Emergence of Inter-municipal Cooperation and its Support among Citizens and Local Politicians

Dissertation zur Erlangung des akademischen Grades

Doktor der Wirtschafts- und Sozialwissenschaften (Dr. rer. pol.)

Vorgelegt im Fachbereich Wirtschaftswissenschaften der Universität Kassel

Von Christian Bergholz

Disputation: 09.10.2017

Kassel, Dezember 2017

Summary

The present dissertation focuses on inter-municipal cooperation (IMC) from different perspectives. First, it analyses the emergence of IMC in the public service tourism marketing based on data from Western German municipalities. The focus is on the presence of spillovers and the extent to which they influence the emergence of IMC. The results show that municipalities which are affected by positive spillovers act as free riders and start IMC less likely. Second, citizens´ preferences for IMC are analyzed by using survey data from three rural German counties. The results indicate that citizens do not entirely refuse IMC in their home municipalities. Notably, citizens that fear a loss of democratic control in their home municipalities and citizens who trust their local politicians support IMC less likely. There is no evidence for the hypothesis that citizens from municipalities that are supposed to profit a lot from IMC also support it more likely. Third, local politicians´ preferences for IMC are examined. The analyses are based on delegates´ survey data from municipalities from the same counties as those from the citizens' survey. The main question answered is if delegates´ view on IMC is shaped by potential loss of political power through IMC. The results clearly show that delegates who can expect to lose political power through IMC prefer it significantly less likely than delegates who do not expect to lose political power.

Zusammenfassung

Die vorliegende Arbeit untersucht das Thema Interkommunale Zusammenarbeit (IKZ) aus verschiedenen Perspektiven. Es wird zunächst das Zustandekommen von IKZ im Bereich des Tourismusmarketings anhand von westdeutschen Gemeinden untersucht. Hier wird der Fokus insbesondere auf den Aspekt der regionalen Spillovers gelegt und der Frage nachgegangen, inwieweit regionale Spillovers Einfluss auf die Entstehung von IKZ haben. Die Ergebnisse zeigen, dass Gemeinden, die bei vorliegenden Spillovers die Gelegenheit haben Trittbrett zu fahren, diese ergreifen und IKZ mit einer signifikant niedrigeren Wahrscheinlichkeit starten. Weiterhin untersucht die vorliegende Arbeit Bürgerpräferenzen für Interkommunale Kooperation. Auf Grundlage einer Bürgerbefragung in drei ländlichen hessischen Landkreisen zeigen die Ergebnisse, dass die Bürgerinnen und Bürger dem Thema IKZ grundsätzlich nicht skeptisch gegenüberstehen. Trotzdem lassen sich ein paar Eigenschaften der Bürgerinnen und Bürger identifizieren, die eine Ablehnung von IKZ erklären. Das sind unter anderem Bürgerinnen und Bürger, die erwarten, dass IKZ die Kontrollmöglichkeiten der Wählerschaft gegenüber der Lokalpolitik erschwert. Weiterhin lehnen solche Bürgerinnen und Bürger IKZ eher ab, die der Lokalpolitik vertrauen. Allerdings lässt sich kein Nachweis für die Hypothese finden, dass Bürgerinnen und Bürger aus Gemeinden, die besonders von IKZ profitieren sollten, sich auch häufiger dafür aussprechen. Als letzten Schwerpunkt werden in dieser Arbeit die Präferenzen der Lokalpolitikerinnen und Lokalpolitiker für IKZ untersucht. Hierzu werden Befragungsdaten von Gemeindevertreterinnen und Gemeindevertretern aus denselben drei ländlichen hessischen Landkreisen analysiert. Es wird konkret der Frage nachgegangen, ob Gemeindevertreterinnen und Gemeindevertreter, die einen Machtverlust im Zuge einer IKZ erwarten können, diese häufiger ablehnen als Gemeindevertreter, die nicht mit einem Machtverlust rechnen müssen. Die Ergebnisse bestätigen die Hypothese klar. So lehnen Gemeindevertreterinnen und Gemeindevertreter, die zu einer regierenden Fraktion gehören, Interkommunale Kooperation signifikant wahrscheinlicher ab als solche, die nicht zu einer regiereden Fraktion gehören.

Contents

List of Tables

List of Figures

List of Abbreviations

B-P	big player
CDU	Christian Democratic Party
cloglog	complementary log-log
ICA	Institutional Collective Action
IMC	inter-municipal cooperation
NATO	North Atlantic Treaty Organization
SAR	spatial autoregressive model
SPD	Social Democratic Party
S-P	small player
US	United States

1. Introduction

Municipalities have emerged and changed over hundreds of years, during which historical occurrences and political decisions have shaped the status quo. But this given structure is often not optimal regarding the efficiency of public service provision. A reasonable number of municipalities are still too small to exploit scale economies or to internalize existing spillovers for local public services (Oates, 1972; Hulst et al., 2009). Especially European countries have applied structural reforms to increase the size of the small municipalities (e.g. Blesse and Baskaran, 2016; Bhatti and Hansen, 2011; Moisio and Uusitalo, 2013; Allers and Geertsema, 2014; Hansen, 2015). However, empirical evidence suggests that the expected effects of structural reforms have not been generated and top down municipal mergers were accompanied by severe citizen protests (e.g. Blume and Blume, 2007; Hulst et al., 2009; Hanes and Wikström, 2012; Hanes et al., 2012; Blesse and Rösel, 2017).

An alternative reform is inter-municipal cooperation (hereafter IMC). In the current thesis, IMC is defined as the voluntary joint provision of a public service of at least two horizontal municipalities for a longer period.[1] IMC is related to structural reforms and it has been subject to research by economics and public administration scholars in Europe as well as in the US (see e.g. Blaeschke, 2014; Bel and Warner, 2016; Di Porto et al., 2016; LeRoux and Carr, 2007; Feiock et al., 2009; Andrew, 2009; Shrestha and Feiock, 2011). Proponents posit that IMC as well as structural reforms can help to reduce costs because of large scale production and reduce double structures in public service provision, IMC can also be an instrument to internalize spillovers (e.g. Blesse and Rösel, 2017). However, the main difference is that municipalities are dissolved through structural reforms and cooperating municipalities stay

[1] Note that in some publications the term IMC is also used for vertical cooperations or informal hand shake deals as well as for short term IMC. For an overview of different characterizations of IMC see e.g. Hulst et al. (2009) or Heinz (2007).

autonomous in all fields, except the one(s) they provide jointly. This is one of the main arguments in favour of IMC put forth by the public administration literature and politicians. IMC has the potential to generate the benefits of structural reforms without incurring costs. Proponents from the public administration scholars and politicians argue that citizens´ resistance is expected to be lower for IMC than for structural reforms and, thus, they consider it as the more suitable instrument to reach the mentioned objectives (e.g. Heinz, 2007; Gjertsen, 2014).

There has been a substantial number of publications about IMC emergence for the US and Europe (for an overview see e.g. Bel and Warner, 2016). But for Germany there is still a huge research gap. Admittedly, a reasonable number of case studies have been published (e.g. Hollbach-Grömig, 2005; Hesse and Götz, 2006; Schulitz and Knoblauch, 2011), but the German IMC literature still lacks large scale empirical analysis (except Blaeschke, 2014).

This thesis helps to fill this gap and contributes to the IMC emergence literature, to get comprehensive insights about IMC in Germany. It focuses on municipalities from all Western German states and is one of the first publications that analyses IMC on such a large scale. Even though the analyses build on a non-representative survey, additional understanding about IMC emergence in the German context can be provided. However, this thesis does not just redo already existing analyses using German data. Instead it provides entirely new insights to the international IMC emergence literature that are especially relevant for economic and public administration scientists and politicians respectively. Three papers with three different research questions are presented. First, which impact do regional spillovers have on IMC emergence? Second, which municipal and individual factors drive citizens´ preferences for IMC? Third, what determines local politicians´ preferences for IMC, especially in the light of losing political power through IMC?

The existing literature on IMC has emphasized arguments in favour of economies of scale to explain IMC emergence. Former contributions point out the existence of spillovers, but do not directly account for its impact and implications in analysing IMC emergence in econometrical approaches (e.g. Feiock, 2007; Kwon and Feiock, 2010; Shrestha and Feiock, 2011; Di Porto et al., 2016). Chapter 3 fills this gap by focusing on the public service tourism marketing, where, besides the potential of exploiting economies of scale and scope, the existence of spillovers is given. The main question is to what extent the existence of regional spillovers has an impact on the emergence of IMC in tourism marketing. To answer this question, Olson and Zeckhauser´s (1966) famous exploitation hypothesis is adjusted to the context of IMC. It proposes that the great get exploited by the small whereas the small, free ride on the greats´ contributions to a public good. With respect to this thesis, the classification of great and small depends on the extent of municipalities´ preference or interest in the public service tourism marketing. It is accounted for the fact that each municipality is embedded in a certain spatial constellation of great and small neighbouring municipalities. These constellations help to identify to what extent municipalities have the opportunity to free ride. Ceteris paribus the great (municipalities with high interest in tourism marketing) invest more in tourism marketing, and the small (municipalities with low interest in tourism marketing), less. The results show that the main argument of Olson and Zeckhauser (1966) contributes to explaining the emergence of IMC in the presence of spillovers. In situations with free riding opportunities, especially low interest (small) municipalities act opportunistically and free ride on their high interest (great) neighbours instead of participating in bearing the costs in cooperative arrangements. The results clearly show that the opportunity to free ride hinders IMC emergence. Chapter 3 presents a methodical innovation, which additionally contributes to the IMC emergence literature. It is the first time that hazard model is applied. It is more adequate than methods applied in previous studies because it explicitly explains the start of IMC, namely

switching from no cooperation to cooperation at a particular point in time. Furthermore, hazard models are able to deal with endogeneity problems through backward effects from the endogenous variable of the exogenous ones much better than the usual methods.

One of the most widespread political arguments in favour of IMC is that it evokes less political resistance than structural reforms (e.g. Heinz, 2007; Gjertsen, 2014; Blesse and Rösel, 2017). However, not much is known about to what extent and in which situations citizens support or oppose IMC. So far, the literature lacks a systematic examination of their preferences. In light of the negative experiences with massive citizens´ protest by merging municipalities top down, this question seems very important for politicians. Chapter 4 answers the question whether citizens´ support for IMC is higher in municipalities where citizens, by the logic of normative theory, can expect higher net benefits from IMC. To answer this question, survey data of 1400 citizens from 59 German municipalities are used and an econometrical approach is conducted. The results indicate that citizens´ preferences for IMC are not driven by normative theory. Support for IMC is not higher in small and fiscally weak municipalities. But citizens who assume that their home-municipality suffers from fiscal stress prefer IMC more likely, even if their assessment often does not mirror the real situation. Nevertheless, it indicates that they consider IMC as a viable instrument to cope with fiscal problems. Because normative theory apparently is not able to explain citizens´ preferences, it is examined to what extent citizens´ individual characteristics, political beliefs as well as assessment of their home-municipalities' service quality shape their preferences for IMC. Citizens who are concerned about losing autonomy and control if their home-municipality cooperates oppose IMC more likely. Additionally, citizens who trust their local politicians do not want their municipality to cooperate, because they are reluctant to see their trusted government share political power with other agents. Furthermore, support for IMC is higher among citizens who assess the current

service quality as low, subjects who are emotionally attached to their home-municipality are less supportive of IMC.

Chapter 5 focuses on another politically highly relevant topic, local politicians´ view on IMC. Two contradictory arguments can be derived from the Public Choice literature regarding local politicians' IMC preferences. First, in IMC arrangements, local politicians lose political power because they must coordinate service related decisions with the partners. Thus, politicians who seek to maintain their political power oppose IMC. Second, a recently published paper (Di Liddo and Giuranno, 2016) shows IMC as an instrument to mitigate yardstick competition. Through IMC, local politicians can extract rents without reducing their probability of getting re-elected and thus prefer to start IMC. In order to investigate these contradictory hypotheses, local council members survey data from 679 individuals from 60 municipalities are used.[2] The results show that local council members who belong to the mayor´s supporting fraction oppose IMC more likely. It indicates that local council members fear a loss of political power instead of having an interest in mitigating yardstick competition through IMC. Side results show that council members from fiscally weak municipalities assume IMC as an instrument to deal with fiscal problems. In line with normative theory, they prefer IMC more likely the more indebted their municipality and the higher the value of expenditures over revenues is.

This thesis consists of 6 chapters. The subsequent chapter 2 provides a review of the relevant literature and points at the research gaps the papers in this thesis help filling. Chapter 3 includes the paper on IMC emergence in the field of tourism marketing, which is characterized by substantial spillovers. In chapter 4 the paper examines the question: What drives citizens´

[2] Their survey among the council members is conducted among the same municipalities as in the survey for citizens.

preferences for IMC?[3] Chapter 5 is devoted to the question whether local politicians that fear a loss in political power oppose IMC more likely than those who do not.[4] The final chapter 6 concludes and points out questions of interest for future research.

2. Literature review

2.1 Optimal municipality size

This section illustrates arguments that determine the optimal size of the lowest government level, the municipalities. Even fiscal federalism is closely related to the topic of optimal governmental size, the literature that is discussed in the following is not about the classical fiscal federalism question about to what extent responsibilities to provide public goods are distributed across governmental layers in a federal system. For a review of the literature of fiscal decentralization see e.g. Oates (1999), Oates (2005) and Vo (2010).

Since Oates´ (1972) seminal contribution of fiscal federalism the discussion about optimal jurisdiction size is mainly shaped by one trade-off. He argues that in larger jurisdictions more citizens must consume a uniform level of a public good that differs from their own preferences than in smaller ones. On the other hand, large municipalities are able to produce in a larger scale and can exploit economies of scale and scope (Alesina and Spolaore, 2003; Alesina et al., 2004). In the following this trade-off is outlined. Afterwards additional arguments that determine optimal municipality size are presented.

Within a municipality, all citizens can consume only one level of the local public service. The more inhabitants live within a municipality and the more heterogeneous their preferences are, the higher is the loss in utility by consuming a uniform level of the public service. Several

[3] Chapter 4 is coauthored with Prof. Dr. Ivo Bischoff, University of Kassel.
[4] Chapter 5 is coauthored with Prof. Dr. Ivo Bischoff, University of Kassel.

studies derive differences in preferences from certain characteristics like income, age, ethnicity and religion (e.g. Alesina et al., 2004; Brasington, 2003). Hence, municipalities with different composition of these characteristics have different preferences. Ceteris paribus, many small municipalities can tailor public services much better to their citizens´ preferences than a few large municipalities, which leads to a more efficient service provision (Oates, 1972). This is especially true when Tiebout sorting in the past worked well and municipalities consist of citizens with similar preferences.

Economies of scale can be realized when the average costs decrease while the output increases. Consequently, if the production scale of a good is below the scale that guarantees the lowest average costs, increasing the municipality size, the number of consumers result in efficiency enhancing effects (e.g. Oates, 1972; Miceli, 1993; Dafflon, 2006). Empirical evidence suggests that expanded municipality size can lead to realizing economies of scale. Blesse and Baskaran (2016) analyse the structural reform in the German state Brandenburg, where small municipalities either get merged top down or they voluntarily merge bottom up. They find costs reducing effects through economies of scale, but also that other costs from the merger process reduce the overall gains. Note that studies from the Netherlands and Finland provide little evidence in favour of scale economies after an increased municipality size through structural reforms (Allers and Geertsema, 2014; Moisio and Uusitalo, 2013). Some other studies report a reduction in average costs after increasing municipality size, but they cannot clearly attribute these effects through economies of scale (e.g. Blom-Hansen et al., 2014; Reingewertz, 2012). The forthcoming paper by de Andrade Lima and da Mota Silveira Neto (2017) analyses a secession process on per capita costs of public service provision of municipalities. By using difference-in-difference they find that the per capita costs rise and that this increase is due to a reduction in economies of scale.

To illustrate the trade-off between benefits from larger scale production and a more heterogeneous population, Alesina and Spolaore (2003) provide a model of endogenous emergence of countries. In the absence of spillovers, they show that each public good requires its own optimal jurisdiction size. An empirical test of this trade-off conducts Alesina et al. (2004). They investigate school district mergers in the US and find that citizens relinquish lower costs through scale economies in favor of not being merged with school districts consisting of inhabitants that strongly differ with respect to ethnicity, income and religion.

Beyond this trade-off, the theoretical as well as the empirical literature provide further arguments regarding the optimal jurisdiction size. Having a few large municipalities instead of a high number of small municipalities can lead to a reduction in political participation on local level. The larger the number of citizens, the less is each vote worth and the less is the incentive to participate in the democratic process. This could lead to free riding behaviour in political participation on local level (e.g. Olson, 1965; Borck, 2002; Osborne et al., 2000; Swianiewicz, 2002). Lassen and Serritzlew (2011) analyse a large scale structural reform in Denmark by applying difference-in-difference approach. They find a causal effect that an increase in municipality size leads to substantial reduction in citizens´ internal political efficacy[5]. Further, contributions show that increasing municipality size through structural reforms can result in increasing political costs, in terms of dissatisfaction with local democracy, and falling voter turnouts on a local level (e.g. Hansen, 2015; Fritz and Feld, 2015).

Another important determinant of the optimal municipality size is spillovers. Several publicly provided services produce positive spillovers, like e.g. economic development policies

[5] Internal political efficacy represents citizens´ believe that they are able to understand as well as to effectively contribute to political decision making (Lassen and Serritzlew. 2011).

or tourism marketing. This leads to two important effects. First, nearby municipalities act as free riders because they benefit from public service provision of others without contributing and therefore do not provide the public services themselves. Second, existing positive spillovers lead to an inefficient low provision level of public services because providers, who's activities spill over, do not take affected consumers outside their boundaries into account when deciding about the provision level.[6]. Besides bargaining solutions and other mechanisms to internalize spillovers[7], municipality size can be expanded until payers and beneficiaries coincide and spillovers are internalized (e.g. Oates, 1972; Dafflon, 2006).

Olson´s (1969) posits that fiscal equivalence is given and public services can be provided efficiently when consumer and payer circles coincide. It guarantees that there are no spillovers. But it also implies that there is different spatial scope for each locally provided public service, which indicates that a municipality cannot internalize all its spillovers with one jurisdiction size. The same is true for economies of scale and scope. Each public service has its own scale where average costs are at a minimum. Jurisdiction sizes have to be adjusted to totally exploit scale economies for each locally provided public service. Theoretically, a jurisdiction for each public service is necessary. The concept of functional federalism adopts this argument (see Eichenberger and Frey, 2006). By implementing a framework of bottom-up single-purpose jurisdictions that can overlap with political jurisdictions, one can, at least theoretically, reach complete fiscal equivalence. However, this theoretical idea has shown not to be practicable because of excessive transaction costs (e.g. Dafflon, 2006). Miceli (1993) suggests that municipalities should have the size of the optimal scale of the public service with the least scale

[6] An inefficient high provision level is the consequence if negative spillovers exist.

[7] Instruments to internalize spillovers are for instance Coase´s (1960) bargaining solution or Pigouvian taxes and subsidies (Pigou, 1920).

economies. Furthermore, he claims that not exploited scale economies can be realized by joint provision with neighbouring municipalities.

There are two ways to cope with this trade-off. First, municipalities can choose one municipality size and live with inefficiencies in fields where the optimal scale cannot be reached. Second, one can apply complementary single purpose governments, i.e. inter-municipal cooperation, where municipalities can jointly provide services to exploiting scale economies or internalize spillovers. It can be considered as a mechanism to artificially expand municipality size for certain services. The following sub section illustrates and discusses both reforms.

2.2 Governmental reforms

After a first huge wave of top down municipal mergers in Europe in the 1960s and 1970s, today there is still the trend to increase the size of the very small municipalities by merging. Municipalities either get merged by the state governments, the central government or they set a legal framework to allow for voluntary bottom up municipal mergers (see Blesse and Baskaran, 2016 for Germany, Bhatti and Hansen, 2011 for Denmark, Moisio and Uusitalo, 2013 for Finland, Allers and Geertsema, 2014 for the Netherlands and Hanes, 2015 for Sweden). Advocates of this reform expect cost savings due to the exploitation of scale economies, internalizing spillovers, better performance of the internal local administration as well as growth impulses for the local economy. Unfortunately, the expectations could not be reached. Only a few studies find the expected effects. See Blesse and Rösel (2017) for an overview. Furthermore, political costs in form of severe citizens' protest went along with top down municipal mergers (e.g. Blume and Blume, 2007; Blesse and Rösel, 2017; Hanes and Wikström, 2012; Hanes et al., 2012)

An alternative that might avoid the mentioned problems is IMC. It is a reform with similar initial objectives (exploiting scale economies, internalize spillovers) as structural reforms, but there are big differences between both. First, IMC guarantees less intervention in municipalities' autonomy, municipalities only need to find compromises for jointly provided services. Especially local politicians value this argument, because they have interest in maintaining their political power (e.g. Ferris and Graddy, 1988). Also citizens´ resistance is expected to be lower when they can participate in small, autonomous jurisdictions (e.g. Heinz, 2007; Gjertsen, 2014). Second, IMC is more flexible and can be adjusted more easily to changing circumstances, like an increasing demand for public services (de Mello and Lago-Penas, 2013). This also comprises municipalities that decide, for whichever reasons, not wanting to cooperate anymore. IMCs can be rolled back more cost-effectively than disentangling an already merged municipality. Third, structural reforms cannot meet the requirements for each public service to adjust it to its optimal scale. Structural reforms can only improve the average efficiency in the provision over several services by changing its boundaries. Nevertheless, these reforms might be pareto-enhancing, but often there is additional room for improvements. By applying IMC and finding different partners for different public services, municipalities have the possibility to adjust their optimal scale for each public service and thus exploit scale economies and internalize spillovers whenever necessary, while leaving other fields untouched. Note that these efficiency gains have to be weighed up against transaction costs, which arise through negotiating with different partners and keep IMCs running (e.g. Feiock, 2007; Feiock et al., 2009).

The IMC emergence literature is mostly fed by the public administration and by the economics scholars and can roughly be divided into a US and European strand of literature. The US contributions stem mostly from public administration scholars and focus to the greatest extent on metropolitan areas (e.g. LeRoux and Carr, 2007; Feiock, 2007; Feiock et al., 2009;

Kwon and Feiock, 2010; Shrestha and Feiock, 2011). This body of literature is dominated by the so-called institutional collective action framework (ICA) (Feiock, 2007). It provides a rational choice explanation under which circumstances IMC emerges. A transaction costs approach is adopted in order to identify factors that facilitate or hinder IMC emergence. Transaction costs exist in several forms and for various reasons. They can be driven by inherent factors of the provided service like asset specificity and measurability of outcomes (Williamson, 1985; Feiock, 2007). Transaction costs can be further divided into intrajurisdictional and interjurisdictional transaction costs, whereas the former are predominantly characterized by factors which correlate with heterogeneous citizens´ preferences within a jurisdiction. These can hinder collective action because IMC outcomes might not be in line with some subgroups´ preferences which can lead to political costs in form of protests. Interjurisdictional transaction costs, on the other hand, arise when differences between jurisdictions´ preferences for a public service exist. The more heterogeneous these preferences are the more complicated is it to agree on an IMC contract (Feiock, 2007; Blaeschke, 2014). Interjurisdictional transaction costs can also arise from differences in bargaining power, because the stronger players might dominate weaker ones and demand a disproportional share of the gains, which reduces the probability of IMC (e.g. Feiock et al., 2009). A significant transaction costs reducing factor are policy networks of local municipalities (e.g. Thurmaier and Wood, 2002; Feiock, 2007). For instance, when municipality A cooperates with municipality B and B cooperates with C and also C has further cooperation partners, a regional network of municipalities emerges. Such networks increase trust and reduce commitment risks among partners. Opportunistic behaviour becomes less likely because information about free riding behaviour or opportunism spreads quickly within these networks. It creates social pressure to act according to formal and informal rules. Furthermore, network members are better informed about each other’s competences. Once

these networks are established it facilitates further IMC emergences (e.g. Feiock et al., 2009). LeRoux et al. (2010) analyse IMC emergence and find that the number of municipal managers or department heads´ contacts with other local politicians increase the likelihood to start IMC. They suggest to implement regular meetings of local politicians within regions to facilitate exchange.

Empirical results from the US IMC emergence literature can be summarized as follows. Being a member of a policy network increases the likelihood to start IMC (e.g. Feiock et al., 2009; LeRoux et al., 2010). Differences in socio-demographic characteristics prevent IMC (e.g. Feiock et al., 2009). Small and shrinking municipalities as well as those that suffer from fiscal stress start IMC more likely (e.g. Kwon and Feiock, 2010; Shrestha and Feiock, 2011; Lackey et al., 2002; Krueger and Bernick, 2010).

The European strand is dominated by publications provided by economic scholars (e.g. Blaeschke, 2014; Blaeschke and Haug, 2014; Di Porto et al., 2016; Bel and Warner, 2016). Whereas the US-literature mostly focuses on metropolitan areas, which are characterized by a few very large municipalities and a lot of small ones, the European strand emphasizes rural areas, dominated by small and medium sized municipalities. Contrary to the US, European municipalities have a lower level of autonomy in service provision. Several services are compulsory and federal as well as state governments set quality standards. This could be a reason for European studies focusing more on cost saving effects in IMC and US studies focusing on institutional problems preventing IMC agreements (Bel and Warner, 2016). The European strand expands the understanding of the spatial context of IMC emergence. Blaeschke (2014), for instance, uses the market analogy and considers each municipality as IMC demander if it suffers from fiscal stress or from demographic change. Further, he considers all its direct neighbours as suppliers if the spatial lags of these characteristics are similar, which let the probability of IMC emergence increase. Di Porto et al. (2016) apply a spatial lag as well as a

Durbin model to explain IMC emergence. The empirical models in this thesis (chapter 3, 4 and 5) account for the number of similar direct neighbours of each municipality regarding certain characteristics like fiscal stress, fiscal capacity, population size or the governing political party. Even though the European strand focuses on small, rural municipalities instead of metropolitan areas, the main results are quite similar to the US strand. Municipalities that suffer from fiscal stress and those that are small in population size start IMC more likely (e.g. Blaeschke, 2014; Steiner, 2003; Bel et al., 2013). Like for the US, Di Porto et al. (2016) find that the emergence of IMC is more difficult when potential cooperation partners differ in socio-economic characteristics. For a meta-regression analysis of IMC emergence see Bel and Warner (2016).

Following the arguments of section 2.1, there are two major rationales of starting IMC: Exploitation of economies of scale and scope as well as the internalization of spillovers. Theoretical arguments suggest that through IMC larger scales in production of public services can be realized, which can lead to per capita costs reduction. Furthermore, the capacity utilization of infrastructure can be increased by providing services for cooperation partners. This is especially important for capital-intensive public services like wastewater disposal or waste disposal and can be a way to utilize capacities in shrinking municipalities (e.g. Bel et al., 2013).

Internalizing spillovers is the second main motive of starting IMC. The famous Coase Theorem (1960) suggests that internalizing spillovers through bargaining results in Pareto-enhancing outcomes, but only if transaction costs are sufficiently low so that they do not outweigh the gains. However, because of free riding and strategic behaviour, municipalities do not always successfully internalize them through bargaining (e.g. Feiock et al., 2009).

Most of IMC emergence studies emphasize the economies of scale instead of the internalizing spillovers argument as the main motive of IMC (for an overview see Bel and Warner, 2016).

These studies often mention spillovers and the problems they can cause in collective action, but neglect these arguments in their empirical strategies. Chapter 3 fills this gap in the literature by focusing on IMC emergence in the public service of tourism marketing, where, besides the potential of exploiting economies of scale and scope, spillovers exist.

So far, literature on IMC emergence has focused on arguments of normative values. Empirical studies focus on normative measures like municipalities fiscal condition, demographic change etc. to explain the emergence of IMC (e.g. Blaeschke, 2014; Di Porto et al., 2016; Feiock et al., 2009). But is this also true for citizens´ view on IMC? Do citizens support IMC when they expect net gains from it? So far, little is known about their preferences. The municipal mergers literature suggests that there are severe protests against this reform but this is mostly driven by the loss of identity because small municipalities get disintegrated and lose their autonomy (e.g. Blume and Blume, 2007; Blesse and Rösel, 2017; Fritz and Feld, 2015; Hansen, 2015). Chapter 4 fills this gap and asks what drives citizens´ preferences for IMC.

The same question can be asked regarding local politicians. Is their IMC preference shaped by normative values or are other determinants important? The Public Choice literature tells us that politicians have their individual objectives. They might only force IMC because it is popular and use this to increase their re-election probability or they misuse it as an instrument to mitigate yard stick competition in order to extract rents (Di Liddo and Giuranno, 2016). Local politicians, on the other hand, can oppose IMC because they fear a loss in power, even if it is beneficial for their municipality (e.g. Ferris and Graddy, 1988). So far, there is little evidence about what shapes their preferences for IMC. Chapter 5 fills this gap in the literature by analysing local politicians´ preferences for IMC and especially focuses on their self-interest.

3. Collective action in the case of spillovers – An application of Mancur Olson´s Theory

This chapter is funded by the Hans-Böckler-Foundation-Project: *Interkommunale Kooperation – Ein Ansatz zur Sicherung der nachhaltigen Kommunalentwicklung sowie der Versorgung mit öffentlichen Leistungen*

Abstract

This paper examines the question whether the existence of regional spillovers has an impact on the emergence of inter-municipal cooperation in tourism marketing. We use data from a survey conducted among Western German municipalities merged with official statistics regarding municipalities´ fiscal, political and demographic situation as well as tourism-related characteristics. We are the first to apply a hazard model to explain the emergence of inter-municipal cooperation. This method has serious advantages over the previously used methods. Our results show that especially municipalities with a low preference for tourism marketing that have the opportunity to free ride on neighbours with a high preference for tourism marketing start inter-municipal cooperation less likely. The results are in line with Olson and Zeckhauser´s (1966) famous proposition "*the exploitation of the great by the small*".

3.1. Introduction

The sufficient and efficient provision of public services still is a challenge, especially for small and rural municipalities. Given the fact that municipalities´ boundaries are historically given and despite several established adjustments, there are still many municipalities that do not meet the requirements for an optimal provision of public goods. Especially rural municipalities often are too small to provide certain public services efficiently. They are neither able to exploit economies of scale nor to internalize existent spillovers. (Oates, 1972; Hulst et al., 2009). There have been some approaches about how to deal with this challenge. In the

sixties and seventies of the last century structural reforms were applied in some European countries in order to mitigate these inefficiencies. However, there were severe protests against this reform among the citizens and according to empirical evidence the expected benefits are often not generated (e.g. Blume and Blume, 2007; Hulst et al., 2009; Hanes and Wikström, 2012; Hanes et al., 2012; Blesse and Rösel, 2017).

Public administration as well as the economics scholars have discussed inter-municipal cooperation (hereafter IMC) as an alternative to structural reforms (e.g. Steiner, 2003; Dafflon, 2012; Hulst et al., 2009; Blesse and Rösel, 2017). In the last two decades, one can observe an increasing number of IMCs in Europe (e.g. Rosenfeld et al., 2016; Steiner, 2003; Hulst et al., 2009). By establishing IMC, municipalities provide certain public services jointly, but stay independent in all other tasks of public service provision. Proponents posit that through IMC municipalities can exploit economies of scale and scope and internalize spillovers (Feiock, 2007). However, regional spillovers from public goods offer the incentive to free ride on nearby municipalities. Therefore, some municipalities show no interest in internalizing spillovers through IMC because free riding provides them a better outcome. As a result, IMC does not exist in regions where it would be pareto-superior. So far, the existing literature on IMC has emphasized arguments in favour of economies of scale in order to explain the emergence of IMC. Former contributions mention the existence of spillovers, but do not directly account for its impact and implications in analyzing IMC emergence. We fill this gap by focusing on the public service tourism marketing, where, besides the potential of exploiting economies of scale and scope, the existence of spillovers is given. Our main question is: Does the existence of regional spillovers have an impact on the emergence of IMC in tourism marketing?

In our empirical strategy, we build on Olson and Zeckhauser´s (1966) famous exploitation hypothesis which proposes that the great get exploited by the small whereas the small free ride on the greats´ contributions to a public good. In our framework the classification of great and

small depends on municipalities´ preference or interest in the public service tourism marketing. We account for the fact that each municipality is embedded in a certain spatial constellation of great and small neighbouring municipalities. The different constellations help to identify to what extent the opportunity to free ride on neighbouring municipalities exists. Depending on the spatial constellation, we examine municipalities´ probability to start IMC. Finally, we control for factors that have shown to be important in former studies like municipalities' fiscal and demographic situation as well as institutional, political and geographical differences.

Apart from this, our second contribution is a methodical innovation. To the best of our knowledge, we are the first who apply hazard model i.e. complementary log-log (hereafter cloglog) in order to explain the emergence of IMC. It is more adequate than methods that are applied in previous studies because it explicitly explains the start of an IMC, namely switching from no cooperation to cooperation at a particular point in time. Additionally, hazard models are able to deal with endogeneity problems through backward effects from the endogenous variable of the exogenous ones much better than the usual methods. We make use of a unique data set collected in a survey among rural municipalities in Western Germany merged with official financial, demographic, political and tourism data on municipality level. So we can conduct our analysis on 303 municipalities over a period of 16 years from the year 2000 to 2015.

Our results show that the main argument of Olson and Zeckhauser (1966) contributes to explaining the emergence of IMC in the presence of spillovers. In situations with the opportunity to free ride, municipalities act opportunistically and free ride on their neighbours instead of participating in bearing the costs in cooperative arrangements. We can clearly conclude that the opportunity to free ride hinders the emergence of IMC. Further, we find that with an increasing number of neighbours with a similar preference for tourism marketing, municipalities are more likely to start IMC. This is true for municipalities that have a relatively

high interest in tourism marketing and for those that have a relatively low interest in tourism marketing, with a larger effect for the latter. It supports the notion put forth by Feiock (2007) and Feiock et al. (2009) that transaction costs by establishing IMC matter.

The paper is structured as follows. In section 3.2, we review the literature. Section 3.3 sketches the institutional background. A stylized model of different spatial constellations that shape freeriding opportunities is presented in section 3.4. In section 3.5, we present the data and our empirical strategy. The results are reported in section 3.6. Section 3.7 discusses the results and concludes.

3.2 Related Literature

In this paper, IMC is defined as the joint provision of a public service of at least two municipalities for a longer period. We predominantly assume IMC between direct neighbouring municipalities, because the vast majority of existing IMCs take place between adjacent municipalities (e.g. Blaeschke, 2014; Feiock, 2004).

There is a growing body of IMC literature in Europe as well as in the US. The European contributions focus on the question, why some municipalities start cooperating while others do not, by identifying favorable and opposing determinants (e.g. Di Porto et al., 2016; Blaeschke, 2014; Bel et al., 2013). They mostly focus on small and medium sized municipalities. The main results can be summarized as follows. Municipalities that suffer from fiscal stress and those with a small population size start IMC more likely (e.g. Blaeschke, 2014; Steiner, 2003; Bel et al., 2013; Di Porto et al., 2016). The spatial dimension plays an important role as well. For instance, Di Porto et al. (2016) find that the emergence of IMC is more difficult when potential cooperation partners differ in socioeconomic characteristics.

The US strand of literature, mostly fed by public administration scholars, focuses on IMC in metropolitan areas. Despite the different setting regarding the size and the environment of

municipalities, the results are similar to those from small and medium sized municipalities in Europe. Differences in socio-demographic characteristics prevent IMC (Feiock et al., 2009). Small and shrinking municipalities as well as those suffering from fiscal stress start IMC more likely (e.g. Kwon and Feiock, 2010; Shrestha and Feiock, 2011; Lackey et al., 2002; Krueger and Bernick, 2010).

A notable contribution to the IMC literature, which also influenced the European strand, is Richard Feiock´s (2007) Institutional Collective Action framework (ICA). He builds on Coase´s (1960) argument that internalization of spillovers can only be successful under sufficiently low transaction costs, when they do not exceed the gains. Therefore, he identifies several types of transaction costs which facilitate the emergence of IMC when they are sufficiently low. Their main argument is that the more similar municipalities are, regarding several characteristics like preferences for public services, bargaining power and political preferences, the more likely they come to an agreement and start IMC. Various empirical studies show that these kinds of transaction costs have an impact on the emergence of IMC (e.g. Feiock et al., 2009; Kwon and Feiock, 2010; Shrestha and Feiock, 2011; Bel and Warner, 2016).

The European as well as the US strand has mostly focused on arguments in favour of economies of scale to explain IMC emergence. Spillovers are pointed out, but their consequences and influence on the emergence of IMC has not been systematically analysed yet (e.g. Feiock, 2007; Kwon and Feiock, 2010; Shrestha and Feiock, 2011; Di Porto et al., 2016). One of the few exceptions that apply an econometric approach regarding this issue is a contribution by Feiock et al. (2009). They analyse the emergence of IMC in the field of economic development. One can expect that positive effects, like job creation and increasing spending capacity, spill across nearby jurisdictions after economic development efforts. Their paper provides interesting insights of transaction costs reducing factors that facilitate IMC in a field which produces substantial regional spillovers. However, their empirical approach lacks a

measure that indicates the quantity or the existence of regional spillovers. Therefore, they cannot identify whether internalization of spillovers or other motives like exploiting scale economies are the reason for IMC emergence. In order to fill this gap, we examine the question: Does the existence of regional spillovers have an impact on the emergence of IMC in tourism marketing?

In order to explicitly account for the spillover arguments and its consequences, we make use of Olson and Zeckhauser´s (1966) famous theory that the small exploit the great. In their seminal paper, they argue that great North Atlantic Treaty Organization (NATO) members bear the major burden for the global public good defence and small members mainly free ride on the great. In case of the alliance all NATO partners will be defended by the coalition, irrespective of their contribution. Like defence also tourism marketing can produce positive spillovers and a similar pattern of free riding is expected. The effort in attracting tourists can produce positive spillover effects for nearby municipalities, because tourists do not only book hotels or spend money within the boundary of the advertising municipality. Consequently, the great, who have more interest or a higher preference for tourism marketing, provide the good and the small free ride. However, there are differences between the two public goods. Contrary to defence, the public good character of tourism marketing is expected to be regionally limited and so are its spillovers. But we can expect that on local level spillovers at least affect nearby municipalities.

The marketing literature clearly shows that spillovers from advertising exist. It divides spillovers in expansive and predatory spillovers. Expansive spillovers can be interpreted as positive spillovers, where a company benefits from competitors´ advertising effort. Advertising animates the addressees not only to buy the advertised brands, it might also trigger other memories and additional demand for competitors' products. Expansive spillovers are shown for online advertising (Lewis and Nguyen, 2015), for TV advertising of pharmaceuticals (Shapiro, 2017) and for the US soft drink industry (Lopez et al., 2015). Predatory spillovers explicitly

affect competitors negatively by stealing their former customers. Vardanyan and Tremblay (2006) provide evidence for negative spillovers in the US brewing industry and Sahni (2016) for online restaurant advertising.

We can conclude that spillovers play a role in advertising in general. It can be expected that spillover effects change the rational suppliers´ behaviour regarding the optimal investment in the marketing mix. So far, there is no reliable evidence for municipalities´ tourism marketing and its spillover effects. We expect predatory spillovers in situations where whole regions compete for the same potential group of tourists. For example, beach resorts at the North Sea compete with beach resorts at the Baltic Sea. One region increases its tourism marketing effort which leads to a loss of tourists in the other region and vice versa. Expansive spillovers, on the other hand, are expected to be existent within regional tourism markets and benefits of tourism marketing cannot be restricted to the advertiser's boundaries.

3.3 Institutional context

3.3.1 The German tourism sector

The tourism sector is a growing and significant factor for the German economy. In 2015, about 2.9 million people were employed in this sector. Germany records 436.4 million overnight stays in 2015 and 343.9 million in 2005. This is a 26.9 % growth within ten years (Statistisches Bundesamt, 2016). Tourism activity is widely spread in Germany. Almost all regions in Germany show some touristic activity and almost all municipalities have at least one accommodation provider.[8] Nevertheless, there are touristic hotspots spread all over Germany, for instance at the Baltic Sea, the North Sea, around the Alps in the south and the Central

[8] Calculated on "Verbandsgemeindelevel". "Verbandsgemeinden" are an intermediate government layer between municipalities and counties. Often rural and small municipalities are grouped together to "Verbandsgemeinden" (see section 3.3.3).

German Uplands, to mention a few. On the map in Figure 3.1 the touristic hotspots[9] are coloured in orange. Our data show that IMCs have emerged in touristic hotspots as well as in regions without a high extent of tourism. At the same time there is no IMC in tourism marketing in both types of regions.

3.3.2 German municipalities

The municipalities in Germany provide important public services to citizens and the local economy, like local road maintenance, business parks, pre-school childcare and tourism marketing. When it comes to public service provision, they are, to a certain degree, autonomous in their decisions. But for some tasks, minimum standards for municipalities are set by the federal as well as by state governments. Tourism marketing, however, is not a mandatory public good, like e.g. preschool childcare. Municipalities can decide whether they provide it and to what extent. In Germany the states set the legal framework for IMC. In all states, municipalities are allowed to start IMC autonomously, even though there are slight differences in the relevant legislation between states. Municipalities' expenditures cover about one quarter of overall government expenditures (Zimmermann, 2009). To a certain degree, municipalities enjoy the liberty of self-financing through their own revenue sources, i.e. land tax and local business tax. Furthermore, touristic hotspots are allowed to collect tourism taxes under certain conditions (see footnote 9). Although for most municipalities the largest share comes from a vertical tax sharing system and state grants (e.g. Zimmermann, 2009).

[9] According to some German state laws municipalities are allowed to collect tourism tax if their annual overnight stays per capita exceed the number of inhabitants at least seven times. Municipalities that fulfil this conditions are defined as touristic hotspots. (Kommunales Abgabengesetz der Länder; http:\\gesetze-bayern.de/Content/Document/BayKAG/True?AspxAutoDetectCookieSupport=1)

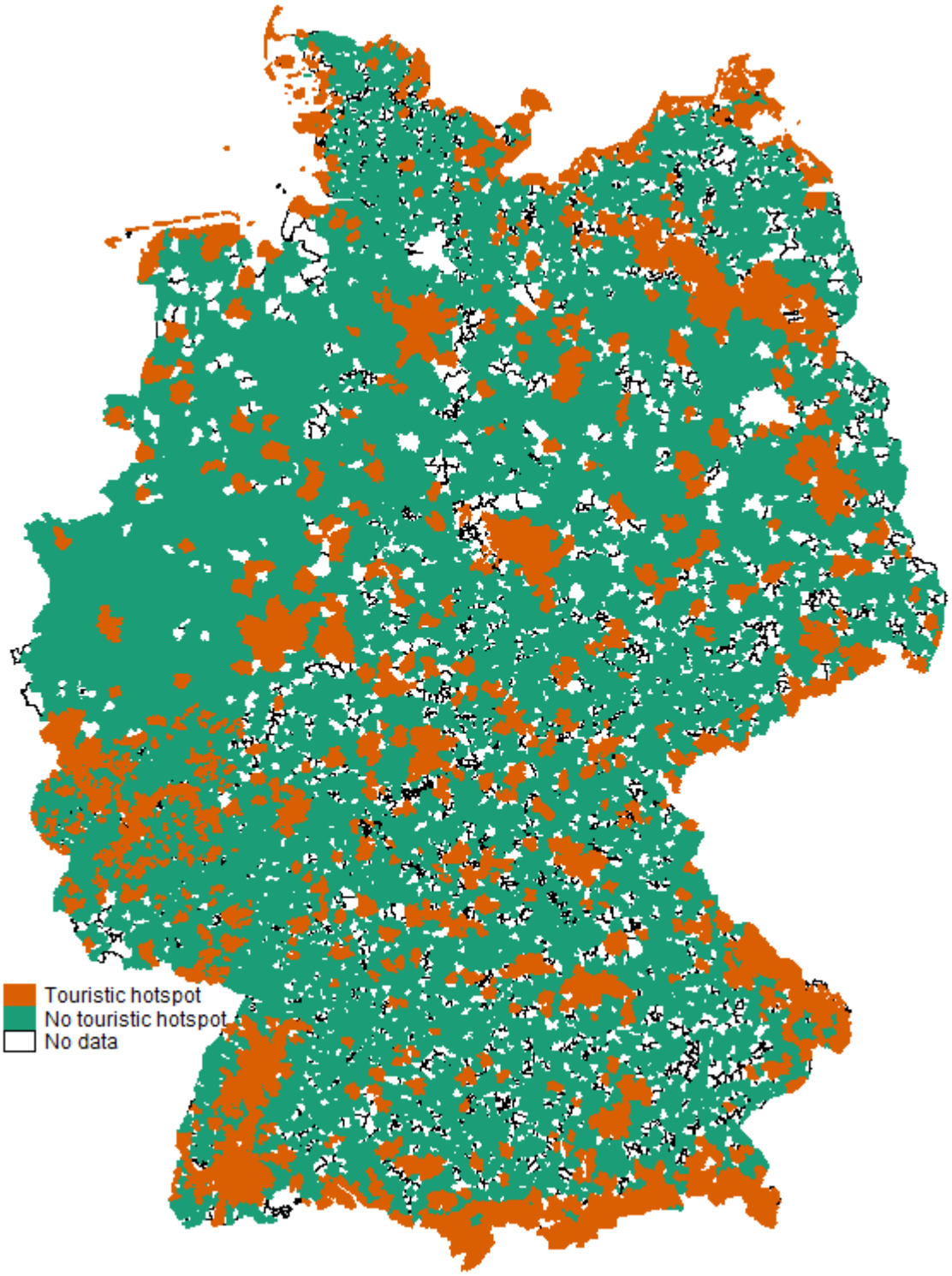

Figure 3.1: German map of touristic hotspots

3.3.3 Structural reforms and differences in German states

In the 60s and 70s of the last century, the state governments began to centralize the very fragmented municipality structure in Western Germany. In some states (Hesse, North Rhine-Westphalia) very small municipalities lost their autonomy by getting grouped together to larger entities. In other states (Schleswig-Holstein, Lower Saxony, Rhineland-Palatinate, Bavaria and Baden-Wuertemberg), an intermediate governmental level was introduced and the very small municipalities were also grouped together under the new governmental level, the "Verbandsgemeinden"[10]. "Verbandsgemeinden" provide several tasks like internal administration for all their autonomous member municipalities. Municipalities that are not members of a "Verbandsgemeinde" are called "Einheitsgemeinden". As a heritage of these kinds of structural reforms, German states differ tremendously regarding the number of autonomous municipalities. For example, Rhineland-Palatinate has approx. 4.6 million inhabitants within an area of approx. 20,000 km² and about 2,200 autonomous municipalities in 2015. On the other hand, Hesse has approx. 6.1 million inhabitants within an area of approx. 21,000 km² and only 426 autonomous municipalities in 2015. The median municipality in Rhineland-Palatinate has 560 inhabitants and in Hesse it has 7,563.

3.4 A stylized model of free riding opportunities in the presence of regional spillovers

Before we come to the stylized model we clarify some details and assumptions. By assuming that most IMCs exist between adjacent neighbours (e.g. Blaeschke, 2014; Feiock, 2004), we focus on regional tourism markets and its expansive (positive) spillovers between direct neighbours. We present a stylized model derived from Olson´s (1965) logic of collective

[10] In some of the States there are jurisdictions that are located between municipalities and counties called "Verbandsgemeinden", "Samtgemeinden", "Amtsgemeinden", "Gemeindeverwaltungsverband" etc. Hereafter we use the term "Verbandsgemeinden" as synonym for all the other terms.

action, Feiock´s (2007) ICA and Olson and Zeckhauser´s (1966) exploitation hypothesis. Olson and Zeckhauser (1966) define big/small countries in terms of their national income. Transferring this concept to the current paper, we define big and small in terms of municipalities´ preferences or interest in tourism marketing. Thus, big municipalities have a high preference for tourism marketing and are called big players (*B-P*). Ceteris paribus, they provide tourism marketing more likely and in a higher quantity and/or quality. Small municipalities, i.e. those with a low preference for tourism marketing, provide tourism marketing less likely and in a lower quantity and/or quality. They are called small players (*S-P*). The extent of tourism marketing spillovers as well as the opportunity to free ride depend on different spatial constellations a municipality is located in. We construct a simple environment with these two types of municipalities that helps explain different stylized constellations of free riding opportunities. The four stylized constellations consist of different combinations of *B-P*s and *S-P*s (see Figure 3.2). Two constellations are asymmetric (1 and 2) and two are symmetric (3 and 4). For each constellation, we derive whether the centered municipality is expected to start IMC.

Let us begin with the asymmetric ones. Consider a centered *S-P* that is surrounded by three *S-P* and one *B-P* (constellation 1). Now we can expect a relatively low probability of IMC emergence for two reasons. First, the centered *S-P* would not agree on IMC because free riding on *B-P´*s effort is a better option than internalizing all costs through IMC. Here, we observe Olson and Zeckhauser's (1966) exploitation of the great by the small. Second, *B-P* and *S-P* have divergent preferences for tourism marketing. This heterogeneity between them lets the transaction costs for finding an agreement to start IMC rise.

The second asymmetric constellation is characterized by a centered *B-P* surrounded by only *S-P* (constellation 2). The centered *B-P* does not find a cooperation partner because free

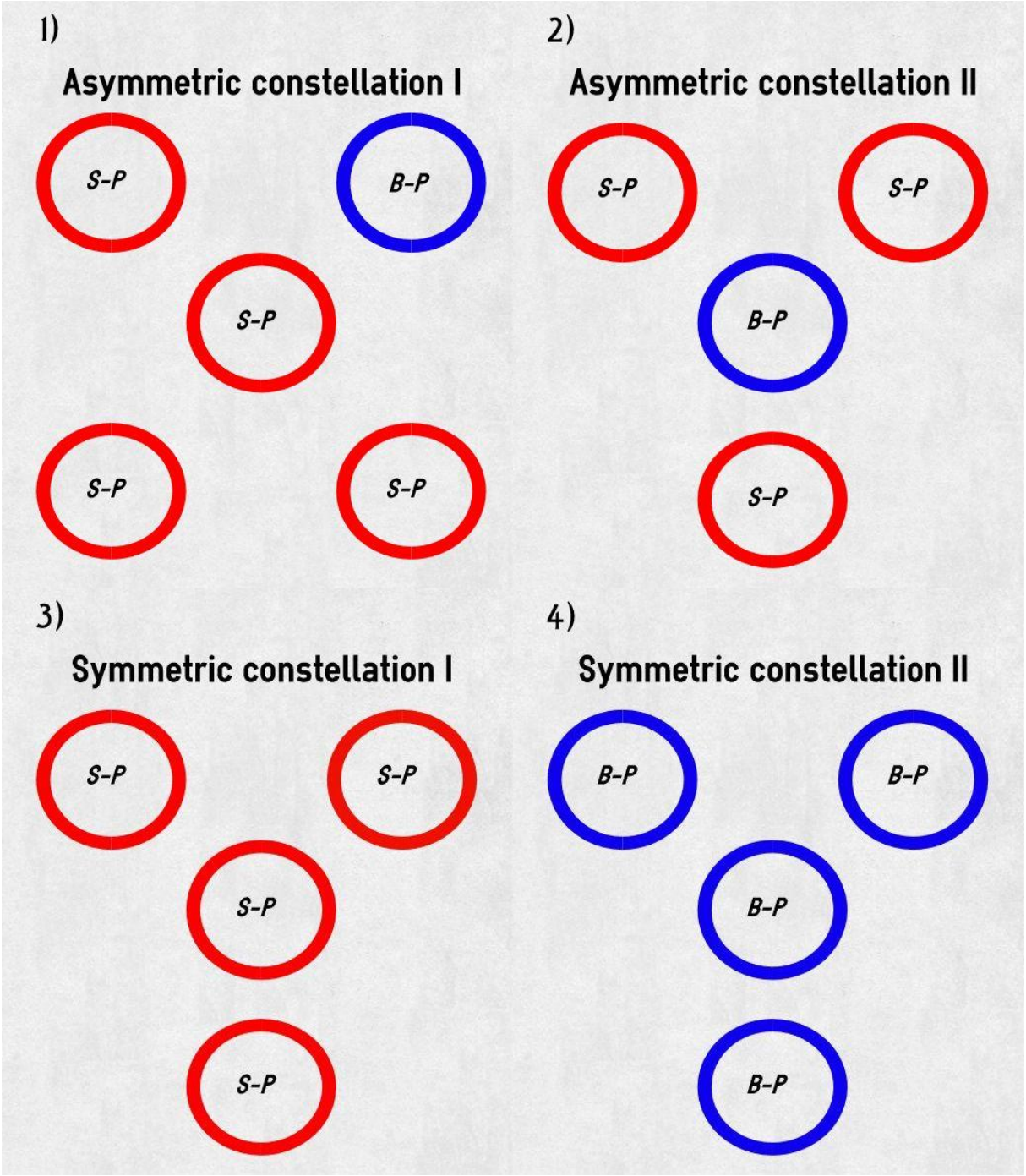

Figure 3.2: Symmetric and asymmetric constellations

riding is the better option for all its neighbours, instead of bearing the costs for tourism marketing. Again, we observe Olson and Zeckhauser´s (1966) exploitation of the great by the small. And again, because of heterogeneity between *S-P* and *B-P* they face high transaction costs for coming to an agreement through IMC. Note that this does not mean that there is no

investment in tourism marketing at all. The *B-P* invests in tourism marketing and the small players free ride on it.

Let us look at the two symmetric constellations. Consider a centered *S-P* with only *S-P*s as direct neighbours (constellation 3). Free riding at the expense of the neighbours is per se impossible because none of the municipalities can expect the others to take the lead by starting to invest in tourism marketing. However, IMC can be a way for the centered *S-P* to provide tourism marketing together with its neighbours. And because of lower transaction costs, municipalities with similar preferences come to a cooperative agreement more easily than those with diverging preferences. The centered *S-P* starts IMC more likely than in the two asymmetric constellations.

The final constellation is characterized by a centered *B-P* with only *B-P*s as direct neighbours (constellation 4). Contrary to constellation 3, the surrounding municipalities as well as the centered *B-P* still have incentives and the opportunity to free ride on each other. But because all of them have a similar preference for tourism marketing, other things equal, reaching an agreement is expected to be easier and more likely because of lower transaction costs than in the asymmetric constellations.

In reality, we will encounter constellations that differ from these four stylized constellations. In particular, some neighbours are *S-P* and some are *B-P*. In this context it is important to note that for a centered *B-P*, a *S-P* as neighbour has not much impact on the decision to cooperate when there are several other similar *B-P*s, but for a centered *S-P* only one single *B-P* provides an opportunity to free ride, which has a large effect on IMC emergence.

From the stylized model we expect that especially *S-P*s refrain from starting IMC when they have the opportunity to free ride (constellation 1) compared to the case when they do not have the opportunity (constellation 3). Thus, our first hypothesis reads:

H1: *Having the opportunity to free ride, small players are less likely to start IMC than small players without this opportunity.*

The number of direct neighbours plays an important role in examining IMC emergence. Recall, neighbours with similar preferences are better suited as cooperation partners than others because transaction costs are lower. We test this argument by distinguishing between *S-P*s (constellation 3) and *B-P*s (constellation 4).

H2a: *The more neighbours with a similar preference a small player has, the more likely it is to start IMC.*

H2b: *The more neighbours with a similar preference a big player has, the more likely it is to start IMC.*

By testing **H1** we are going to find out whether a *S-P* starts IMC less likely if it has the opportunity to free ride. Free riding opportunity is given if a neighbouring *B-P* exists. However, a neighbouring *B-P* does not only provide the opportunity to free ride, it also has diverging preferences for tourism marketing, which leads to higher transaction costs and, thus, to the second argument, which might explain less IMC in this constellation. To find out whether free riding is the reason for a lower probability to start IMC, we have to control for the number of neighbours with a similar preference for tourism marketing in scenarios with and without an additional neighbouring *B-P*. Consider constellation 3, a centered *S-P* with three direct neighbours that are all *S-P*s and compare it with constellation 1, consisting of a centered *S-P* which has four direct neighbours, three are *S-P*s and the fourth is a *B-P*. Other things equal, if we observe no difference in the probability to start IMC between the two scenarios, we can be sure that there is no free riding effect that prevents IMC. But if there is a higher probability to start IMC for constellation 3 compared to constellation 1, even when constellation 1 has in total

one more neighbour, we can expect that there is free riding behaviour. The final hypothesis reads:

H3: *Among small players, an additional neighbour with a similar preference for tourism marketing leads to a lower rise in the probability to start IMC if there is a big player around, compared to if there is no big player around.*

3.5 Empirical Strategy

3.5.1 Data sources

Our analyses build on data from Western German local governments remote from metropolitan regions merged with official data on municipal level from the Land Statistical Offices. They include population, geographical, political and financial as well as tourism related data. Unfortunately, there is no official data base of inter-municipal cooperation in Germany. That is why we ran a survey and asked all 4,610 local governments in Western Germany that are remote from metropolitan regions[11] to participate by filling in the mail-sent questionnaire on paper or online.[12] We received 507 answers from all Western German states (except the city states Berlin, Hamburg and Bremen) which represents a response rate of ca. 11 %. Not all of them answered all relevant questions and some respondents made contradictory statements. Because of this and because of missing data in several important explanatory variables, we must

[11] These are municipalities with less than 250,000 inhabitants. Smaller municipalities that are located in metropolitan areas around the big cities with an in and outbound commuter connection of at least 9 % are removed from the population.

[12] The data on municipalities´ provision of tourism marketing was part of a larger survey, in which we also asked municipalities about provision in other fields, namely construction yard as well as internal administration. Note that we also asked municipalities from East Germany in the first place, but excluded them from the study because these municipalities were affected by substantial structural reforms in our observation period. Changing jurisdictions causes problems in assigning data to municipalities. Furthermore, the emergence of IMC in an environment with changing jurisdiction is difficult and the situation cannot be compared to the stable situation in West-German states.

reduce the number of observations to 303 municipalities. Nevertheless, it compiles a solid data base in order to answer our research questions.

Our sample is not representative and there is no reliable information about existing IMCs in Western Germany. For that reason, we do not know the actual cooperation behaviour for Western German municipalities. We are aware that there could be a response bias. After talking to local politicians and because IMC is increasingly promoted by superordinate governments, we get the impression that social desirability in favour of IMC exists. That is why we check in a first step whether the stated IMCs really exist, by consulting the tourism associations´ websites. In a second step, we follow Solon et al. (2015) and account for several factors that could cause other potential selection biases. In our regression models, we control for municipalities´ fiscal situation, population size, the extent of tourism etc. In the end, we cannot be entirely sure that we disposed of all doubts of a potential response bias. Nevertheless, we are confident that we did the utmost to dispose of these problems.

In the survey, we ask municipalities how they conduct their tourism marketing, i.e. which entity (county, municipality itself, municipality in cooperation with others, private provider etc.) is mainly responsible for it. Because we are mostly interested in IMC, we further ask detailed questions about the configuration of the IMC regarding the start of the cooperation, cooperation partners, legal form as well as terminated/expired and future IMCs.

3.5.2 Endogenous variable

We focus on long-term IMCs organized in tourism associations.[13] The endogenous variable IMC_{it} is 1 for those municipalities that start IMC at a particular time interval t (ticked

[13] That is why we dropped 52 observations where the respondents ticked option 1 or 2.

option number three[14]). It is 0 if option number four, five, six or seven was chosen. The observation period lasts from the year 2000 to 2015. Because we use hazard model, all municipalities are observed over time until they start IMC or start another provision type (privatization, delegation to the county, delegation to the "Verbandsgemeinde"). If a municipality starts providing tourism marketing in one of the mentioned provision types, it is censored for all following periods after the start (all the following periods in the panel are deleted). Municipalities that have not started an IMC in the observation period are censored after 2015. Out of 303 municipalities 126 (42 %) start an IMC at some point in the observation period and 26 (9 %) start one of the alternative provision types. We assume that municipalities which provide the service by one of the mentioned alternative provision types do not start IMCs on top of it. This is justified by the fact that we asked for the prevalent provision type in tourism marketing (see Figure A1 in Appendix A). Some municipalities stated that they initiate IMC before the year 2000. Adding these observations to the sample would bias our results, because it directly influences the probability of starting additional IMC between 2000 and 2015 significantly and there would be no variation in these observations, because beginning an additional IMC is very unlikely. Consequently, we dropped them from the sample.

3.5.3 Identification strategy

Our main purpose is to identify factors that explain the emergence of IMC in tourism marketing. The focus rests on the role of intra-regional spillovers from tourism marketing. We build on Olson and Zeckhauser´s (1966) exploitation of the great by the small and derive three hypotheses that we want to test. Essentially, we argue that big players which have a high interest in tourism marketing get exploited by the small players by free riding. In such constellations, we expect IMC to emerge less likely. We measure the preference or interest in tourism

[14] Figure A1 in Appendix A shows the translated question from the questionnaire.

marketing by the extent of municipalities' annual overnight stays per capita. The higher it is the more a municipality depends on tourism and the higher is the interest in promoting it (other things equal). Additionally, we control for several factors like demographic, political, institutional, geographic and financial characteristics.

First, we introduce a dummy variable ***S-P*** (small player) that is 1 if municipality *i´*s annual overnight stays per capita are below the median of all direct neighbours (0 else). As mentioned before, being a small player is always defined in relative terms (compared to the values of the direct neighbours)[15]. Second, we identify whether there is at least one big player as a direct neighbour by adding a dummy variable to the model (***BP_AROUND***). It is 1 if municipality *i* has at least one direct neighbour whose annual overnight stays per capita are at least 4 times[16] the overnight stays per capita of the centered municipality *i* (0 else). It serves as a measure for the opportunity to free ride. At the same time, it illustrates that there are highly diverging preferences of municipality *i* with at least one direct neighbour. Third, we construct an interaction variable of ***S-P*** and ***BP_AROUND*** (***S-P*BP_AROUND***) to clearly distinguish between small players with and without a big player as direct neighbour. By adding an interaction variable to the model, the interpretation of the coefficients of the interaction variable´s components changes compared to usual dummy variables. The effect of ***S-P*BP_AROUND*** represents the difference in the likelihood to start IMC between small players that have at least one big player as direct neighbour and those that do not have a big player as direct neighbour. To illustrate it differently, it shows the differences in the likelihood to start

[15] For instance, a municipality A in a vibrant tourism region that has a huge number of annual overnight stays per capita in absolute terms can be classified as a *S-P* if its neighbours have even more annual overnight stays per capita. On the other hand, a municipality B can be classified as a big player with a lower number of annual overnight stays per capita than municipality A if it is located in a non-touristic region, but has annual overnight stays per capita higher than the median of its neighbours.

[16] Note that we conduct several robustness checks with alternative definitions of ***BP_AROUND*** (see footnote 23 and 24 on page 49).

IMC between constellation 1 and 3 of Figure 3.2. It is the main variable to test **H1**. The coefficient of ***S-P*** represents the likelihood to start IMC if municipality *i* is a small player which does not have a big player as direct neighbour, compared to the case that municipality *i* is a big player.

The variable ***B-P*** (big player) is 1 if municipality *i´*s annual overnight stays per capita are above the median of its direct neighbours (0 else). We add the variable ***NUMSIM_STAYS_PC*** to the model which counts the absolute number of municipality *i´*s direct neighbours whose annual overnight stays per capita do not differ by more than 25 % of municipality *i*. It takes on non-negative integer values that range from 0 to 5. The variable serves as a proxy for the number of direct neighbours with a similar preference for tourism marketing and indicates low transaction costs between potential partners. Again, we construct an interaction variable (***B-P*NUMSIM_STAYS_PC***). It clearly distinguishes between the impact on IMC of the number of neighbours with a similar preference for tourism marketing if municipality *i* is a big player (constellation 4), compared to the case when municipality *i* is a small player (constellation 3). Note that there can also be neighbouring big players in constellation 3 and small players in constellation 4. What matters is the absolute number of similar neighbouring small players in constellation 3 and the absolute number of similar neighbouring big players in constellation 4. The variable ***B-P*NUMSIM_STAYS_PC*** and its components are the main variables to test **H2a** and **H2b**.

Finally, we introduce the interaction variable ***BP_AROUND*NUMSIM_STAYS_PC***. It represents the difference in the likelihood to start IMC of an additional neighbour that has a similar preference for IMC with and without a big player as direct neighbour. It is the main variable in order to test **H3**.

3.5.4 Control variables

We control for several types of (low) transaction costs by introducing three variables that cover the number of similar direct neighbours regarding different characteristics. Again, similar means that the value of characteristics does not differ by more than 25 % between municipality *i* and a direct neighbour. The variables are *NUMSIM_EXP_OV_REV* and *NUMSIM_TAX_PC*. The former captures municipality *i´s* absolute number of neighbours with a similar ratio of expenditures over revenues and measures similar preferences for fiscal stress. The latter represents the absolute number of neighbours with similar per capita tax revenues and measures similar preferences for fiscal capacity. The variable *NUMSIM_POP* represents the absolute number of similar neighbours regarding population size. Furthermore, neighbours with the same governing party can reduce transaction costs as well because local governments with the same ideology and beliefs in politics come to an agreement easier. We count the absolute number of municipality *i´*s direct neighbours that have the same strongest party in the municipal council (*SAME_STRONGEST_PARTY*). Finally, an absolute majority in the municipal council makes political decisions easier (*ABSOLUTE_MAJORITY*). That is true for the decision for or against IMC.

Existing studies show that fiscal pressure is one of the main drivers for IMC (see section 3.2). That is why we control for municipalities´ annual tax revenues per capita (*TAX_REV_PC*) as an indicator for fiscal capacity. And for the ratio of expenditures and revenues (*EXP_OV_REV*) which covers municipalities´ fiscal stress. Municipalities´ population size (*POP*)[17] has shown significant impact in former studies as well (see section 3.2).

[17] Population is calculated in 1000 inhabitants.

With respect to municipalities´ geographical location we control for various characteristics. Municipalities that are located near important touristic sites have an exogenous advantage in attracting tourists. We include *NEAR_TOURISTIC_SITE* that is 1 if important touristic sites are within a 20 km radius (0 else).[18] Because we use data on touristic sites from the year 1997, they are time-invariant and clearly exogenous to the model. We further introduce the distance to the next big city (over 100,000 inhabitants), because on the one hand, almost all of these cities attract a reasonable number of tourists[19], on the other hand, they invest a significant amount in tourism marketing, which might spill over to nearby municipalities (*DISTANCE_BIG_CITY*). We account for the absolute number of direct neighbours (*NUM_NEIGHBOURS*) and for municipalities that are located at a county border or at a state border with two dummy variables (*COUNTY_BORDER*, *STATE_BORDER*). Because of institutional differences between municipalities of different counties/states, we expect those IMCs to emerge less likely. State fixed effects are added to the model, to cover differences in the administrative structure of the states. We also introduce time fixed effects to control for unobserved shocks that might have an impact on IMC in tourism marketing.

We add a dummy variable (*ONLINE*) that equals 1 for respondents who filled in the questionnaire online and 0 for those who filled in the printed questionnaire. Finally, we distinguish between several types of municipalities to control for institutional differences. We add a dummy variable (*VERBANDSGEMEINDE_1*) that is 1 if the municipality is part of a "Verbandsgemeinde" and their internal administration is mandatorily carried out by the "Verbandsgemeinde" (0 else). And a dummy variable that is 1 if a municipality is part of a "Verbandsgemeinde" without the mentioned obligation to transfer the internal administration

[18] The Baedeker Travel Guide (1997) attributes one star for interesting touristic spots or municipalities and two stars for very special touristic spots. In Germany 280 municipalities qualify for either one or two stars. We use its definition of important touristic sites in Germany.

[19] See the official German tourism statistics at https://www.regionalstatistik.de/genesis/online.

to the "Verbandsgemeinde" (*VERBANDSGEMEINDE_2*). "Einheitsgemeinden" serve as the omitted control group. In order to get better insights into our sample, a table of descriptive statistics containing all the exogenous variables we use, is presented in Table 3.1.

Matrix	Variable	Obs	Mean	Std. Dev.	Min	Max
Freeriding	***S-P***	2,937	0.5679265	0.4954489	0	1
	BP_AROUND	2,937	0.3258427	0.4687687	0	1
	S-P*BP_AROUND	2,937	0.2138236	0.4100736	0	1
	B-P	3,471	0.3710746	0.483162	0	1
	NUMSIM_STAYS_PC	3,471	1.039182	0.9625062	0	5
	B-P*NUMSIM_STAYS_PC	3,471	0.6081821	0.9222088	0	5
	BP_AROUND*NUMSIM_STAYS_PC	2,937	0.4824651	0.7957968	0	4
Controls.fiscal	*NUMSIM_TAX_REV_PC*	3,471	4.067128	1.856165	1	12
	NUMSIM_EXP_OV_REV	3,471	5.958225	2.046079	1	15
	EXP_OV_REV	3,471	0.9259618	0.5124877	-27.55565	3.149509
	TAX_REV_PC	3,471	5147.551	270694	-76.20529	2738.75
Controls.demogr	*NUMSIM_POP*	3,471	2.044944	1.05018	1	6
	POP (in 1000)	3,471	7.637997	1.295385	0.019	8.8759
Controls.other	*ABSOLUTE_MAJORITY*	3,471	0.3820225	0.485952	0	1
	NUM_NEIGHBOURS	3,471	6.133967	1.893924	1	16
	NEAR_TOURISTIC_SITE	3,471	0.4747911	0.4994361	0	1
	COUNTY_BORDER	3,471	0.6286373	0.4832388	0	1
	STATE_BORDER	3,471	0.1428983	0.3500195	0	1
	DISTANCE_BIG_CITY	3,471	6.232303	3.616496	7.908762	30.15864
	ONLINE	3,471	0.5808124	0.4934972	0	1
	VERBANDSGEMEINDE_1	3,471	0.397868	0.4895285	0	1
	VERBANDSGEMEINDE_2	3,471	0.1302218	0.3365958	0	1

Table 3.1: Descriptive statistics; exogenous variables

3.5.5 Empirical method

Unlike a lot of other papers in the IMC emergence literature, we do not conduct an ordinary binary panel regression (e.g. Di Porto et al., 2013) or cross section analysis with a binary endogenous variable (e.g. Blaeschke, 2014; Bel et al., 2013; Feiock et al., 2009) to explain the emergence of IMC. Cross section approaches actually explain the existence not the emergence of IMC and entirely ignore the time dimension. Panel models incorrectly imply that the decision to cooperate is made again and again each year while municipalities just keep

cooperating. However, the actual objective is to explain the emergence of IMC at a particular point in time. This is guaranteed by applying hazard model, which explicitly explains the switch from no cooperation to cooperation. An additional argument in favour of hazard model is that IMCs are actually quite consistent once they have started. Furthermore, changing back to no cooperation in tourism marketing (as well as in other fields) can hardly ever be observed in the data set.[20] Thus, a good predictor that explains whether a municipality cooperates in time interval *t* is to look at whether it has cooperated in *t-1*. That is why we assume that IMC in our observation period is definite. One might argue that municipalities can start a second IMC in tourism marketing over time and, therefore, censoring observations in periods following the start of municipality *i´s* first IMC in the panel would be inappropriate. But according to our data, starting an additional IMC in tourism marketing seems very unlikely because almost all of the IMCs in our sample are institutionalized in tourism associations. Either municipalities join the existing tourism association or they do not. Founding a second tourism association cannot be found in our data either.

Furthermore, hazard models address endogeneity issues in a way that ordinary panel models are not able to by dropping (censoring) all following observation periods of an observation *i* after the event (starting IMC) occurs. All kinds of backward effects from exogenous variables on the endogenous one are prevented. For instance, this issue is critical if fiscal stress influences the decision to cooperate and later on cooperation determines the level of fiscal stress.

In hazard models the probability to start IMC depends on time intervals in which municipality *i* can start IMC, and on the explanatory variables that affect the hazard rate

[20] Only two out of the 507 municipalities state a disbandment of an IMC in its history.

independently of time. Nevertheless, explanatory variables can vary over the time intervals. The hazard rate function is defined as the probability of failure within interval *t* and *t+1* divided by the probability of surviving at least until time interval *t*. Under the assumption of a complementary log–log distribution the discrete hazard function reads (Allison, 1982):

$$P_{it} = 1 - \exp[-\exp(\beta' X_{it})] \tag{1}$$

P_{it} equals the probability of starting an IMC in the time interval *t*, given that it has not started an IMC or got censored before. $\beta' X_{it}$ represents the matrix of explanatory variables and its corresponding coefficients.

The data set includes information about the year in which the municipality starts an IMC. Therefore, our data can be considered as discrete, even if they are intrinsically continuous. The appropriate estimation method for this kind of data is the cloglog model with discrete time intervals for each year (e.g. Jenkins, 2005; Allison, 1982).

In order to test the hypotheses, we apply the explained complementary log-log model. Our regression model reads:

$$IMC_{it} = f(Freeriding_{it-2}, Controls.fiscal_{it-2}, Controls.demogr_{it-2}, Controls.other_{it}, FE_t, FE_s)$$

IMC_{it} is 1 for those municipalities that start an IMC at a particular time interval *t*. The matrix *Freeriding* represents the variables that cover the main variables of interest that are the most important to test our three hypotheses. Note that *Freeriding* consists of slightly different variables for each of the models (see section 3.5.6 or Table 3.2). The three *Control* matrices consist of fiscal, demographic, geographical political and institutional control variables that are identical for each model. We do not assume a functional form of the base line hazard. Alternatively, we include dummy variables for each time interval (FE_t) and apply a fully non-parametric approach. State fixed effects FE_s are added to the model. Standard errors are clustered at state level. We lag tourism related, demographic and fiscal variables by two years

because the awareness for the need to start IMC in tourism marketing lies in the past. Furthermore, looking for suitable partners and the IMC bargaining process itself takes time until the cooperation finally starts. Thus, an observed IMC is the end of a process. The approach of lagging exogenous variables further helps to overcome endogeneity problems through simultaneity. As a robustness check, we test another specification of lagged variables by taking the mean value of *t*-1 and *t*-2 (see section 3.6). Before running the regressions, we checked for high correlations between all of our exogenous variables. We do not find critical correlation coefficients between them.

3.5.6 Regression models

We test our hypothesis in three different regression models, because having ***S-P*** and ***B-P*** in one model would result in multicollinearity and some variables are interacted with multiple other variables. In model 1 we test **H1**, that is why it includes ***S-P***, ***BP_AROUND*** as well as ***S-P*BP_AROUND***. For small players, we examine whether the opportunity to free ride (a big player as direct neighbour exists) changes the probability to start IMC compared to situations without this opportunity. In model 2 we test **H2a** and **H2b**. Compared to model 1 we drop the former three variables and add ***B-P*** and ***B-P*NUMSIM_STAYS_PC*** in order to test whether an additional neighbour with a similar preference for tourism marketing changes the probability to start IMC for small players as well as for big players. In the final model 3, we only look at small players in order to test **H3**. Consequently, we drop all the big players. We reintroduce ***BP_AROUND*** and create the interaction variable ***BP_AROUND*NUMSIM_STAYS_PC*** to examine if among small players, an additional neighbour with a similar preference has a different impact on IMC, with and without a big player as direct neighbour. By means of this, we can identify to what extent free riding is the reason of less expected IMC or if only high transaction costs, caused by diverging preferences for tourism marketing, prevent IMC.

3.6 Results

In model 1 (Table 3.2) we test **H1**. The highly significant coefficient of the interaction variable ***SP*BP_AROUND*** suggests that small players which have the opportunity to free ride (a big player as direct neighbour exists) have a 69 % lower probability to start IMC than small players without this opportunity.[21] Further, the results allow us to make more detailed interpretations. We can compare the likelihood of big players starting IMC with the likelihood of small players, which differ in having the opportunity to free ride or not, starting IMC. As ***S-P*** indicates, without an opportunity to free ride, small players have a 58 % higher probability to start IMC than big players. With an opportunity to free ride, small players have an 11 % lower probability to start IMC than a big player. It indicates that small players compared to big players only start IMC more likely if there is no opportunity to free ride.[22] The sizeable hazard ratio of 69 % underlines the strong effect of the opportunity to free ride on the probability to start IMC. Our results confirm **H1**.[23]

By looking at the positive and highly significant impact of the variable ***NUMSIM_STAYS_PC***[24] in model 1, it becomes clear that additional similar neighbours,

---

[21] Note that we report coefficients in Table 3.2. In order to interpret the sizes of the effects we calculate hazard ratios (e.g. Jenkins, 2005). The regression tables with hazard ratios instead of coefficients are reported in Appendix A, Table A1.

[22] It is straightforward to realize that the aforementioned 69 % lower probability to start IMC for small players with the opportunity to free ride, compared to small players without this opportunity, is the difference between a 58 % higher probability and an 11 % lower probability to start IMC.

[23] Because of the arbitrary chosen definition that a big player has 4 times more annual overnight stays per capita as municipality *i*, we apply robustness checks with alternative definitions. We changed the definition of ***BP_AROUND*** from 4 times to 5 times, 6 times, and 7 times. The results are robust to these changes. The three columns in Table A2 (Appendix A) show basic model 1 with ***BP_AROUND*** defined as 5, 6 and 7 times. The three columns in Table A3 show basic model 3 with the same definitions. In basic model 2, ***BP_AROUND*** is not included.

[24] The variable ***NUMSIM_STAYS_PC*** counts municipality *i´s* direct neighbours who´s annual overnight stays per capita does not differ by more than 25 % and assume that these neighbours have similar preferences for tourism marketing. We change this arbitrary definition of similar preferences in a robustness check and

VARIABLES	(1)		(2)		(3)	
	Coeff	Std. Err	Coeff	Std. Err	Coeff	Std. Err
S-P	0.457**	(0.183)				
NUMSIM_STAYS_PC	0.406***	(0.124)	0.404***	(0.0743)	0.638***	(0.0635)
BP_AROUND	1.276***	(0.296)			0.577	(0.539)
S-P*BP_AROUND	-1.174***	(0.409)				
B-P			0.283	(0.216)		
B-P*NUMSIM_STAYS_PC			-0.280**	(0.119)		
BP_AROUND*NUMSIM_STAYS_PC					-0.399**	(0.173)
NUMSIM_TAX_REV_PC	-0.0244	(0.0896)	-0.0587	(0.0438)	-0.00268	(0.0855)
NUMSIM_EXP_OV_REV	0.148**	(0.0694)	0.0903**	(0.0440)	0.0238	(0.0635)
NUMSIM_POP	0.110	(0.0757)	0.0721	(0.0678)	0.0866	(0.103)
EXP_OV_REV	0.831*	(0.469)	0.301	(0.338)	1.083*	(0.593)
TAX_REV_PC	-6.28e-05	(0.00036)	-0.000104	(0.000380)	5.13e-05	(0.00066)
POP	-3.79e-05***	(1.47e-05)	-3.36e-05***	(8.10e-06)	-3.93e-05	(5.88e-05)
NEAR_TOURISTIC_SITE	0.490***	(0.162)	0.308***	(0.0928)	0.585***	(0.224)
DISTANCE_BIG_CITY	3.19e-06**	(1.56e-06)	4.18e-06***	(9.97e-07)	4.52e-06	(4.46e-06)
COUNTY_BORDER	-0.156	(0.224)	-0.144	(0.192)	0.119	(0.259)
STATE_BORDER	0.0987	(0.169)	-0.113	(0.219)	-0.232	(0.278)
NUM_NEIGHBOURS	-0.0526	(0.111)	0.0982*	(0.0520)	0.0950	(0.123)
ABSOLUTE_MAJORITY	-0.0117	(0.107)	0.0328	(0.199)	-0.224	(0.287)
ONLINE	0.211	(0.165)	0.167	(0.241)	0.0896	(0.249)
VERBANDSGEMEINDE_1	-0.449	(0.308)	-0.446***	(0.141)	-0.232	(0.668)
VERBANDSGEMEINDE_2	0.465***	(0.0745)	0.537***	(0.0941)	0.821***	(0.275)
Observations	**2,063**		**2,438**		**1,206**	
Time Interval Dummies	**Yes**		**Yes**		**Yes**	
State Fixed Effects	**Yes**		**Yes**		**Yes**	
Clustered Standard Errors (States)	**Yes**		**Yes**		**Yes**	

Table 3.2: Regression results; basic specification

regarding annual overnight stays per capita, increase the likelihood to start IMC. Unfortunately, in model 1 we are not able to distinguish whether there are different effect sizes between small and big players. That is what we do in regression model 2 by testing **H2a** and **H2b**. Deriving from ***B-P*NUMSIM_STAYS_PC*** and ***B-P***, the results show that with an additional neighbour which has a similar preference for tourism marketing, the likelihood to start IMC for big players rises on average by 26 % and for small players it rises on average by 50 %. Here too, the difference between both equals the hazard ratio of the interaction variable ***B-***

rerun the three basic models. In the two additional specifications, a neighbour is defined as similar if the value differs by at most 20 % and by at most 33 %. The results remain robust to these changes. The results are presented in Appendix A, Table A4 for 20 % and Table A5 for 33 %.

P*NUMSIM_STAYS_PC (24 %). We can clearly confirm **H2a** and **H2b** and find that with an increasing number of similar neighbours for small as well as for big players, the likelihood to start IMC increases. The results also show that an additional similar neighbour for small players has a higher impact on the likelihood to start IMC than an additional similar neighbour for big players.

In regression model 3, we split the sample and only keep the small players to further examine if the result from **H1** is driven by free riding or by transaction costs. We find that for small players which have a big player as direct neighbour, an additional neighbour with a similar preference in tourism marketing increases the likelihood to start IMC on average by 57 %. The effect for small players without a big player as direct neighbour is 89 %. The difference between both is 32 %, which is the hazard ratio of ***BP_AROUND*NUMSIM_STAYS_PC***. Given the same number of direct neighbours with a similar preference for tourism marketing, it indicates that there is a lower probability to start IMC with an additional big player as direct neighbour, compared to no big player as direct neighbour. This can be interpreted as the free riding effect. Our results confirm **H3.** It provides evidence that Olson and Zeckhauser´s (1966) exploitation of the great by the small is highly relevant for our context.

Unfortunately, *SAME_STRONGEST_PARTY* suffers from a lot of missing values and reduces our sample significantly. That is why we exclude it from the basic model. Nevertheless, we run all three basic models including it (see Table 3.3). When included, it is insignificant while the impact of the other variables remains mostly the same. Most importantly, the performance of major variables remains unchanged with one exception. By testing **H3**, ***BP_AROUND*NUMSIM_STAYS_PC*** shows no significant impact. However, we test **H3** in a sub sample with small players only, which reduces the number of observations in a first step. In a second step the missing values of variable *SAME_STRONGEST_PARTY* reduce the sub sample again by 35% and we end up with only 169 municipalities. We are convinced that the

insignificance is caused by the low number of observations. Our results of model 3 are also robust to changes in the definition of ***BP_AROUND*** and in the definition of ***NUMSIM_STAYS_PC.***[25]

Our control variables provide the following results. Municipalities located near touristic sites (*NEAR_TOURISTIC SITE*) start IMC more likely. The same is true for municipalities´ distance to the next big city (*DISTANCE_BIG_CITY*). The number of similar neighbours regarding fiscal stress (*NUMSIM_EXP_OV_REV*) is positively significant in model 1 and 2. It is not significant in model 3 and neither in the models with *SAME_STRONGEST_PARTY* (see Table 3.3). Because the result is not stable we doubt its relevance in explaining the emergence of IMC in our context. Population size (*POP*) has a negatively significant impact on IMC emergence in model 1 and 2 but not in model 3. Institutional differences in the organisation of the very small municipalities play a role in cooperation behaviour. Municipalities that are part of a "Verbandsgemeinde" without the obligation to transfer the internal public administration to the "Verbandsgemeindelevel" (*VERBANDSGEMEINDE_2*) are more likely to start IMC than "Einheitsgemeinden". Furthermore, the larger municipalities are in terms of population size, the less likely they are to start IMC.

As a robustness check, we run our regressions with another variant of lagged variables. Instead of applying a two years lag, we take the mean values of *t-1* and *t-2*. The performance of the major variables remains unchanged. Only *POP* and *NEAR_TOURISTIC_SITE* lose their significance. The impact of both control variables has to be treated with caution. The regression results are reported in Appendix A, Table A6.

[25] See footnote 23 and 24 on page 49 Regression tables are presented in Appendix A, Table A3, A4 and A5.

VARIABLES	(7)		(8)		(9)	
	Coeff	Std.Err	Coeff	Std.Err	Coeff	Std.Err
S-P	0.338***	(0.121)				
NUMSIM_STAYS_PC	0.409***	(0.121)	0.401***	(0.0726)	0.653***	(0.0883)
BP_AROUND	1.295***	(0.312)			0.661	(0.570)
S-P*BP_AROUND	-1.061***	(0.359)				
B-P			0.298	(0.216)		
B-P*NUMSIM_STAYS_PC			-0.267**	(0.105)		
BP_AROUND_NUMSIM_STAYS_PC					-0.350	(0.237)
NUMSIM_TAX_REV_PC	-0.0355	(0.0866)	-0.0892**	(0.0432)	0.0247	(0.0765)
NUMSIM_EXP_OV_REV	0.151*	(0.0780)	0.0765	(0.0476)	-0.0230	(0.0787)
NUMSIM_POP	0.120*	(0.0629)	0.114**	(0.0540)	0.0848	(0.0719)
SAME_STRONGEST_PARTY	0.000162	(0.0523)	-0.0313	(0.0440)	0.121	(0.112)
ABSOLUTE_MAJORITY	0.0138	(0.131)	0.0314	(0.236)	-0.338	(0.292)
NUM_NEIGHBOURS	-0.0750	(0.125)	0.104**	(0.0416)	0.0235	(0.164)
NEAR_TOURISTIC_SITE	0.462***	(0.135)	0.302***	(0.0791)	0.374*	(0.196)
EXP_OV_REV	0.920	(0.587)	0.298	(0.414)	1.674**	(0.666)
TAX_REV_PC	2.45e-06	(0.000404)	-7.72e-05	(0.000358)	0.000345	(0.000876)
POP	-0.0342***	(0.0111)	-0.0301***	(0.00725)	-0.0446	(0.0800)
COUNTY_BORDER	-0.0368	(0.253)	-0.0877	(0.249)	0.439*	(0.241)
STATE_BORDER	0.0172	(0.165)	-0.155	(0.208)	-0.487	(0.306)
DISTANCE_BIG_CITY	0.00340**	(0.00156)	0.00341**	(0.00136)	0.00507	(0.00509)
ONLINE	0.244	(0.154)	0.203	(0.236)	0.133	(0.352)
VERBANDSGEMEINDE_1	-0.377	(0.329)	-0.468***	(0.142)	0.0748	(0.743)
VERBANDSGEMEINDE_2	0.554***	(0.0951)	0.584***	(0.0874)	0.946***	(0.296)
Observations	**1,613**		**1,852**		**784**	
Time Interval Fixed Effects	**Yes**		**Yes**		**Yes**	
State Fixed Effects	**Yes**		**Yes**		**Yes**	
Clustered Standard Errors (States)	**Yes**		**Yes**		**Yes**	

Table 3.3: Regression Results; including *SAME_STRONGEST_PARTY*

3.7 Discussion and Conclusion

In the current paper we examine the emergence of IMC in the public service tourism marketing. The main question asked is: Does the existence of regional spillovers have an impact on the emergence of IMC in tourism marketing? We use information about whether and when Western German municipalities started IMC between the year 2000 and 2015 from a survey and merge it with official fiscal, demographic, geographic, political and tourism data on municipality level to a unique data set. We can conduct our analysis on 303 municipalities. We

close a gap in the literature by explicitly taking regional spillovers into account by analysing its impact on the emergence of IMC. The spillover argument is often pointed out, but existing studies do not directly account for its impact on IMC emergence (see section 3.2). In our identification strategy, we build on Olson and Zeckhauser´s (1966) famous exploitation hypothesis. In their framework the small free ride on the great and exploit them. We define great and small in terms of municipalities´ preference or interest in tourism marketing. It is assumed that each municipality is embedded in a spatial constellation of great and small municipalities. These constellations help identify to what extent there is the opportunity to free ride.

As a methodical contribution we apply hazard model, which has never been used before to explain the emergence of IMC. To answer the question under which conditions a municipality starts IMC, hazard model is superior to the usual applied methods because it explicitly explains the start of an IMC, namely switching from no cooperation to cooperation at a particular point in time. Additionally, hazard models address endogeneity problems through backward effects from the endogenous variable of the exogenous ones much better than the usual methods.

Our results are in line with Olson and Zeckhauser´s (1966) proposition that the small exploit the great. Especially the small municipalities (low interest in tourism marketing) that have the opportunity to free ride on great neighbours (high interest in tourism marketing) act opportunistically and start IMC less likely. We can show that the lower probability to start IMC in a scenario with a free riding opportunity is due to spillovers and not only due to high transaction costs. The results confirm that spillovers and its consequences play an important role in the emergence of IMC. With this result, again, we want to stress that this neglected aspect deserves more attention in the IMC literature and ignoring it could lead to

misinterpretation of coherences. Olson and Zeckhauser´s (1966) exploitation hypothesis provides an appropriate basis in order to illustrate the free rider problem in IMC.

We also find that municipalities´ number of direct neighbours with a similar preference for tourism marketing significantly increases the likelihood to start IMC. The effect is larger for the ones with a low interest than for those with high interest in tourism marketing. It means that an additional similar neighbour for municipalities with a low interest has a higher impact on the likelihood to start IMC than a similar neighbour for municipalities with a high interest. One explanation could be that high interest municipalities often simply do not have the need to start IMC, even when there are suitable partners available. The utility they receive from the provision of tourism marketing seems to be large enough to be profitable even without cooperation. Note that IMC is always a trade-off between giving up some autonomy and gaining positive effects, like improving efficiency by internalizing spillovers or by exploiting economies of scale (e.g. Ferris and Graddy, 1988). Apparently, low interest municipalities depend on the gains from IMC to a higher degree than high interest municipalities. As outlined by Feiock´s ICA (2007) and Feiock et al. (2009), we show that similar preferences between potential cooperation partners reduce transaction costs and increase the likelihood to start IMC. We conclude, not the mere number of neighbours determines the emergence of IMC, but the number of neighbours that share preferences for the public service.

The higher municipalities´ distance to the next big city, the more likely they are to start IMC. This indicates additional support of an impact of spillovers on IMC because big cities usually invest in tourism marketing and/or attract tourists anyway. Because these spillovers decrease with distance, we observe IMC as more likely for municipalities that are far away from big cities because with distance also the opportunity to free ride decreases. Finally, we cannot confirm the finding of the existing literature that the likelihood of starting IMC declines with

population size. Unlike in the basic specification, we do not find evidence for an impact of population size in most of our robustness checks.

The current paper suffers from some limitations. First, with the measures of differences between municipalities regarding their annual overnight stays per capita, we simply assume rather than explicitly prove the existence of spillovers. Data on municipalities' tourism marketing expenditures are required in order to clearly identify spillovers. Unfortunately, in German official statistics it is part of a compound measure including other assets and it is impossible to separate it properly. Having data on tourism marketing expenditures, future research can provide refined insights by quantified spillover effects, for example by applying spatial autoregressive model (SAR) with tourism marketing expenditures as the dependent variable (e.g. LeSage, 2014). Nonetheless, with our measure, we are able to identify and isolate the important effects and test our hypotheses. Second, our data stem from a survey and might suffer from a response bias. As explained in section 3.5, our approaches encounter a potential social desirability response bias in favour of IMC and potential other response biases. We checked whether the stated IMCs really exist by consulting the tourism associations´ websites and controlled for factors in our exogenous variables that could cause a response bias (Solon et al., 2015), but due to the fact that there is no information available about the actual number of IMC in tourism marketing in Germany, we cannot guarantee that we eliminate the response biases entirely. Nevertheless, we are confident that we did the utmost to dispose of the problem.

Let us finish the paper with policy implications. Apart from structural reforms, voluntary IMC is an alternative solution to deal with spillovers on municipality level. We find that IMC exists in regions where we would usually expect free riding behaviour, but our results also show that IMC emerges less likely in such regions. Especially in asymmetric constellations where municipalities have divergent preferences for tourism marketing, federal and state governments could help to overcome the free riding dilemma by subsidies. Some German states like Hesse

or Bavaria have implemented subsidy programs for IMC (e.g. Kompetenzzentrum für Interkommunale Zusammenarbeit, 2016), but so far they are not particularly designed for overcoming free riding behaviour. They simply provide financial incentives for IMCs and support municipalities in legal and organizational affairs. However, even the mere financial incentive can help to start IMC, especially in cases in which the subsidy equals at least the gains they receive by free riding. Another recommendation to encounter free riding behaviour is to shift the decision about tourism marketing on a higher layer, the county. Counties encompass a much broader geographical area and a substantial part of spillovers can be internalized. This efficiency gains have to be counted against the loss of utility of each member municipality, due to a uniform level of tourism marketing (Oates, 1972).

Results from the US metropolitan area IMC literature provide interesting insights even for the rural municipalities, because metropolitan areas are also characterized by asymmetric relationships as in municipalities´ tourism. Their results show that especially formal and informal ties as well as connections between the local politicians of the core city and the adjacent smaller municipalities help to come to cooperative solutions (e.g. Feiock et al., 2009). We account for this argument by the number of neighbours with the same strongest party in the municipal countries and find no effects for tourism marketing. The mere political affiliation does not have impact on the likelihood to start IMC. Admittedly, our measure is not optimal to control for formal and informal ties. In future research, we have to address this important point in explaining IMC by using suitable measures.

4. Citizens´ support for inter-municipal cooperation: evidence from a survey in the German state of Hesse

Christian Bergholz and Ivo Bischoff (University of Kassel)

Abstract

Inter-municipal cooperation (IMC) is promoted as a way in which small, fiscally weak municipalities can cope with intensified interregional competition and demographic change. We provide first evidence on citizens' support for IMC using survey data from rural Germany. We cover different fields of public services and find the support for IMC to be lower for services where IMC implies intensified interaction with citizens from neighboring municipalities. The main research question asks whether citizens' support for IMC is larger in municipalities that can – by the logic of normative theory – expect higher net benefits from IMC. The answer is largely negative: While support for IMC decreases in the travel-time to neighboring municipalities, we do not find the support for IMC to be higher among citizens in small and/or fiscally weak municipalities, nor do we find the available of suitable partners to matter. At the same time, citizens' policy preferences strongly depend on individual-level factors. Believing that IMC reduces citizens' influence and control reduces the support for IMC substantially. Trust in local politicians and a high degree of emotional attachment to the home municipality reduce citizens' support for IMC.

4.1. Introduction

In recent years, local and regional authorities have become increasingly interested in the topic of inter-municipal cooperation (IMC). IMC is regarded a way by which small, fiscally weak municipalities can cope with intensified interregional competition (e.g. Hulst and van Munfort, 2007; Gjertsen, 2014). Normative theory suggests that IMC generates economies of scale and scope and thereby help these municipalities to ease the fiscal pressure and regain budgetary room for maneouvre (e.g. Miceli, 1993; Alesina et al., 2004; Andrew and Hawkins, 2012). The need to ease fiscal pressure is particularly large in rural areas where municipalities have to deal with the consequences of demographic change and a general decline in population.

By its main objectives, IMC is related to the local sector reforms many European regions went through in the second half of the 20th century. In the 1950s - 1970s, thousands of municipalities in various – mostly rural – European regions were amalgamated. The primary aim of these reforms was to create viable units that have the capacity to keep up with the increasing requirements for local public service quality. In most cases, the reforms were initiated by state or federal governments and evoked massive resistance among citizens in the affected municipalities (e.g. Hanes and Wikström, 2012; Hanes et al., 2012). Nowadays, many countries and regions encourage voluntary mergers of municipalities (e.g. Saarimaa and Tukiainen 2014; Blesse and Baskaran 2016). However, mergers are just as far-reaching as non-voluntary amalgamations: Joint provision is not restricted to those public goods and services where economies of scale and scope are large. Instead, the economics of scale and scope come at the price of having to live with compromises in all other fields of municipal policy. Therefore, municipal mergers – like non-voluntary amalgamations – evoke massive resistance among citizens (e.g. Weese, 2013, Tanguay and Wihry, 2008).

This is where IMC comes in. Under IMC, cooperation is limited to the production of certain public services while municipal autonomy in other fields remains untouched. This argument leads public administration scholars and politicians to conclude that citizens' resistance against IMC will be much lower than the resistance against top-down regional reforms or voluntary mergers (e.g. Heinz, 2007; Gjertsen, 2014). So far, however, citizens' preferences regarding IMC have not been analyzed systematically. The current paper delivers evidence to help closing this gap. We use data from a survey with 1400 respondent citizens from 59 municipalities in the German state of Hesse. The municipalities are located in three peripheral and economically weak counties threatened by population decline. The survey asks subjects whether they want their municipality to cooperate in different fields of government activity where economies of scale and/or scope are feasible. The survey data is combined with data from official sources informing us about the municipality the respondents live in (e.g. its population size, fiscal situation, distance to neighboring municipalities). Based on this combined data set, we address the following questions: 1) Is citizens' support for IMC larger in municipalities that can – by the logic of normative theory – expect higher net benefits from IMC? 2) How do citizens' individual characteristics and beliefs shape their support for IMC?

Our results can be summarized as follows: Regarding the first question, the answer is largely negative. We find citizens to account for easily available information that is salient privately. This applies to the increased travel costs when municipalities provide public services jointly. Furthermore, support for IMC is lower in small municipalities that have substantially larger neighbors. Beyond that, we find municipal-level factors to be irrelevant. In particular, support for IMC is not higher in small and fiscally weak municipalities, nor do we find the availability of suitable cooperation partners to matter. Instead, policy preferences are primarily driven by individual characteristics. Most importantly, subjects who expect IMC to reduce citizens' political influence are more likely to oppose IMC. Support is higher among citizens

who assess the current service quality as low and/or assess the financial perspectives of the home-municipality as negative. Subjects who are emotionally attached to their home municipality are less supportive of IMC. The same holds for subjects whose trust in the local government is high.

The paper proceeds as follows. Section 2 reviews the relevant literature. The institutional background is presented in section 3. Data and the main hypothesis are presented in section 4. Section 5 lays out the empirical model and introduces the variables before section 6 reports the results. Section 7 discusses the results and points the policy implications of our research.

4.2 Review of literature

The term IMC refers to the voluntary cooperation between otherwise independent municipalities in fulfilling their obligatory or voluntary tasks and providing public services (e.g. Blaeschke, 2014; Lintz, 2015). Depending on the tasks and services, IMC may be motivated by regional spillovers or by economies of scale and scope (e.g. Miceli, 1993; Alesina et al., 2004; Blaeschke, 2014). In this paper, we emphasize tasks and services where municipalities cooperate to generate economies of scale and scope. Especially small municipalities can generate substantial economies of scale when cooperating with other municipalities (e.g. Miceli, 1993; Alesina et al., 2004; Andrew and Hawkins, 2012). Furthermore, fiscally weak municipalities lack the means to provide an attractive bundle of public services and thus gain more from IMC than fiscally strong municipalities (e.g. Steiner, 2003; Blaeschke, 2014). However, the economies of scale and scope from IMC come at a cost: Large groups of citizens encompass a wider range of tastes and preferences for public services. The more the population in a certain municipality differs from the population in its neighboring municipality with respect to their policy preferences, the lower are the net benefits from IMC. Empirical studies on IMC generally use differences in the characteristics of the municipal population to approximate

differences in preferences (e.g. Alesina et al., 2004; Andrew, 2009; Andrew and Hawkins, 2012; Blaeschke, 2014; Bel and Warner, 2016). Accordingly, the net benefits from IMC are larger the more similar the cooperating municipalities are in the characteristics of their population (e.g. with respect to average income). Finally, the net benefits from IMC decline in the transaction costs involved in negotiating, implementing and controlling IMC-contracts entail substantial transaction costs. Other things equal, these transaction costs are lower the more similar the partners are (e.g. Feiock and Scholz, 2010).[26]

This paper tests whether the above arguments from normative theory play a role in shaping citizens' policy preferences regarding IMC. Are citizens from small and fiscally weak municipalities more supportive of IMC than citizens from larger and/or fiscally strong municipalities? Does the availability of suitable cooperation partners increase citizens' support for IMC?

We are not aware of a large-scale empirical study on the factors that drive citizens' view on IMC directly. However, the study by Tanguay and Wihry (2008) is related to this issue. They analyze data from referenda on municipal mergers in Quebec (Canada) in 2004. After the central government has forced a large number of municipalities to merge, some municipalities were given the chance to vote on a rollback of the merger. The authors use the share of voters voting in favor of a rollback as dependent variable. The most important independent variable is taken from publications of the provincial government. In these publications, the provincial

[26] A number of authors have analyzed the degree to which the emergence of IMC follows the suggestions of normative theory. The results are in line with normative theory when it comes to population size, fiscal stress and expected transaction costs (see Blaeschke, 2014; Bel and Warner, 2016 for a review). Regarding the similarities in population characteristics, some authors find similarity in municipal size (e.g. Lee et al., 2012), median income (e.g. Feiock et al., 2009) and fiscal capacity (e.g. LeRoux and Carr, 2007; Kwon and Feiock, 2010) to increase the probability that municipalities cooperate. On the other hand, there are numerous studies that find little or no support for the impact of similarity (e.g. Bel and Warner, 2016). A related strand of literature builds on essentially the same trade-off and show that heterogeneity within a certain region drives the number and size of municipalities or school districts (e.g. Nelson, 1990, Alesina and Spolaore, 1997; Alesina et al., 2004).

governments informed citizens about the estimated change in municipal expenditures per capita and in tax liability per capita that is expected to go along with the merger. Tanguay and Wihry (2008) find the share of votes in favor of rollbacks to rise in the expected change in expenditures per capita but fall in the expected tax liability. In addition, vote-shares rise in the income differences between the municipalities to be merged.

4.3 Institutional background

The municipalities in Germany in general and the German state of Hesse in particular provide important public services like local roads, business parks, cultural infrastructure and pre-school childcare and account for approximately one quarter of overall government expenditures. Supra-ordinate governments set minimum standards for the essential public services but municipalities are left with substantial autonomy in their decisions. This autonomy also exists when it comes to setting local business and land tax rates, though municipalities largely rely on state grants and vertical tax sharing (e.g. Zimmermann, 2009; Bischoff and Krabel, 2016). A directly elected mayor is head of the municipal administration. The mayor is responsible to a local council and needs its approval for major decisions including the budget, local tax rates or formal IMC-arrangements.

In this paper, our regional focus rests on three peripheral counties in the German state of Hesse (Landkreis Kassel, Werra-Meissner-Kreis and Odenwaldkreis). The total population in these counties adds up to approximately 435,000 living in 60 municipalities. The average disposable income per capita amounts to 19,370 € while the overall average in the state of Hesse is 20,452 (e.g. Bischoff et al., 2014). The municipalities differ in size with the largest having more than 27,000 inhabitants and the smallest one having less than 700 inhabitants (see Table 4.1). In the period between 2009 and 2013, total population decreased by 2.9 percent. Only 6 municipalities grew in this period while 14 municipalities witnessed a decline by more than 5

Municipal characteristic	Mean	Std. Dev.	Min	Max
Seat-share of free voter associations	0.144	0.206	0	1
Seat-share of leftwing parties	0.539	0.156	0	1
Population (in thousand)	7.1961	5.1862	0.644	27.417
Debt per capita	1197.1	907.3	112	5119.4
Own tax revenues per capita	630.7	317.7	315.3	2228.7
Rate of population growth (%)	-2.92	2.47	-9.30	3.67
Ratio of running expenditures / regular revenues	1.03	0.10	0.79	1.39

Table 4.1: Descriptive statistics on municipalities in the sample

percent. In the same period of time, the overall population in the state of Hesse grew (e.g. Bischoff et al., 2014). The municipalities also differ substantially in their fiscal capacity. The debt per capita varies between 112 € and 5,119 € and tax revenues per capita cover the span of 315 € to 2,229 €. The average debt per capita (1,197 €) exceeds the overall average in Hesse by almost 10 percent while the average amount of tax revenues per capita (630 €) falls short of the Hessian average by more than 30 percent (e.g. Bischoff et al., 2014). On average, the regular expenditures (excluding investments) exceed regular revenues (excluding capital gains) by 2.6 percent, again with considerable variation across municipalities. These figures show that most municipalities in the three counties are threatened by demographic change and suffer from fiscal pressure – though to considerably different extent.

4.4 Data and hypotheses

In summer 2013, we conducted an online survey among citizens from all 60 municipalities in the three counties. We chose 30,000 citizens at random and invited them by personalized letter to participate in the online-survey. The questionnaire starts by asking

participants to assess the quality of local services in their home municipality and state their expectations regarding its financial perspectives. The second section asks for subjects' policy preferences for IMC and for their expectation regarding the impact of IMC on democratic control. Later sections elicit subjects' political beliefs and personal characteristics.

What do you think? How intensively should your municipality cooperate with other municipalities?
a) In running childcare facilities, my municipality should
□ run childcare facilities jointly.
□ cooperate only loosely (coordinate services and help out occasionally).
□ not cooperate at all.
□ don't know

Table 4.2: Survey question generating our dependent variable

The survey elicits citizens' policy preferences on IMC in four different fields of government activity: 1) childcare facilities, 2) infrastructure for private households (such as community centers, sports facilities), 3) road maintenance and winter services, and 4) internal administration (registration office, regulatory agency, public construction authorities) and. Table 4.2 presents the precise question we used for childcare facilities. Analogous questions are used for the other fields. These fields were chosen for a number of reasons. First, all four fields require significant amounts of public resources and they all bear the potential of generating economies of scale and scope through IMC. Second, the existing evidence suggests that IMC is vividly debated especially in these fields (e.g. Rosenfeld et al., 2016). Third, the state agency founded to foster IMC in Hesse names these fields to be of particular relevance. Finally, the four services differ in the degree to which IMC is visible for the citizens. In field (3) road maintenance and winters services as well as (4) internal administration, IMC goes relatively unnoticed by the citizens. This is entirely different for IMC in fields (1) childcare services and (2) infrastructure for private households. Here, the place of service provision is

likely to change for some citizens and the interaction with citizens from other municipalities is intensified through IMC. Alesina et al. (2004) argue that citizens prefer to interact with their peers and thus witness losses in utility from IMC if this increases the probability of having to interact with people outside their peer group. Thus, citizens' support for IMC in the latter two fields is expected to be lower (e.g. Norris, 2001; Alesina et al., 2004).[27]

The main purpose of this paper is to explain why some citizens support a close cooperation in the different fields named above while other citizens oppose close IMC. In particular, we are interested in answering the following two questions:

1) Is citizens' support for IMC larger in municipalities that can – by the logic of normative theory – expect higher net benefits from IMC?
2) How do citizens' individual characteristics and beliefs shape their support for IMC?

With respect to question 1, the literature in section 2 leads to the following hypotheses:

H1 (municipal size):

Citizens' support for IMC decreases in the population size of their home municipality.

H2 (fiscal pressure):

Citizens' support for IMC increases in the fiscal pressure of their home municipality.

H3 (availability of similar partners):

The more similar the neighboring municipalities are to the citizens' home municipality with respect to their residents' preferences for public services, the more likely the citizens are to support IMC.

---

27 In the terminology of the regional governance literature, childcare and household-related infrastructure are often referred to as lifestyle amenities, road maintenance and winter services belongs to the systems maintenance services and internal administration may be called "political" (see e.g. Norris, 2001).

Though not stressed in the literature reviewed above, it seems reasonable to argue that the costs of IMC increase in the travelling distance between municipality m and its potential cooperation partners. This leads to hypothesis H4:

H4 (travel distance):

The closer the neighboring municipalities are, the more likely citizens are to support IMC.

The rational voter hypothesis predicts that citizens do not undergo the effort of collecting the information necessary to develop a sophisticated picture of the pros and cons of policies. Instead, they are likely to rely on information collected en passant (e.g. Caplan, 2008; Bischoff and Siemers, 2013). In the case of IMC, some characteristics of the home municipalities (e.g. its fiscal capacity) and especially the characteristics of the neighboring municipalities are difficult to assess en passant. On the other hand, factors like municipal size or travel distance to neighboring municipalities are easy to observe and their importance for the costs or benefits of IMC is evident. Similarly, voters are likely to have a rough idea of the degree to which the population in their home municipality is similar to that of its neighbors. The regressions below will show to what extent the rational voter hypothesis applies in the context of IMC.

Turning to the second question, the existing studies tells us that citizens' shows that trust in political institutions is crucial for citizens' support for reforms (Rodrik, 1996; Heinemann and Tanz, 2008). In the context of IMC, political representatives have substantial leeway when negotiating IMC contracts with representatives of other municipalities. Citizens who trust their government may be more likely to support IMC because they do not expect delegates to use this leeway opportunistically. This lead to hypothesis H5:

H5 (trust in local politicians facilitates IMC):

Citizens are more likely to support IMC if their trust in local politicians is high.

On the other hand, one may argue that citizens who trust local politicians are more likely oppose IMC because they are reluctant to see their trusted government share political power with other agents. Thus, the alternative hypothesis H5a reads:

H5a (trust in local politicians hampers IMC):

Citizens are less likely to support IMC if their trust in local politicians is high.

Our final hypothesis deals with the possible impact of IMC on citizens' local identity. German citizens' often feel strongly attached to their home municipality. Local cohesion is intensified by the rivalry to sports teams from neighboring municipalities and by the active role of local clubs ("Vereine") for social life in rural Germany. We expect citizens who are strongly attached to their home municipality to fear a loss in local identity from IMC:

H6 (emotional attachment to home municipality):

Citizens who strongly attached to their home municipality are less likely to support IMC.

4.5 Empirical model and covariates

In total 1,381 persons from 59 municipalities completed the questionnaire. This provides us with an average of more than 20 respondents per municipality. The response-rate differs across municipalities. Male and more educated subjects are over-represented as are individuals with residential property. Thus, our survey data is not fully representative of the population underlying the sample. To control for this, we include dummy variables for all characteristics for which representativeness is not given. In fact, we controlled for important factors that are usually not even elicited in this kind of survey. Through this wide range of individual-level variables, we take care of the main concerns regarding the use of non-representative surveys (e.g. Solon et al., 2015). Following Solon et al. (2015), the battery of independent variables ensures that our estimates regarding the impact of individual- and municipal-level factors are reliable. At the same time, we do not claim that support rates for IMC reported in Table 4.3 are

fully representative of the Hessian population. As further sensitivity analysis, we run weighted regression using a Poisson-model (e.g. Elliot, 1991 together with Cameron and Trivedi, 2009). Their results are qualitatively identical to the results of the unweighted panel-regressions reported below.

	Field f			
Stated preference	(1) Childcare	(2) Infrastructure for private households	(3) Road maintenance, winter services	(4) Internal administration
Cooperate closely	**36.5**	**46.2**	**60.4**	**46.2**
Cooperate loosely	56.1	43.6	35.0	37.0
No cooperation	5.4	7.3	3.8	13.4
Don‘t know	2.0	3.0	0.8	3.4

calculated without weights. Weight-corrected statistics do not differ significantly.

Table 4.3: Frequency of policy preference among respondents (in percent)#

Table 4.3 summarizes subjects’ answer on the central question whether their home municipality should cooperate in providing different public services (for the question, see table 4.2). Some 35 percent of the respondents support close cooperation in field (1) and (2) where IMC implies interaction with citizens from neighboring municipalities. The support for close IMC ranges around 60 percent for the other two services.[28] This difference is in line with the argument put forth by Alesina et al. (2004): Citizens are more skeptical about IMC if it implies intensified interaction with citizens from other municipalities.

[28] The correlation between subjects’ answers across fields is moderate.

Below, we run multiple regressions to explain inter-municipal and interpersonal differences in citizens' support for IMC and thereby test the hypothesis stated above. The following covariates are used.

a) municipal-level covariates

We introduce the population size (*POP*) of the respondents' home municipality to test Hypothesis H1. We expect the support for IMC to decrease in population size. Two variables are used to capture the fiscal situation (hypothesis H2): debt per capita (*DEBT*), the ratio of running expenditures over regular revenues *(EXP/REV*) - both calculated as averages over the period 2009 – 2013 (see table 4.1). We expect the support for IMC to decrease in both variables. To test hypothesis H3, we have to capture the degree of similarity in citizens' preferences between subjects' home municipalities and their potential cooperation partners. We follow the existing literature and use the similarity in population characteristics to capture the similarity in policy preferences (see section 2). The more neighboring municipalities with similar population characteristics there are, the higher the net benefits from IMC – other things equal. As differences in per capita income are extremely low, we concentrate on the degree of similarity in age composition.[29] The variable *NUM_SIM_CHILDREN* counts the number of municipalities where share of children below the age of 15 deviates from that in municipality m by less than 5 percent. On average, 63 percent of the neighboring municipalities qualify for this criterion. We introduce the *AVERAGE_TRAVEL_TIME* from municipality m to their direct neighbors (according to Google maps) to accommodate hypothesis H4. Travel time is an indicator for the additional costs that citizens have to bear when consuming public services

[29] Indicators on the ethnic composition as often used in US studies (e.g. Feiock et al., 2009) are not available for Germany. And even if they were, a normative interpretation of their performance seems inappropriate to us. The available data only informs about the share of inhabitants without German passport. This group is internally heterogeneous and so is the group of citizens with German passport. This information is used in the variable *NUM_SIM_NONGERMAN* – though we believe that a normative interpretation is equally inappropriate.

produced jointly with other municipalities. The larger the travel time, the higher these additional costs and thus the less likely subjects are to support IMC.

A number of municipal-level control variables are used. These variables account for the characteristics of potential cooperation partners. Given that IMC in Germany is largely restricted to direct neighbors (e.g. Blaeschke, 2014, Rosenfeld et al., 2016), we concentrate on the characteristics of the municipalities directly adjacent to the citizens´ home municipality. We introduce two variables to control for expected political transaction costs of IMC. First, we control for the number of direct neighbors to the respondent's home municipality. Feiock et al. (2009) argue that search costs rise in the number of neighbors. Second, the variable *SAME_MAYORS_PARTY* counts the number of neighboring municipalities whose mayor is supported by the same political party as the mayor in the respondent's home municipality. We account for the fiscal situation and population size of the neighboring municipalities by introducing the median value of the corresponding indicator among the directly neighboring municipalities. These so-called spatial lag indicators are named *SL_MED_POP*, *SL_MED_DEBT*, *SL_MED_EXP/REV*. We also account for the notion that citizens prefer to stay among their peers (e.g. Alesina et al., 2004). The variable *NUM_SIM_NONGERMAN* captures the number of direct neighbors whose share in non-German population differs by less than 20 percent from the share in municipality m. On average, 46 percent of the neighboring municipalities qualify for this. A special dummy-variable *BORDERING_KS* marks all municipalities that border the city of Kassel (ca. 200.000 inhabitants).

b) individual-level covariates

To accommodate hypothesis H5 and H5a, we ask subjects for their trust in local politicians. The dummy variable *TRUST_LOCAL_GOV* takes on the value 1 if respondents have much trust or very much trust in local politicians, otherwise 0. Hypothesis H6 states that the support for IMC depends on the degree to which respondents feel emotionally attached to

their home municipality. We expect attachment to be higher among citizens born in the current place of residence. The variable *BORN_IN_RESIDENCE* takes on the value 1 if the respondent is born in residence, otherwise 0. Similarly, emotional attachment is likely to be stronger among citizens who are active members of local sports clubs, cultural initiatives, the local fire brigade etc. Variable *ACTIVE* is 1 for active people (0 else). We expect active citizens and citizens born in their current residence to be less supportive of IMC than non-active subjects or subjects born elsewhere.

We introduce a number of individual-level control variables. We control for subjects' beliefs regarding the impact of IMC on citizen's political influence and democratic control (e.g. Dafflon, 2012; Gjertsen, 2014). We ask subjects whether they expect IMC to go along with a loss in control and influence for the citizens. A dummy variable is constructed (*IMC_REDUCE_INFLUENCE*), taking on the value 1 if the answer is affirmative, 0 else. Subjects' who fear a loss in citizens' control and influence are expected to be more skeptical about IMC. Similarly, citizens' support for IMC may depend on their expectation concerning the financial perspectives of their home municipality: The more negative their expectations are, the more likely citizens are to support IMC. We elicit subjects' expectations and construct a dummy variable that takes on the value 1 if subjects expect the financial capacity of their home municipality to decline, 0 else (*MUNICIPAL_PERFORMANCE_DECLINE).* Furthermore, the participants of our survey are asked for their assessment of the services in all four fields of interest. A dummy variable *S_BAD* is created for every service. It takes on the value 1 if subjects assess the quality of service s as bad (0 else). We control for respondents' sex using a *FEMALE*-dummy, for their status as parents of juvenile children using a *PARENTS*-dummy and for their age (*AGE*). The dummy-variable *COMMUTER* is 1 for all subjects whose way to work, school or university exceeds the median distance of 6 km reported in the survey (0 else). The variable *HIGH_EDU* takes on the value 1 for subjects who have a high-school diploma and 0 for all

others. The dummy variable *INFORMS_REG_NP* is 1 for subjects who consults a local newspaper on a daily basis (0 else). We introduce a dummy variable *RESIDENTIAL_PROPERTY* that is 1 for all subjects living in a self-owned house or flat (0 else) and we control for per capita household income reported by the respondents *(HH_INCOME_PC*). Finally, we control whether subjects believe that their municipality already cooperates with other municipalities in public service provision. Almost 50 percent of all citizens report that they do not know. We introduced dummy variables for those who believe that their home municipality cooperates and for those who believe that it does not.

4.6 Results

In the regressions reported below, we use a logit panel approach:

$$IMC_{if} = f\left(X_{if}, Z_{m}\right)$$

Our dependent variables IMC_{is} takes on the value 1 if subject *i* supports close cooperation in field f (0 else). Matrix X_{if} contains individual-level covariates and matrix Z_m contains covariates characterizing subjects' home municipality. Table 4.4 reports the average marginal effects (resp. average discrete probability effects of our discrete variables) obtained in our regressions. Standard errors are clustered on respondents' level.

The baseline specification in column 1 (Table 4.4) includes all variables described above and covers subjects' answers to all four fields of government activities. It also includes county fixed effects and field fixed effects. We find insignificant coefficients for population size, fiscal variables and the variable *NUM_SIM_CHILDREN* capturing similarity between the population of municipality m and its direct neighbors. Thus, hypothesis H1 to H3 are not supported. The average travel time to the neighboring municipality (*AV_TRAVEL_TIME*) is significant. This support hypothesis H4. All other municipal-level variables are insignificant. On individual level, we find trust in the local politicians to make respondents more reluctant to support IMC.

Variables	(1)		(2)		(3)		(4)		(5)		(6)	
	ME	Std. Err.	ME	Std. Err.	ME	Std. Err.	ME	Std. Err.	ME	Std. Err.	ME	Std. Err.
BORN_IN_RESIDENCE	0.0117	0.0297	-0.0127	0.0377	0.0501	0.0365	0.0158	0.03	0.011	0.0295	-0.0135	0.0371
ACTIVE	-0.0996***	0.0307	-0.1093***	0.0387	-0.0938**	0.0364	-0.0968***	0.0311	-0.0963***	0.0306	-0.089**	0.0402
RESIDENTAL_PROPERTY	0.0307	0.036	0.0336	0.0441	0.0248	0.0458	0.0378	0.0363	0.0314	0.0359	0.0517	0.0528
S_BAD	0.1133***	0.0232	0.129***	0.0392	0.1261***	0.0303	0.1182***	0.0234	0.1125***	0.0231	0.119***	0.029
TRUST_LOCAL_GOV	-0.0915***	0.0278	-0.1007***	0.0346	-0.0848**	0.0349	-0.1115***	0.0277	-0.0873***	0.0275	-0.0996***	0.0341
IMC_REDUCE_INFLUENCE	-0.3261***	0.0267	-0.266***	0.0312	-0.4147***	0.0378	-0.3354***	0.0267	-0.3224***	0.0266	-0.31***	0.0331
MUNICIPAL_PERFORMANCE_DECLINE	0.1006***	0.0279	0.0754**	0.035	0.1431***	0.0353			0.1021***	0.0274	0.1428***	0.0359
FEMALE	0.0001	0.0288	-0.0569	0.0362	0.0505	0.0366	0.0043	0.0293	-0.0013	0.0286	0.0193	0.0368
AGE	0.0018	0.0012	0.0019	0.0015	0.0017	0.0015	0.0019	0.0012	0.0019	0.0012	0.0016	0.0016
HIGH_EDU	0.0789***	0.0268	0.0577	0.0336	0.1084***	0.0336	0.0786***	0.0272	0.077***	0.0265	0.0926***	0.0332
ASSUMES_COOPERATION	0.0062	0.029	-0.0049	0.0366	0.0231	0.0355	0.0037	0.0297	0.0119	0.029	0.0157	0.0378
ASSUMES_NO_COOPERATION	0.0755	0.0603	0.0313	0.0735	0.1312*	0.0668	0.0857	0.0604	0.0757	0.06	0.1015	0.0781
INFORMS_REG_NP	-0.0127	0.0302	-0.0226	0.0383	-0.0064	0.0366	-0.01	0.0308	-0.011	0.03		
COMMUTER	-0.0137	0.0309	0.0067	0.0383	-0.0397	0.0376	-0.0056	0.0312	-0.0104	0.0306	0.0315	0.0384
PARENTS	0.0023	0.0344	-0.0259	0.0439	0.036	0.0429	0.0016	0.0352	-0.001	0.034	0.0118	0.0445
HH_INCOME_PC	0.0001**	0.0001	0.0001*	0.0001	0.0001**	0.0001	0.0001**	0.0001	0.0001**	0.0001	0.0001	0.0001
DEBT	0.0029	0.02	0.0072	0.0247	-0.0043	0.0254	0.0003	0.0205	0.0163	0.019	0.0144	0.0258
EXP/REV	0.183	0.1669	0.4187**	0.2064	-0.037	0.198	0.2808*	0.1697	0.0934	0.1563	-0.0342	0.2033
SL_MED_DEBT	-0.0235	0.0312	-0.0795*	0.0405	0.04	0.0441	-0.0253	0.0319	-0.0255	0.0302	-0.033	0.0371
SL_MED_EXP/REV	0.3255	0.3459	0.4345	0.4286	0.2732	0.4173	0.4139	0.3432	0.2295	0.3356	0.0795	0.4507
POP	0.0016	0.0033	0.0052	0.0041	-0.0009	0.0041	0.0016	0.0033			0.0042	0.0043
SL_MED_POP	-0.0112	0.0066	-0.0202**	0.0083	-0.0026	0.0079	-0.0143**	0.0066			0.0002	0.009
SMALL_LARGE_NEIGHBORS									-0.0421***	0.0155		
LARGE_SMALL_NEIGHBORS									0.0248*	0.0143		
NUM_SIM_CHILDREN	-0.0017	0.0113	-0.0061	0.0139499	0.0023	0.014	-0.0019	0.0114	-0.0036	0.0113	0.0134	0.014
SAME_MAYORS_PARTY	-0.0086	0.009	-0.0055	0.0110176	-0.0111	0.0108	-0.0071	0.0091	-0.0085	0.0087	-0.0061	0.0115
NUMBER_NEIGHBORS	0.0131	0.012	0.0238	0.0148415	0.0018	0.0146	0.0148	0.0122	0.0203	0.0123	0.0065	0.0153
AVERAGE_TRAVEL_TIME	-0.0095**	0.0046	-0.0098	0.0059919	-0.0091	0.0059	-0.0096**	0.0046	-0.0095**	0.0043	-0.0102*	0.0056
NUM_SIM_NONGERMAN	-0.0103	0.0216	-0.011	0.0271323	-0.0097	0.0268	-0.0148	0.022	-0.0228	0.0218	-0.0248	0.0271
BORDERING_KS	-0.09	0.0433	-0.0545	0.0529796	-0.1236**	0.0563	-0.1043**	0.0434	-0.1066***	0.0387	-0.095*	0.0532
County Fixed Effects	Yes		Yes		Yes		Yes		Yes		Yes	
Field Fixed Effects	Yes		Yes		Yes		Yes		Yes		Yes	
Wald χ^2	329.08***		129.75***		156.57***		315.34***		339.58***		240.28***	
Observations	3744		1869		1875		3755		3744		2689	
Groups	946		946		946		949		946		679	

Table 4.4: Panel logit regression models (marginal effects)

This is in line with hypothesis H5a (and contradicts H5). Next, respondents who are active in their home municipality are less likely to support IMC (*ACTIVE).* This result supports hypothesis H6. Among the control variables, *IMC_REDUCE_INFLUENCE* is highly significant and shows the expected negative sign. Also, citizens who expect a decline of the home municipalities' economic performance (*MUNICIPAL_PERFORMANCE_DECLINE)* are more likely to prefer IMC than others whereas citizens´ assessment of current service quality as bad (*S_BAD*) has a significantly positive influence. *HIGH_EDU, HH_INCOME_PC* and *AGE* are significantly positive. All other variables are insignificant.

In model 2, we focus on fields (1) and (2) where IMC implies close interaction with citizens from the cooperating municipalities. The results are largely identical. Similarly, the main results hold if the analysis focusses on fields (3) and (4) where IMC goes largely unnoticed by the citizens (column 3).

Looking at the size of the effects, *IMC_REDUCE_INFLUENCE* has the largest influence by far. Subjects who fear that IMC reduces citizens' control and influence are less likely to support IMC by 32 percentage points. The variables *S_BAD* and *MUNICIPAL_PERFORMANCE_DECLINE* yield a marginal effect of approximately 10 and 13 percentage points respectively. Subjects with high-school education have a probability of supporting IMC that is about 10 percentage points higher than that of subjects with less school education. The probability of supporting IMC in contact services is 10 percentage points lower for parents. All other marginal effects are well below 10 percentage points.

One might argue that the individual-level belief *MUNICIPAL_PERFORMANCE_ DECLINE* covers up the impact of the important municipal characteristics. To accommodate this concern, we drop *MUNICIPAL_PERFORMANCE_DECLINE* and redo the regression of model 1 (see column 4). The performance of all independent variables remains unchanged. In particular, we do not observe significant coefficient estimators for the covariates capturing

fiscal stress (*DEBT, EXP/REV*), nor for other municipal-level variables that were insignificant before.

Given the prominent role of population size in normative theory, we are puzzled by its insignificance in all models. To investigate this aspect further, we introduce an additional model that accommodate an argument put forth by Brasington (1999). In his study on school district mergers in the United States[30], he finds that small districts often merge with large districts while symmetric mergers are less frequent. He proposes the following rationale for this pattern: Small districts can benefit massively from the economies of scale and scope from merging. The benefits are especially large when merging with a large district. These benefits are likely to outweigh the costs from increased heterogeneity in preferences within the merged district. Citizens in large districts are likely to keep control over the major decisions even in the merged district. They may thus not object to merge with a smaller school district even if additional economies of scale and scope are moderate. Citizens in medium-sized districts are more reluctant to merge school districts because merging means bearing the costs from increased heterogeneity without gaining much in exchange (Brasington, 1999). To account for this argument, we construct two variables. *SMALL_LARGE_NEIGHBORS* counts the number of large neighbors (pop. > 10.000) for municipality m – provided the latter is small (pop. < 5.000). It is zero for all municipalities that are not small or do not have large neighbors. Similarly, *LARGE_SMALL_NEIGHBORS* captures the number of small neighbors of large municipalities. 18 percent are classified as small municipalities with one or more large neighbors and 25 percent are classified as large municipalities with one or more small neighbors. The argument of Brasington (1999) suggests that both variables yield positive coefficient estimators. We redo

30 School districts are single-purpose governments that decide about all major issues on primary and secondary public education (e.g. Mullin, 2007).

model 1 by introducing these variables while dropping the two population-related variables used in the earlier models to avoid collinearity (column 5). Unlike Brasington predicted, we find *LARGE_SMALL_NEIGHBORS* to be insignificant and, more importantly, *SMALL_LARGE_NEIGHBORS* to be significantly negative. This suggests that citizens do not follow the rationale put forth by Brasington (1999). Instead, it suggests that the fear to be dominated by a large cooperation partner is weighted higher than the prospects of possible economies of scale and scope especially in childcare and household-related infrastructure.

Finally, we rerun the baseline model using a subsample that contains only those subjects who consult regional newspapers daily (column 6). The main idea behind this step is to test whether more municipal-level variables become significant once the sample is reduced to the better-informed. The answer is negative. *ACTIVE* and *HH_INCOME_PC* become insignificant while all other variables' performance is unchanged. Like the baseline model, we run all the additional regressions (column 4-6) also separately for fields (1) + (2) and field (3) + (4) respectively. The results are qualitatively the same and presented in the supplementary material.

Next to the regressions reported above, we run a large number of sensitivity analyses to test the stability of our results. First, we rerun the first three models with municipal fixed effects to account for possibly omitted municipal-level factors and test the stability of the results obtained for the individual-level variables. Their performance is qualitatively identical to their performance in the baseline model (Appendix B, Table B1). Second, we run weighted regressions using to account for the overrepresentation certain groups of individuals in our survey even though the recent paper by Solon et al., (2015) suggest that our regressions presented above take care of this problem through its numerous control variables. Again, the sensitivity analyses yield qualitatively the same results (Appendix B, Table B2).

4.7 Concluding remarks

The topic IMC is on the agenda of many local and supra-ordinate governments. Like many public administration scholars, they see IMC as an important element in a strategy to help small and fiscally weak municipalities to cope with demographic change and intensified interregional competition. A lack of public support for IMC is regarded to be one major obstacle against a more widespread application of IMC. So far, little is known about citizens' view on IMC. In the current paper, we use data from a survey in 59 German municipalities to provide first evidence on this issue. It focusses on two questions: 1) Is citizens' support for IMC larger in municipalities that can – by the logic of normative theory – expect higher net benefits from IMC? 2) How do citizens' individual characteristics and beliefs shape their support for IMC?

Regarding the first question, we find support for IMC to be lower in municipalities with a large average travel-time to its neighbors. This indicates that citizens are aware of the costs of IMC. Fiscal stress in the home municipality is not found to promote the acceptance for IMC. Furthermore, citizens' policy preferences are not found to depend on the availability of suitable partners – i.e. neighboring municipalities that are similar to municipality m with respect to local government composition or age composition. Citizens in small municipalities with large neighbors are more skeptical about IMC. This suggests that they see primarily the danger of being dominated by the large cooperation partner rather than the potential benefits from IMC as suggested by Brasington (1999). This interpretation is supported by a side-result of the survey underlying our study: Subjects were asked: "If your home municipality had decided to cooperate with other municipalities, which of the following constellations of partners would you prefer?" a) "cooperate with one municipality similar to ours", b) "… two or more municipalities similar to ours" and c) "stop producing the service by ourselves and purchase it from the nearby town". Less than 10 percent of the participants chose option c) – even among citizens from small municipalities only.

The performance of municipal-level factors is partially in line with the prediction of the rationally uninformed voter (e.g. Caplan, 2008, Bischoff and Siemers, 2013). Subjects account for the travel time to the neighboring municipalities and citizens in small municipalities also account for the existence of a larger municipality nearby. This information is easily available and salient in their private life – e.g. because it is directly related to the availability of shopping opportunities. The insignificant municipal-level variables are less easy to pick up en passant and less salient for citizens' private life. This conclusion does not change if we introduce weights to account for possible mis-representations in our sample, nor does it change if we reduce the sample only to those citizens reading regional newspapers on a daily basis. Even these better-informed citizens do not account for fiscal capacity or the availability of suitable partners.

Regarding the second question, we find a number of individual-level factors to drive citizens' policy preferences for IMC. Support is substantially higher among citizens who assess the quality of public services as bad and/or expect their municipality to be threatened by a decline in fiscal capacity. Citizens who are active in local initiatives or clubs and whose emotional attachment to their home municipality are strong are more reluctant to support IMC. While trust in politicians usually facilitates reforms, this does not seem to be true in the context of IMC. Here, citizens who trust their local government are less likely to support IMC – presumably because they do not want to see this government share political power with other persons and institutions. The factor with the largest marginal effect (resp. discrete probability effect) by far is the expectation that citizens will lose influence and control when municipalities cooperate. Subjects holding this belief are by 30 percentage points less likely to support IMC.

Our study suffers from a number of limitations. First, the usual caveats regarding survey data apply: Answers are hypothetical and may not be perfect predictors of subjects' behavior in local ballots or initiatives on IMC. On the other hand, survey data has the advantage that we

can combine the policy preference regarding IMC with many personal characteristics and thus learn something about their individual-level drivers. Our study shows that this provides valuable insights that analyzing data from ballots cannot bring. Second, we analyze citizens' policy preferences in rural areas and selected fields of municipal activity only. We concentrate on fields where the predominant argument pro IMC are economies of scale and scope. In other fields of local government activities – e.g. public transportation or promotion of tourism – the predominant argument is the internalization of spillovers. In these latter fields, the game-theoretical logic of IMC is somewhat different because municipalities outside the IMC-arrangements can free ride. Therefore, it is not clear whether the results obtained here can be generalized to fields where spillovers motivate IMC. This remains an interesting question for future research.

Despite these limitations, there are important lessons to learn from our analysis. First, voters seem to understand that the need for IMC is higher in municipalities facing negative financial perspectives (see the performance of *MUNICIPAL_PERFORMANCE_DECLINE*). However, citizens' subjective assessment of their home municipality's perspective is only loosely related to the development of the corresponding indicators in the years prior to the survey. Given this loose relationship, governments in municipalities with declining population and/or severe fiscal stress cannot automatically expect their citizens to be more supportive of IMC.

Second, citizens are very concerned about giving up political power and local autonomy. This conclusion is supported by the performance of *IMC_REDUCE_INFLUENCE* and *TRUST_LOCAL_GOV*. Governments who want to engage in IMC have to meet the concern of citizens fearing to lose influence and control. To this end, informal handshake-deals are not the type of arrangement that seems suitable. Instead, IMC should be reached in a transparent

political process, settled in formalized agreements and run in governance structures that maintain transparency and accountability.

Third, there is massive resistance among citizens of small municipalities to outsourcing public service production to large neighboring municipalities nearby. *SMALL_LARGE_NEIGHBORS* and the side-result on the preferred structure of partners support this conclusion. This is bad news for those regional planners who intend to meet the challenge of demographic change by empowering medium-sized towns in rural areas at the expense of their small neighboring municipalities. It is similarly bad news for those who want to meet these challenges in a step of centralization that transfers tasks to the county level. Our results predict massive political resistance among citizens for both steps.

5. Local council members' view on inter-municipal cooperation: Does office related self-interest matter?

Christian Bergholz and Ivo Bischoff (University of Kassel)

Abstract

We analyze data from a survey among local council members in 59 German municipalities. We ask council members whether their home municipality should cooperate with neighboring municipalities in the provision of public services like childcare or road maintenance. Their answers are clearly driven by office-related self-interest. Council members who have more political power and thus have more power to lose if their home municipality cooperates are more likely oppose inter-municipal cooperation. This interpretation receives further backing by the fact that delegates' support for inter-municipal cooperation increases in the population size of their home municipality but decreases in the size of its neighbors.

5.1 Introduction

Demographic change and intensified competition for capital and high-skilled labor is putting increased fiscal pressure on rural municipalities in Europe. It reduces their financial room of maneuver and makes it difficult for them to provide inhabitants with an attractive bundle of goods and services (e.g. Geys et al., 2008). One element in a strategy to cope with this situation is to cooperate with other municipalities in fulfilling their obligatory or voluntary tasks and providing public goods and services. Many scholars, especially from public administration, support this inter-municipal cooperation (hereafter IMC) because it has the potential to generate economies of scale and scope, lower costs of public service provision and help municipalities regain financial room of maneuver (e.g. Hulst and van Monfort, 2007; Bartolini and Fiorillo, 2011; Gjertsen, 2014).

In this paper, we analyze IMC from a Public Choice perspective. Our central question reads: Can we expect local politicians to oppose or promote IMC? The literature contains two contradicting arguments. Some authors argue that office-related self-interest makes local politicians oppose IMC because it implies a loss in political power (e.g. Heinz, 2007; Blaeschke, 2014). On the other hand, IMC may have a positive side for local politicians because it has the potential to mitigate yardstick competition and facilitate rent-extraction. Thus, politicians who are interested in extracting political rents face incentives to support IMC (Di Liddo and Giuranno, 2016). Ex ante, it is unclear which of the two arguments dominates. Answering this question is important from a scientific perspective because it informs us about the empirical relevance of competing approaches of modelling local government behavior. From a political perspective, it improves the informational basis for IMC-related policies. If local politicians oppose IMC because it implies a loss in power, supra-ordinate government may offset this obstacle by subsidizing IMC. If, however, local politicians promote IMC in order to extract rents, promoting IMC is not advisable. Instead, the government must take measures to preserve yardstick competition.

We use data from a survey among local council members (hereafter delegates) from 59 German municipalities. These municipalities are situated in three peripheral counties that experience a decline in population and demographic aging and suffer from fiscal stress. However, not all municipalities in the counties are hit equally hard by these developments. Some municipalities are hit very hard while others have been growing in population or fiscal capacity. The survey elicits delegates' preferences regarding inter-municipal cooperation and collects information about their activities in the local council (years in office, party affiliation etc.). Our empirical strategy relies on a comparison between delegates with different levels of political power. Politically powerful delegates have more power to lose in the case of IMC but also more rents to gain if IMC is used to mitigate yardstick competition. If we find politically

powerful delegates to be more supportive of IMC than other delegates, we conclude that the prospect of rent-extraction dominates the loss in power. The opposite is true if politically powerful delegates are less supportive of IMC. Given the German tradition of strong parties and strong party discipline (e.g. Lösche, 2008; von Alemann, 2010) and given the powerful position of German mayors, our main measure for political power relies on the delegates' proximity to the mayor. Other things equal, delegates who belong to the fraction that supports the mayor have more political power than delegates from other fractions. We use a model with municipal fixed effects to control for possible differences in municipal characteristics and party fixed effects to capture differences in political ideology.

We find the support for IMC to be lower among delegates who belong to the fraction that supports the mayor. This result holds for fields of government activities where IMC goes largely unnoticed for the citizens, and it also holds for fields where IMC implies intensified interaction with citizens from other municipalities. The marginal effect is sizeable: Belonging to the mayor's fraction reduces the probability of supporting IMC by 15.5 percentage points. This result indicates that the loss in political power from IMC dominates the prospect of additional political rents.

In a second step of our analysis, we drop municipal fixed effects and analyze the impact of municipal characteristics on delegates' support for IMC. We find support for IMC to decrease in the expected transaction costs associated with IMC. This result is in line with the normative theory of IMC. Contrary to the prediction of normative theory, we find the support for IMC to increase in the size of the delegates' home municipality but to increase in the size of its neighbors. If we accept the notion that a municipality's power in IMC-negotiation depends on its population size relative to its neighbors, the aforementioned result provides additional support for our main finding in the regressions with municipal fixed effects: Delegates are less likely to support IMC the larger the concomitant loss in political power.

The remaining paper proceeds as follows. Section 2 reviews the related literature before the data and institutional background is presented in section 3. Section 4 presents the first step of our analysis that uses municipal fixed effects. Section 5 reports on the analyses from the second step that focuses on municipal-level factors. Concluding remarks are made in section 6.

5.2 Related literature

Normative theory suggests that the benefits from IMC due to economies of scale and scope depend on municipal size. The smaller a municipality is, the larger the economies of scale and scope it can expect from cooperation (e.g. Miceli, 1993; Bartolini and Fiorillo, 2011).[31] However, the benefits from IMC come at a cost: IMC reduces the possibility to tailor public services to the tastes of the local population. The average difference between a citizen's preferred quality and quantity of public services and the quality and quantity they get increases if services are provided jointly. Other things equal, the average difference is higher the more heterogeneous the populations in the cooperating municipalities are (e.g. Alesina et al., 2004; Blaeschke, 2014). This implies that the net benefits from IMC are higher the more similar the municipalities are with respect to the characteristics of their population. Finally, Richard Feiock and co-authors point out that negotiating, implementing and controlling IMC-contracts entail substantial transaction costs (e.g. Feiock and Scholz, 2010). Other things equal, these transaction costs are higher the more heterogeneous the partners are.

Since the beginning of the century, many countries in Europe and beyond witnessed an increase in the number of municipalities joining forces (e.g. Hulst and van Monfort, 2007; Lintz, 2015). Especially Germany has witnessed a substantial increase in the level of cooperation (e.g.

---

31 In metropolitan areas, much of the IMC is motivated by regional spillovers. The game-theoretical logic behind IMC in the case of spillovers differs from the logic behind IMC in the case of economies of scale (e.g. Blaeschke, 2014). In this paper, we will focus on IMC in those fields of government activities where economies of scale and scope are the predominant argument pro IMC.

Blaeschke, 2014; Rosenfeld et al., 2016). A number of papers have analyzed factors driving the emergence of IMC (see Blaeschke, 2014 or Bel and Warner, 2016 for a review). In line with normative theory, they find strong support for the relevance of population size (e.g. Steiner, 2003; Bel et al., 2011; Di Porto et al., 2013) and transaction cost arguments (e.g. LeRoux et al. 2010, Kwon and Feiock, 2010). The existing studies also show that fiscal stress promotes IMC (e.g. Lackey et al. 2002; Steiner, 2003; LeRoux and Carr, 2007; Krueger and Bernick, 2010; Bel et al., 2013; Di Porto et al., 2013). Most studies capture the similarity in preferences across municipalities using indicators that depicts the degree of similarity in the composition of their population. Some studies find the similarity in median income (e.g. Feiock et al., 2009), municipal size (e.g. Lee et al., 2012) or racial composition (e.g. Alesina et al., 2004) to increase the probability that municipalities cooperate. Other studies do not find the homogeneity in citizens' characteristics across municipalities to promote cooperation (e.g. Bel and Warner, 2016). So far, there is little empirical evidence on the question whether IMC is able to generate the postulated benefits. The existing studies provide mixed results (e.g. Blaeschke and Haug, 2014, Bel et al., 2011).

Similarly, few authors have analyzed IMC from a Public Choice perspective. The recent paper by Di Liddo and Giuranno (2016) is an exception in this respect. They provide a theoretical model showing that local governments can impair yardstick competition through IMC. Governments interested in extracting rents are shown to make use of IMC because it increases the amount of extractable rents without reducing the probability of re-election. An additional argument is voiced by Blaeschke and Haug (2014) in their empirical study on IMC in the field of sewage. They argue that nepotist local governments may promote IMC because

this creates new posts to fill.[32] On the other hand, a number of papers mention the conviction that local politicians oppose IMC because they lose political power and freedom of maneuver when cooperating with other municipalities (e.g. Heinz, 2007; Blaeschke, 2014). To the best of our knowledge, there are no studies that empirically test these conjectures. Thus, our paper breaks new grounds.

Through its questionnaire and its regional focus, the current study is closely related to an empirical study on citizens' policy preferences regarding IMC (see chapter 4). The latter addresses the question why some citizens support IMC while others oppose it. The results in chapter 4 find policy preferences to be primarily driven by citizens´ individual characteristics. Most importantly, subjects who expect that IMC reduces the influence and control of citizens are more likely to oppose IMC. In the current paper, we make use of a survey among delegates in the same municipalities. The survey employs a similar questionnaire.

5.3 Data and institutional background

The municipalities in Germany provide important public services like local roads, business parks, cultural infrastructure and pre-school childcare and account for approximately one quarter of overall government expenditures (Zimmermann, 2009: 93-98). Supra-ordinate governments set minimum standards for the essential public services provided locally. Apart from that, municipalities are granted substantial autonomy in their decisions. On the revenue side, the local business tax is the most important endogenous source of local revenues accounting for more than 10 percent of municipal revenues (e.g. Zimmermann, 2009; Bischoff and Krabel, 2016). Municipalities decide about the tax multiplier ("Hebesatz") that fixes the effective rate on the profits of local business establishments. More than 50 percent of municipal

[32] Vaubel (1994) raises similar points in his paper on the political economy of centralization in Europe. He adds the possibility to favor centralization (and IMC) to create a scapegoat for unpopular policy decisions.

revenues come from state grants and vertical tax sharing. The largest part of state grants are unconditional grants distributed through a formula-based fiscal equalization system. The latter aims at reducing the gap between fiscal capacity and some standardized measure of fiscal need. It gives more grants per capita to fiscally weak municipalities without fully levelling out differences in fiscal capacity (e.g. Bischoff and Krabel, 2016). Hessian municipalities are run by formally independent local authorities. A directly elected mayor is head of the municipal administration. The mayor is responsible to a local council and needs its approval for major decisions including the budget and the setting of local tax rates. Formal IMC-agreements also need the approval of the local council. In sum, we see that local politicians in Germany have significant political power. In addition, the fiscal equalization system sets the basis for effective yardstick competition (e.g. Allers, 2012).

Municipal characteristic	Mean	Std. Dev.	Min	Max
Seat-share of free voter associations	0.144	0.206	0	1
Seat-share of leftwing parties	0.539	0.156	0	1
Population (in thousand)	7.1961	5.1862	0.644	27.417
Debt per capita	1197.1	907.3	112	5119.4
Own tax revenues per capita	630.7	317.7	315.3	2228.7
Rate of population growth (%)	-2.92	2.47	-9.30	3.67
Ratio of running expenditures / regular revenues	1.03	0.10	0.79	1.39

Table 5.1: Descriptive statistics on municipalities in the sample

In this paper, the regional focus rests on three peripheral counties in the German state of Hesse (Landkreis Kassel, Werra-Meissner-Kreis and Odenwaldkreis). The total population in these counties adds up to approximately 435,000 living in 60 municipalities. The average disposable income per capita amounts to 19,370 € while the overall average in the state of Hesse

is 20,452 (e.g. Bischoff et al., 2014). The municipalities differ in their size with the largest having more than 27,000 inhabitants and the smallest one having less than 700 inhabitants (see Table 5.1). In the period between 2009 and 2013, total population decreased by 2.9 percent. Only six municipalities grew in this period while 14 municipalities witnessed a decline by more than 5 percent. In the same period of time, the overall population in the state of Hesse grew (e.g. Bischoff et al., 2014). The municipalities also differ substantially in their fiscal capacity. The debt per capita varies between 112 € and 5,119 € and tax revenues per capita cover the span of 315 € to 2,229 €. The average debt per capita (1,197 €) exceeds the overall average in Hesse by almost 10 percent while the average amount of tax revenues per capita (630 €) falls short of the Hessian average by more than 30 percent (e.g. Bischoff et al., 2014). On average, the regular expenditures (excluding investments) exceed regular revenues (excluding capital gains) by 2.6 percent, again with considerable variation across municipalities.

Each municipality has its own local council. In 2013, there were 1,670 council members in the 60 municipal councils. The two large political parties on national level – the conservative Christian Democratic Union (CDU) and the Social Democratic Party (SPD) – play a significant role in local politics. In addition, many municipal councils have members belonging to the so-called Free voter associations (“Freie Wählergemeinschaft”). They are not connected to any political ideology, nor formally associated with one of the parties active on the national level. Their focus rests on local issues. They provide a political platform for citizens who are interested in local politics but prefer not to sign in to one of the regular political parties (e.g. Blaeschke, 2014; Baskaran and Lopez da Fonseca, 2016). Free voters associations account for 14 percent of the seats in the local council on average. In five councils, they have the absolute

majority of seats. Leftwing parties account for 53 percent of the seats on average.[33] The vote shares of leftwing parties and free voter associations differ substantially across municipalities. Mayoral candidates can be officially nominated and supported by fractions in the local council. In our sample 50 percent of the sitting mayors have been nominated by social democratic fractions, 18 percent by the Christian democratic fractions and 3 percent by the free voters association. 28 percent are not nominated by any fraction. Not all of the mayors actually belong to the party that nominated them but some remain formally independent. On the other hand, the nomination expresses a strong link between the nominating party and the mayor candidate. This link exists even after the mayor is elected because he or she needs the approval of the local council in essential policy decisions.

In summer 2013, we conducted a survey among all 1,670 council members in the municipalities described above. Every council member received a questionnaire by regular mail, together with a personalized invitation to participate in the survey and a stamped return-envelope. The questionnaire asks the delegates for their policy preferences for IMC and goes on to elicit their views on a number of questions related to IMC, e.g. its impact on democratic control. The questionnaire closes with a set of questions on socio-demographic characteristics and questions dealing with their activities as delegates.

The survey elicits delegates' policy preferences on IMC in four different fields of government activity: 1) childcare facilities, 2) infrastructure for private households (such as community centers, sports facilities), 3) road maintenance and winter services, and 4) internal administration (registration office, regulatory agency, public construction authorities). Figure 5.1 presents the precise question we used for childcare facilities. Analogous questions are used

33 Next to the SPD, members of the Green Party and the Party "Die Linke" are counted as leftwing.

What do you think? How intensively should your municipality cooperate with other municipalities?

a) In running childcare facilities, my municipality should

- □ run childcare facilities jointly.
- □ cooperate only loosely (coordinate services and help out occasionally).
- □ not cooperate at all.
- □ don't know

Figure 5.1: Survey question on our dependent variable

for the other fields. These fields were chosen for a number of reasons. First, all four fields require significant amounts of public resources and they all bear the potential of generating economies of scale and scope through IMC. Thus, these fields seem suitable for IMC from a normative perspective. Second, the existing evidence suggests that IMC is vividly debated especially in these fields (e.g. Rosenfeld et al., 2016). Third, the state of Hesse runs a special agency founded to foster IMC. It informs local politicians about possibilities to launch IMC and about best practice examples. This agency places a special emphasis on the fields analyzed here.[34] Finally, the four services differ in the degree to which IMC is visible for the citizens. In the fields internal administration as well as road maintenance and winters services IMC goes relatively unnoticed by the citizens. This is entirely different for IMC in the fields of childcare services and infrastructure for private households. Here, the place of service provision is likely to change for some citizens and the interaction with citizens from other municipalities is intensified through IMC (e.g. Norris, 2001).[35] In addition, the following argument of Alesina et al. (2004) applies to these services. Accordingly, IMC increases their frequency interaction

34 For details, see http://www.ikz-hessen.de/projekte.

35 In the terminology of the regional governance literature, childcare and household-related infrastructure are often referred to as lifestyle amenities, road maintenance and winter services belongs to the systems maintenance services and internal administration may be called "political" (see e.g. Norris, 2001). We do not use this terminology here because we are convinced that essential difference when it comes to citizens' view on IMC is visibility and interchange with citizens from other municipalities.

with people outside their peer group and thus causes utility losses among citizens who prefer to interact with their peers only (e.g. Brasington, 2003; Alesina et al., 2004). Thus, citizens are more reluctant to support IMC in these fields (e.g. Norris, 2001; chapter 4).

In total, 679 delegates from 60 municipalities answered the questions and sent back the questionnaire. Their support for close IMC differs markedly across field of government activity (see table 5.2). Only one third of respondents support close IMC in field 1 (childcare facilities) and 2 (infrastructure for private households) while support exceeds 50 percent for in field 3 (road maintenance and winter services) and 4 (internal administration).

	Task			
Stated preference	childcare	infrastructure for private households	road maintenance, winter services	internal administration
Cooperate closely	**33.1**	**34.4**	**53.3**	**56.8**
Cooperate loosely	58.9	53.4	41.8	33.8
No cooperation	7.3	11.9	4.6	9.3
Don‘t know	0.7	0.5	0.3	0.2

Table 5.2: Frequency of policy preference among delegates in percent

The overall response rate of 41 percent is quite high. It differs across municipalities but we have no evidence that it depends systematically on municipal characteristics. We find no evidence of a systematic selection bias except for an over-representation of delegates from free voter associations. In the regressions below and background sensitivity analyses, we control for a large number of municipal-level and individual-level characteristics (including municipal and party fixed effects). Thereby, we take care of the main concerns regarding the use of non-representative surveys (e.g. Solon et al., 2015).

5.4 Empirical analysis: the role of office-related self-interest

The main aim of this paper is to test how delegates' policy preferences regarding IMC are shaped by office-related self-interest: Do they oppose IMC because it implies a loss in political power or do they support it because it annuls yardstick competition and facilitates rent extraction? Our empirical strategy is the following: Given that we have multiple answers from 59 municipalities, we compare the answers of different politicians from the same municipality. Municipal fixed effects control for all characteristics of the municipalities that drive the costs and benefits from IMC. We also control for the impact of ideology by introducing fixed effects for subjects' party affiliation. Having controlled for these factors and a number of others (for details, see below), we compare the answers from delegates with different level of political power. If the prospect to lose political power makes delegates oppose IMC, the opposition against IMC must be stronger among subjects who have more political power to lose. Thus, our first hypothesis reads:

> **H1 (losing political power):**
>
> Delegates with more political power are less likely to support a close cooperation between their home municipality and its neighbors.

The opposite holds if delegates are primarily interested in rent extraction: In this case, the level of support is stronger among delegates with more political power because this implies more direct access to political rents. The second hypothesis reads:

> **H1A (facilitating rent extraction):**
>
> Delegates with more political power are more likely to support IMC.

To test these hypotheses, we pool subjects' answers in the four fields of government activities f ($f = 1, \ldots 4$) and analyze them in a panel logit model. Our dependent variable IMC_{if} is calculated using delegates' answers presented in table 5.2. It takes on the value 1 if delegate i

supports close inter-municipal cooperation in field *f*, i.e. ticked the first option (close cooperation) for this field (0 else). The empirical model is the following:

$$IMC_{if} = f\left(Political\ Power_i, Controls_i, FE_m, FE_f\right) \quad (1)$$

The matrix *Political Power*$_i$ contains the exogenous variables that capture delegates' office-related self-interest regarding IMC. Matrix *Controls*$_i$ contains a number of individual-level control variables (e.g. age, education). The model also includes fixed effects for the home-municipality (FE_m) and different fields of cooperation (FE_f). Standard errors are clustered at delegates' level. We checked for high correlation among the independent variables and do not find critical correlation coefficients. Descriptive statistics are provided in Appendix C, Table C1.

Political parties play a much stronger role in German politics than they do in countries like the US. In particular, we observe a strong degree of party discipline not existend in other countires (e.g. Lösche, 2008; von Alemann, 2010). Thus, the level of political power an individual delegate has strongly depends on the party he or she belongs to. More specifically, delegates have a high level of political power if they belong to the party that proposed the current mayor and supports him or her during the term. The dummy variable *BELONGS_MAYORS_FRACTION* that takes on the value 1 for delegates who belong to the party that proposed the mayor (0 else).

We use a number of control variables. First, we account for possible differences in political convictions and ideology by including party fixed effects (e.g. Bel et al., 2012). The dummy variable *POSITION_IN_COUNCIL* is 1 for all delegates holding an important position in the local council, e.g. party leader or chair of the municipal steering committee "Haupt- und Finanzausschuss" (0 else). This variable captures the possibility that personalized political power emerging from this kind of positions also shapes delegates' view on IMC. In addition,

we use the delegates' *YEARS_OF_OFFICE* as a proxy for political experience. We also ask delegates whether they plan to run again in the next election. The dummy variable *NEXT_ELECTION* takes on the value 1 for all delegates who plan to run up again (0 else). Many scholars see the essential problem of IMC in its negative impact on accountability and citizens' political control and influence (e.g. Dafflon, 2012; Gjertsen, 2014). We ask delegates whether they expect IMC to reduce citizens' political influence and control. The dummy variable *IMC_REDUCE_INFLUENCE* takes on the value 1 for those who entertain this conviction (0 else). Finally, we control for respondents' sex using a *FEMALE*-dummy, for their age (*AGE*) and their level of education. The variable *HIGH_EDU* is 1 for subjects who have a high-school diploma and 0 for all others.

Variables	**(1)**		**(2)**		**(3)**	
	ME	**Std. Err**	**ME**	**Std. Err**	**ME**	**Std. Err**
BELONGS_MAYORS_FRACTION	-0.1555***	0.0325	-0.1010***	0.0375	-0.2014***	0.0413
POSITION_IN_COUNCIL	0.0218	0.0260	-0.0084	0.0303	0.0529	0.0326
YEARS_OF_OFFICE	-0.0026	0.0017	-0.0026	0.0020	-0.0027	0.0021
NEXT_ELECTION	0.0008	0.0271	0 .02481	0.0320	-0.0250	0.0346
IMC_REDUCE_INFLUENCE	-0.1331***	0.0284	-0.0858***	0.0323	-0.1779**	0.0368
FEMALE	-0.0554*	0.0292	-0.0304	0.0331	-0.0849	0.0384
AGE	-0.0002	0.0012	0 .0007	0.0014	-0.0012	0.0015
HIGH_EDU	0.1244***	0.0264	0.1332***	0.03169	0.1066***	0.0328
Municipalitiy Fixed Effects	**Yes**		**Yes**		**Yes**	
County Fixed Effects	**No**		**No**		**No**	
Field Fixed Effects	**Yes**		**Yes**		**Yes**	
Party Fixed Effects	**Yes**		**Yes**		**Yes**	
Observations	2395		1173		1186	
Groups	604		590		597	
Wald χ^2	331.90***		109.49***		150.45***	

Table 5.3: Regression results: the role of delegates' individual characteristics

The regression results are presented in Table 5.3. The baseline model in column 1 contains all variables described above and covers all four fields of government activities. In column 2, we restrict the analysis to those two fields where IMC implies a more active exchange

between the citizens of the cooperating municipalities when consuming the jointly provided public services. This applies to childcare services and infrastructure for private households. Model 3 restricts the analysis to the other two fields where IMC goes largely unnoticed by the citizens. These comprise road maintenance and winter services as well as internal administration.

All three models yield qualitatively identical results. *BELONGS_MAYORS_FRACTION* is significantly negative: Delegates belonging to the fraction that proposed and supports the mayor are less likely to support IMC. *HIGH_EDU* is significant and positive while *IMC_REDUCE_INFLUENCE* are significant and negative. The other variables, among them *POSITION OF OFFICE* and *YEARS_IN_OFFICE*, are insignificant.

Looking at the marginal effects, we find sizeable effects for a number of variables. Believing that IMC reduces political influence of voters reduces the probability to support close IMC by 13.3 percentage points. Delegates with a highschool-diploma are by 12.4 percentage points more likely to support IMC. The largest marginal effect is reported for our central independent variable *BELONG_MAYORS_FRACTION*. Belonging to the fraction that proposed and supports the mayor reduces the probability to support IMC by 15.5 percentage points. The marginal effect is larger in fields where IMC goes largely unnoticed by the citizens (20 percentage points as opposed to 10 percentage points for fields where IMC implies intensified contact with citizens from other municipalities). The result contradicts H1A and strongly supports H1: Delegates with more political power are more likely to oppose the cooperation of their home municipality with its neighbors.

In sensitivity analyses, we control for additional characteristics that may shape the delegates' view on IMC. We control for the fact that some delegates work in the local administration of a nearby municipality and thus may have insights other delegates do not have

(note that delegates cannot work in their home municipality's administration by law). To control for delegates' emotional attachment to their home municipality, we introduce a dummy variable capturing whether or not delegates are born in their current home municipality and another variable capturing whether or not they are active members of local sports clubs, cultural initiatives, the local fire brigade or other local clubs and initiatives (0 else). We also control for the fact that attachment to the home municipality may result from owning real estate within the municipality. Finally, we control for the existence of children under 16. None of these factors prove significant, nor do they change the results above.[36]

5.5 Additional empirical analysis: the role of municipal-level factors

While the main research question has been answered, the data set underlying this analysis allows us to answer a related question: How do municipal-level factors shape delegates' preferences for IMC? Two hypothesis can be derived from the normative literature on IMC:

HM1 (population size):

Delegates' support for IMC decreases in municipal size.

HM2 (transaction costs):

The lower the expected transaction costs associated with IMC are, the higher the support for IMC among the delegates.

To test these hypotheses, we add data on the delegates' home municipality and its neighbors to our current data set. The empirical model is as follows:

$$IMC\_CLOSE_{if} = f\left(Political\ Power_i, Controls_i, X_m, FE_f\right) \quad (2)$$

[36] Detailed results are presented in Appendix C2

Compared to the model in expression (1), we drop the municipal fixed effects (FE_m) and introduce a matrix X_m with municipal-level variables instead. Full descriptive statistics are reported in Appendix C, Table C3.

To test hypothesis HM1, we include the population size (*POP*) of the delegates' home municipality. we capture the expected transaction costs of negotiating and managing IMC-agreements (hypothesis HM2) by introducing *SAME_MAYORS_PARTY*. It depicts the share of neighboring municipalities whose mayor has the same party affiliation as the mayor in municipality m. Given that IMC in Germany is largely restricted to direct neighbors (e.g. Blaeschke, 2014, Rosenfeld et al., 2016), we concentrate on the characteristics of the municipalities directly adjacent to the citizens´ home municipality.

We use a number of municipal-level control variables. The variable *AV_TRAVEL_TIME* captures the average travel time from home municipality m to their direct neighbors (according to Google maps). The travel time is an indicator for the additional costs that citizens have to bear when consuming public services that are produced in cooperation with other municipalities. The larger the travel time, the higher these additional costs and thus the smaller the expected net benefits from IMC. We also include the total number of neighboring municipalities *(NUMBER_NEIGHBORS)* because search costs for suitable partners are expected to increase in the number of potential partners (e.g. Feiock et al., 2009). On the other hand, an increasing number of neighboring municipalities implies more potential partners to choose from. To capture the fiscal situation of the delegates' home municipality, we use the average of debt per capita (*DEBT*) and the ratio of running expenditures over regular revenues (*EXPENDITURES_BY_REVENUES*) - both calculated as five-year averages between 2009 and 2013 (see table 5.1 in section 3). The larger *DEBT* and *EXPENDITURES_BY_REVENUES* are, the higher the fiscal pressure in municipality m. We expect fiscal pressure to increase support for IMC. The literature in section 2 suggests that similar citizens´ preferences of potential

cooperation partners increase the probability to cooperate. That is why we control for the degree to which municipality m and its neighbors are similar in the composition of their population and thus also similar in their tastes for public services (see section 2). The variable *NUM_SIM_CHILDREN* counts the number of municipalities where the share of children below the age of 15 deviates from that in municipality m by less than 5 percent. On average, 63 percent of the neighboring municipalities qualify for this criterion. Unfortunately, further adequate indicators are not available. In particular, we cannot include differences in per capita income because the differences between neighboring municipalities are very low.[37]

We further control for the argument of Alesina et al. (2004) according to which citizens prefer to interact with their peers in general and when consuming public services. To this end, we include the variable *NUM_SIM_NONGERMAN*. It counts the number of municipalities where the share of non-German population deviates from that in municipality m by less than 20 percent. 46 percent of the neighboring municipalities qualify for this. Finally, we introduce spatial lags for population size and fiscal stress indicators. These capture the main characteristics of the municipalities directly neighboring the delegates home municipality m. The variable *SL_DEBT* captures the median debt per capita among m's direct neighbors. The other spatial lags in population size (*SL_POP*) and expenditures by revenues (*SL_EXPENDITURES_BY_REVENUES)* are calculated accordingly. We hypothesize that the delegates support for IMC is lower the higher the degree of fiscal stress among the neighboring municipalities. The rationale is less straightforward for *SL_POP*. On the one hand, having the option to choose a large cooperation partner implies that – through economies of scale –

37 Indicators on the ethnic composition as often used in US studies (e.g. Feiock et al., 2009) are not available for Germany. And even if they were, a normative interpretation of their performance seems inappropriate to us. The available data informs about the share of inhabitants without German passport. This group is internally heterogeneous and so is the group of citizens with German passport. This information is used in the variable *NUM_SIM_NONGERMAN* – though a normative interpretation seems equally inappropriate.

municipality m can expect a substantial decrease in the costs of public service provision (e.g. Brasington, 1999). On the other hand, municipality m is in a weak bargaining position when negotiating with large potential partners. Entering IMC-negotiations in a weak bargaining position implies that the final agreement will be dominated by the preferences of other municipalities' governments and citizens. Benevolent governments may be more reluctant to enter IMC-negotiations the weaker their bargaining position is. However, the prediction is the same for governments motivated by the power coming along with the political office. The weaker the government's bargaining position, the more power it loses if an IMC-agreement is reached.

Table 5.4 presents the regression results. All models include county fixed effects and the following two regional control variables: *COUNTY_BORDER* is 1 for municipalities that are located on a county border (0 else) and *BORDERING_KS* marks all municipalities that border the city of Kassel – the only big city that borders municipalities in our sample. Like in Table 5.4, standard errors are clustered at delegates' level. To keep the presentation focused, neither the coefficients for *COUNTY_BORDER* and *BORDERING_KS*, nor the coefficients for the individual-level variables are reported in Table 5.4. The latter perform like they do in table 5.3.

The baseline model in column 1 contains all individual-level variables used in model 1 of table 5.3 plus the variables sketched above for all four fields of government activities. The performance of *SAME_MAYORS_PARTY* support for hypothesis HM2. The positively significant coefficient of *POP* directly contradicts hypothesis HM1: Support for IMC increases rather than decreases in the population size. This suggests that politicians are not primarily concerned with generating economies of scale and scope for their home municipality but they rather fear the greater loss in political power associated with entering IMC-agreements as a small municipality. This interpretation is further nourished by the negatively significant coefficient of *SL_POP*. It indicates that delegates are less likely to support IMC if this is likely

	(1)		(2)		(3)		(4)		(5)		(6)	
Variables	**ME**	**SE**	**ME**	**SE**	**ME**	**SE**	**ME**	**SE**	**ME**	**SE**	**ME**	**SE**
DEBT	0.064***	0.0233	0.0381	0.0253	0.0899**	0.0306	0.0848**	0.0243	0.0541**	0.0259	0.1167***	0.0319
EXPENDITURES_BY_REVENUES	0.3938**	0.1708	0.4234**	0.2012	0.4204*	0.2205	0.1225	0.1745	0.175	0.2035	0.1225	0.2272
SL_DEBT	-0.0239	0.0407	-0.0082	0.0466	-0.0367	0.061	-0.0069	0.0399	0.009	0.0461	-0.0158	0.0593
SL_EXPENDITURES_BY_REV	0.4202	0.3396	0.6509	0.435	0.1047	0.4314	0.1549	0.3666	0.3947	0.4737	-0.1497	0.4439
POP	0.018***	0.0038	0.0157***	0.0045	0.0189***	0.0047	0.0189***	0.0039	0.017***	0.0045	0.02***	0.0049
SL_POP	-0.0373***	0.0071	-0.025***	0.0089	-0.0492***	0.0087						
NUM_SIM_POP							-0.0266	0.0244	0.0105	0.0301	-0.0594**	0.0296
NUM_SIM_NONGERMAN	0.0861***	0.0256	0.0662**	0.0306	0.0849***	0.0315	0.1036***	0.0262	0.0795***	0.0304	0.1069***	0.0323
NUM_SIM_CHILDREN	-0.0098	0.0124	-0.0208	0.0147	0.0067	0.0165	-0.0102	0.013	-0.0205	0.0149	0.0035	0.0168
SAME_MAYORS_PARTY	0.0245**	0.01	0.0243**	0.0116	0.025*	0.0128	0.0299**	0.0106	0.0272**	0.012	0.033**	0.0133
NUMBER_NEIGHBORS	-0.0413**	0.0142	-0.025	0.0173	-0.0602***	0.0174	-0.0405*	0.0157	-0.0309	0.0189	-0.05***	0.0184
AV_TRAVEL_TIME	-0.0028	0.0056	-0.0062	0.0068	-0.002	0.0076	0.0006	0.0059	-0.0044	0.007	0.0033	0.008
Municipality Fixed Effects	**No**		**No**		**No**		**No**		**No**		**No**	
County Fixed Effects	**Yes**		**Yes**		**Yes**		**Yes**		**Yes**		**Yes**	
Field Fixed Effects	**Yes**		**Yes**		**Yes**		**Yes**		**Yes**		**Yes**	
Party Fixed Effects	**Yes**		**Yes**		**Yes**		**Yes**		**Yes**		**Yes**	
Observations	2307		1145		1154		2307		1145		1154	
Groups	582		576		581		582		576		581	
Wald χ^2	258.47***		78.54***		107.36***		252.21***		76.04***		98.99***	

Table 5.4: Regression results: the role of municipal-level factors

to involve larger partners though the effects of both *POP* and *SL_POP* are moderate in size. The positively significant coefficients of *EXPENDITURES_BY_REVENUES* and *DEBT* show that delegates' support in IMC increases in the degree of fiscal stress. In addition, the performance of *NUM_SIM_NON_GERMAN* suggests that politicians account for the preferences of voters to exchange with their peers when consuming public services. Finally, the negative coefficient for *NUMBER_NEIBHBORS* is in line with the notion put forth by Feiock et al. (2009) according to which transaction costs increase in the number of potential partners.

Like in table 5.3, model 2 restricts the analysis to those two fields of potential cooperation where IMC implies a more active exchange between the citizens of the cooperating municipalities (i.e. childcare services and infrastructure for private households). Model 3 restricts the analysis to the two fields where IMC goes largely unnoticed by the citizens. The performance of most variables is qualitatively the same as in model 1. There are few exceptions: In model 2, the number of neighbors and debt per capita are insignificant. In model 3, *EXPENDITURES_BY_REVENUES* and *SAME_MAYORS_PARTY* are significant at the 10% level only.

In model 4-6, we replace *SL_POP* – the median size of the neighboring population – by *NUM_SIM_POP* – the number of neighboring municipalities with a population size that differs by less than one third from that of municipality m. On average, 42 percent of the neighbors qualify for this. This variable is introduced to account for the possibility that differences in population size capture differences in citizens' preferences (e.g. regarding the necessitiy to have community facilities) or differences in transaction costs (see Lee et al., 2012). *NUM_SIM_POP* is insignificant except in model 6 and the ratio of expenditures over revenues loses signifiance. Apart from that, the results remain qualitatively unchanged.

The bottom line of the above regressions can be summarized as follows: We find support for delegates´ IMC-preferences to increase in those variables capturing the expected transaction

costs of IMC-arrangements (hypothesis HM2). This result is in line with the normative theory of IMC. In addition, the support for IMC increases in the level of fiscal stress of the delegate's home-municipality and in the number of neighboring municipalities with a similar share of non-German population. On the other hand, the positive impact of population size of municipality m strongly contradicts hypothesis HM1. Together with the negative one of the median population size of its neighbors, it suggests that council members are reluctant to enter IMC-arrangements as smaller partner. This regularity is in line with the main findings in section 4: Politicians are more reluctant to support IMC the larger the expected loss in political power from IMC.

5.6 Concluding remarks

In the previous sections, we analyze data from a survey among local council members in 59 municipalities in rural Hesse. Local council members are asked whether their home municipality should cooperate closely with neighboring municipalities in the provision of local public services. We hypothesize that politicians' policy preferences regarding IMC are influenced by office-related self-interest while the direction of self-interest was unclear ex ante: Do delegates oppose IMC because it implies a loss in political power or do they support it because it facilitates rent extraction? We find strong support for the first conjecture: Delegates belonging to the fraction that supports the mayor are less likely to support IMC. This result holds for services where IMC implies close contact between the citizens of the cooperation municipalities (childcare facilities and household-related infrastructure like community centers, sports facilities etc.) and it holds for services where IMC goes largely unnoticed by the citizens (administrative services, maintenance of local roads and winter services). The marginal effect of 15.5 percentage points clearly shows that this pattern is important politically.

In section 5, we drop the municipal fixed effects and focus on the role of municipal characteristics in shaping delegates policy preferences. In line with normative theory, we find delegates to account for expected transaction costs. And in line with the existing literature, fiscal stress is found to raise delegates' support for IMC. However, delegates' support for IMC is also found to increase in the size of their home municipality but decrease in the size of its neighbors. This result clearly contradicts normative theory but lends further support to our central finding. It indicates that delegates are reluctant to be the smaller and thus weaker partner in IMC-negotiations.

Our analysis suffers from a number of limitations. First, the usual caveats regarding survey data apply: Answers are hypothetical and may not be good predictors of subjects' behavior in local ballots or initiatives on IMC. On the other hand, it is much less costly for delegates to disguise office-related self-interest in a survey than it is to disguise it in real-life decisions. Thus, if we observe evidence for office-related self-interest in the hypothetical answers to our survey, it is likely to be present in their real-life decisions in the council. More importantly, survey data has the advantage that we can combine the policy preference regarding IMC with many personal characteristics and thus analyze their influence of delegates' individual characteristics on their support for IMC. Our study shows that this provides valuable insights that are very difficult to collect by observing delegates' voting behavior in the council.

Second, the analysis is based on data for local council members. Council member is an honorary position and thus it is not the monetary pay that motivated them to run for office. Instead, political power and freedom of maneuver are likely to be of particular relevance. The incentives may be different for mayors who are paid for their services.[38] Again, however, the

[38] The theoretical model by Di Liddo and Giuranno (2016) refers to "administrators".

net effect is not straight forward: Mayors are likely to have more political power than delegates but they also have more direct access to political rents.

Third, the results are based on data from Germany. Though there is corruption and rent extraction in German municipalities, a number of institutional controls are in place to make rent extraction difficult and costly (e.g. European Commission, 2014). The results may be different in regions where such controls are not in place or are less effective.

Fourth, we concentrate on fields where the predominant argument pro IMC are economies of scale and scope. In other fields of local government activities – e.g. public transportation, joint business parks or promotion of tourism and economic development in general – the predominant argument is the internalization of spillovers (e.g. Blaeschke, 2014). In these fields, the game-theoretical logic of IMC is different because municipalities outside the IMC-arrangements can free ride. Therefore, it is not clear whether our results can be generalized to fields where spillovers motivate IMC. This remains an interesting question for future research.

From a political perspective, our results suggest that supra-ordinate governments in Germany need to be less concerned about IMC mitigating yardstick competition than the theoretical paper by Di Liddo and Giuranno (2016) suggests. Instead, they may consider policies that incentivize IMC and help overcome the political resistance associated with it. However, this implication has to be taken with a grain of salt. So far, we cannot be sure that IMC really improves the efficiency in public service provision. The empirical evidence is mixed (e.g. Blaeschke and Haug, 2014, Bel et al., 2011).

6. Conclusion and perspectives for future research

The current thesis presents three papers which contribute to the literature on the emergence of inter-municipal cooperation (IMC). It widens the view on IMC in Germany, where large scale, econometric publications are scarce. Particularly the analysis in chapter 3 provides new insights into IMC in Germany because it is the first that applies an econometric approach on municipalities from all Western German states. Though the analysis builds on a non-representative survey, it provides additional understanding about IMC emergence in the German context. This thesis does not only repeat existing analysis with German data, it provides entirely new insights to the international IMC emergence literature. The paper in chapter 3 examines the question whether spillovers and the opportunity to free ride has an impact on IMC emergence. The second paper analyses whether normative arguments as well as individual characteristics shape citizens´ preferences for IMC. The third examines to what extent local politicians oppose IMC when it affects their political power. The results provide relevant insights for economic and public administration scientists as well as for politicians.

In chapter 3 the paper identifies determinants of IMC emergence in the field of tourism marketing, where substantial regional spillovers exist. To do so, Olson and Zeckhauser´s (1966) famous exploitation hypothesis is applied to a new context. It posits that the great get exploited by the small, whereas the great contribute to a public good and the small can free ride on the greats´ contributions. In this thesis municipalities with high interest or a high preference for tourism marketing are defined as the great and those with a low preference as the small. It is accounted for the fact that each municipality is embedded in a certain spatial constellation of great and small neighbouring municipalities. These constellations help to identify to what extent municipalities have the opportunity to free ride. Because of the high interest in tourism marketing, the great provide it anyway and the small free ride on the greats´ contributions. For

the small, free riding sometimes guarantees a better outcome than providing IMC jointly. That is why the existence of spillovers and thus free riding is expected to prevent IMC.

The results clearly show that the small utilize free riding opportunities, which leads to a reduced probability to start IMC. Olson and Zeckhauser´s (1966) exploitation hypothesis provides an appropriate basis in to illustrate the free rider problem in IMC. The results from this paper enrich the understanding of IMC emergence by showing that the existence of spillovers is not only a motive to start IMC. It can also be an obstacle when municipalities get better outcomes through free riding than through cooperation. Ignoring this essential factor can result in misspecification of empirical models and in misinterpretation of coherences.

In line with the existing literature the results indicate that transaction costs matter regarding IMC emergence. Similar preferences in the field of cooperation between potential partners seem to reduce interjurisdictional transaction costs and facilitate IMC emergence. Little evidence is found for factors that are important in several former studies. It seems that in fields which produce substantial spillovers, small municipalities and those that suffer from fiscal stress do not cooperate more likely. Studies that focus on services where substantial economies of scale are achievable find these aspects as being the main driver for IMC.

The analysis in chapter 3 additionally contributes a methodical innovation to the IMC emergence literature. It is the first that applies hazard model. This empirical method proofed to be a suitable alternative to the usually used methods. In order to explicitly explain the start of an IMC it is more adequate than those applied in previous studies. Additionally, it is able to deal with endogeneity problems through backward effects from the endogenous variable of the exogenous ones much better.

The paper in chapter 4 analyses whether citizens from municipalities that can, according to normative theory, expect net gains by cooperation prefer IMC more likely than those who do

not. Building on survey data from 59 municipalities, regression results show that citizens´ preferences are not shaped according to normative theory. Citizens from small or shrinking municipalities as well as those that suffer from fiscal stress do not prefer IMC more likely than others. Admittedly, they consider IMC as an instrument in order to ease fiscal stress because those who assume that their home-municipality suffers from fiscal problems prefer IMC more likely, but the assessment of their home-municipalities' fiscal situation often does not mirror the real situation as the results show.

Because of the bad performance of the variables that reflect normative theory arguments, further investigations examine to what extent individual characteristics like political beliefs, satisfaction with local public service provision as well as socio-demographic characteristics shape citizens´ preferences for IMC. The results show that citizens who are concerned about losing autonomy and control if their home-municipality cooperates oppose IMC more likely. Additionally, citizens who trust their local politicians do not want their municipality to cooperate, because they are reluctant to see their trusted government share political power with other agents. Further findings are that citizens who have close emotional ties to their home-municipality are more likely against IMC. Citizens that have substantially large neighbours (in terms of population size) strongly oppose IMC. This is especially important for politicians because one instrument to fight demographic change is to connect small municipalities with medium or large sized monocentric municipalities, in order to keep utilizing freed-up capacities.

In chapter 5 the paper investigates whether local politicians oppose IMC when they fear a loss of political power or if they prefer IMC in order to mitigate yardstick competition to extract rents. The question is examined by using survey data from 679 local council members from 60 German municipalities. The results show that council members that belong to the governing party oppose IMC more likely. These results indicate that council members fear a loss of political power instead of having an interest in mitigating yardstick competition through

IMC. The findings are in line with the Public Choice literature confirming that politicians pursue their own interest, in this example, maintaining their power. Contrary to the citizens, council members´ preferences for IMC are in line with normative theory. They are more likely to prefer it when their municipality suffers from fiscal stress.

Comparing the results from chapter 4 and chapter 5 one can derive interesting insights into citizens´ and delegates´ view on IMC as well as make recommendations. The factors that drive IMC preferences for citizens and council members are not the same. Citizens do not seem to be well informed about municipalities´ characteristics like the fiscal situation, although they consider IMC as an instrument to ease fiscal problems. This is in line with the theory of the rational uninformed voter which posits that citizens preferably collect information en passant (Caplan, 2008; Bischoff and Siemers, 2013). On the other hand, local politicians do know what shape their municipality is in. They also consider IMC as a viable instrument to fight fiscal stress and are more likely to be in favour of it if their municipality is in a bad condition. When municipalities want to cooperate and when severe citizen resistance can be expected, it is advisable to improve communication with the citizens and provide them with sufficient information. Furthermore, citizens should be included in a transparent IMC process. But the results from chapter 5 show that delegates seek to maintain their power. That is why they could not be interested in providing voters with information that justifies IMC. To avoid local politicians´ selfish behaviour, voters should control their local representatives.

At this point it has to be emphasized that this thesis does not necessarily recommend to apply IMC. Admittedly, there are several theoretical arguments that promise positive effects on local public service provision efficiency and several arguments show that it is more suitable than structural reforms. Some studies examine IMC effects (e.g. Blaeschke and Haug, 2014; Bel and Warner, 2015), but the literature still lacks large scale studies to confirm these arguments, i.e. in which services and under which conditions IMC can be a way to improve

local public service provision. Scepticism is especially advisable with respect to municipal merger experiences. Expectations were much more positive than the realized improvements. Examining IMC´s cost and quality effects and its determinants is the first suggestion for future research.

From this thesis, one can derive further paths to investigate. First, a proof of the existence of spillovers rather than just assuming their existence would be a further step forward. A better measure to identify the existence of spillovers in tourism marketing could be data on municipalities´ real tourism marketing expenditures. One could apply spatial autoregressive model (SAR) with tourism marketing expenditures as the endogenous variable (LeSage, 2014). In a first step one can analyse to what extent nearby expenditures have impact on municipality *i´*s expenditures to identify spillovers. When spillovers can be identified, a spatial lag of tourism marketing expenditures should be included into the empirical model explaining IMC emergence. Expanding the spatial framework from first tier neighbours to second tier or even third tier neighbours could offer a more realistic setting to analyse spillover effects on IMC emergence, because the assumption made in this thesis that only first tier neighbors produce spillovers, does not seem to fit real world situations.

Second, analysing IMC in additional spillover related public services like economic development or crime prevention would help to create a broader picture of free riding in the IMC process. Furthermore, it is not explored which instruments are useful to overcome free riding behaviour.

Third, beyond analysing whether and under which conditions citizens prefer or oppose IMC, it is interesting to get closer insights into citizens´ satisfaction regarding jointly provided local public services. Knowledge about whether citizens are more satisfied with jointly vs solo produced public services and what determines this satisfaction could help design future IMCs

better. It is also interesting to know to what extent citizens notice whether municipalities save money through IMC and invest it to improve quality of existing public services or provide entirely new services.

Fourth, in the European context IMC is mostly considered as an instrument municipalities apply with the aim to increase service quality or reduce costs, which is also in citizens' interest. An empirical test of Di Liddo and Giuranno´s (2016) model on mitigating yardstick competition among mayors could provide insights into alternative motives to start IMC. Even though this thesis does not find mitigating yard stick competition as a motivation for local council members, mayors might have different motives. They have much more political power than an individual council member and might have better opportunities to do handshake deals with other mayors and thus more opportunities to extract rents.

Appendix A: Chapter 3

In the following we consider all measures as tourism marketing which aim at advertising free time and recreation activities of a municipality beyond municipal boundaries.

Below you find a list of provision types which, additionally to autonomously managing the task, might be relevant.

Which of the presented/following options, apart from autonomous management, play the greatest role in your municipality?

- □ We (partly) provide the task(s) for other municipalities.
- □ Another municipality (partly) provides the task(s) for us.
- □ Zusammenarbeit mit anderen Gemeinden (z.B. in einem Zweck- oder Tourismusverband oder einer GmbH) oder Arbeitsteilung mit anderen Gemeinden (Die beteiligten Gemeinden übernehmen jeweils Teilaufgaben und erledigen sie für andere beteiligte Gemeinden).
- □ Cooperation with other municipalities (e.g. tourism associations) or division of subtasks. (The participating municipalities each assume subtasks and provide them for involved municipalities).
- □ Provision through the county
- □ Provision through private providers
- □ None of the presented options play a considerable role

Figure A1: Question – endogenous variable

VARIABLES	(7)		(8)		(9)	
	HR	Std. Err	HR	Std. Err	HR	Std. Err
S-P	1.580**	(0.288)				
NUMSIM_STAY_PC	1.502***	(0.187)	1.498***	(0.111)	1.892***	(0.120)
BP_AROUND	3.583***	(1.061)			1.780	(0.960)
S-P*BP_AROUND	0.309***	(0.126)				
B-P			1.328	(0.287)		
B-P*NUMSIM_STAYS_PC			0.756**	(0.0896)		
BP_AROUND*NUMSIM_STAYS_PC					0.671**	(0.116)
NUMSM_TAX_REV_PC	0.976	(0.0875)	0.943	(0.0413)	0.997	(0.0853)
NUMSIM_EXP_OV_REV	1.159**	(0.0804)	1.094**	(0.0482)	1.024	(0.0651)
NUMSIM_POP	1.116	(0.0845)	1.075	(0.0729)	1.091	(0.113)
EXP_OV_REV	2.295*	(1.076)	1.351	(0.457)	2.954*	(1.750)
TAX_REV_PC	1.000	(0.00036)	1.000	(0.00038)	1.000	(0.000662)
POP	1.000***	(1.47e-05)	1.000***	(8.10e-06)	1.000	(5.88e-05)
NEAR_TOURISTC_SITE	1.633***	(0.264)	1.360***	(0.126)	1.794***	(0.402)
DISTANCE_BIG_CITY	1.000**	(1.56e-06)	1.000***	(9.97e-07)	1.000	(4.46e-06)
NUM_NEIGHBOURS	0.949	(0.105)	1.103*	(0.0574)	1.100	(0.136)
COUNTY_BORDER	0.856	(0.192)	0.865	(0.166)	1.126	(0.292)
STATE_BORDER	1.104	(0.186)	0.893	(0.196)	0.793	(0.220)
ABSOLUTE_MAJORITY	0.988	(0.106)	1.033	(0.205)	0.799	(0.230)
ONLINE	1.235	(0.204)	1.181	(0.285)	1.094	(0.272)
VERBANDSGEMEINDE_1	0.638	(0.197)	0.640***	(0.0902)	0.793	(0.529)
VERBANDSGEMEINDE_2	1.591***	(0.119)	1.711***	(0.161)	2.272***	(0.624)
Observations	**2,063**		**2,438**		**1,206**	
Time Interval Dummies	**Yes**		**Yes**		**Yes**	
State Fixed Effects	**Yes**		**Yes**		**Yes**	
Clustered Standard Errors (States)	**Yes**		**Yes**		**Yes**	

Table A1: Regressions results; hazard ratios

VARIABLES	(10)		(11)		(12)	
	Coeff	Std. Error	Coeff	Std. Error	Coeff	Std. Error
S-P	0.583***	(0.217)	0.451**	(0.185)	0.139	(0.157)
NUMSIM_STAYS_PC	0.434***	(0.123)	0.456***	(0.156)	0.398***	(0.149)
BP_AROUND	1.515***	(0.362)	1.751***	(0.367)	1.283***	(0.346)
S-P*BP_AROUND	-1.603***	(0.524)	-1.566***	(0.471)	-0.917**	(0.413)
NUMSUM_TAX_REV_PC	-0.0355	(0.0928)	-0.0348	(0.0843)	-0.0361	(0.0819)
NUMSIM_EXP_OV_REV	0.154**	(0.0642)	0.155**	(0.0615)	0.163**	(0.0679)
NUMSIM_POP	0.114	(0.0825)	0.0784	(0.0763)	0.0713	(0.0603)
EXP_OV_REV	0.803*	(0.435)	0.848**	(0.429)	0.800	(0.507)
TAX_REV_PC	-0.000209	(0.000299)	-0.000206	(0.000400)	-1.22e-05	(0.000475)
POP	-3.92e-05**	(1.53e-05)	-4.60e-05**	(2.18e-05)	-4.15e-05**	(1.72e-05)
NEAR_TOURISTIC_SITE	0.455***	(0.141)	0.449***	(0.134)	0.471***	(0.152)
DISTANCE_BIG_CITY	3.03e-06*	(1.61e-06)	3.37e-06*	(1.84e-06)	3.97e-06**	(1.71e-06)
COUNTY_BORDER	-0.145	(0.245)	-0.0736	(0.259)	-0.0656	(0.253)
STATE_BORDER	0.0441	(0.162)	-0.00403	(0.185)	0.0484	(0.190)
NUM_NEIGHBOURS	-0.0551	(0.105)	-0.0435	(0.111)	-0.0401	(0.116)
ABSOLUTE_MAJORITY	0.00599	(0.123)	0.0419	(0.131)	0.0217	(0.132)
ONLINE	0.209	(0.139)	0.125	(0.179)	0.168	(0.186)
VERBANDSGEMEINDE_1	-0.518	(0.315)	-0.478*	(0.288)	-0.396	(0.255)
VERBANDSGEMEINDE_2	0.377***	(0.112)	0.487***	(0.0599)	0.386***	(0.0824)
Observations	**2,063**		**2,063**		**2,063**	
Time Interval Dummies	**Yes**		**Yes**		**Yes**	
State Fixed Effects	**Yes**		**Yes**		**Yes**	
Clustered Std. Errors (States)	**Yes**		**Yes**		**Yes**	

Table A2: Regression results; Basic model 1 with *BP_AROUND* 5, 6, 7 times

VARIABLES	(13)		(14)		(15)	
	Coeff	Std. Err	Coeff	Std. Err	Coeff	Std. Err
NUMSIM_STAYS_PC	0.689***	(0.113)	0.677***	(0.115)	0.682***	(0.116)
BP_AROUND	0.732*	(0.429)	1.202***	(0.382)	1.434***	(0.372)
BP_AROUND*NUMSIM_STAYS_PC	-0.559**	(0.268)	-0.644**	(0.277)	-0.670**	(0.278)
NUMSIM_TAX_REV_PC	0.00550	(0.0791)	0.00453	(0.0758)	-0.000602	(0.0761)
NUMSIM_EXP_OV_REV	0.0341	(0.0730)	0.0409	(0.0698)	0.0447	(0.0689)
NUMSIM_POP	0.0770	(0.104)	0.0561	(0.111)	0.0545	(0.119)
EXP_OV_REV	1.276**	(0.568)	1.192*	(0.693)	1.134	(0.737)
TAX_REV_PC	0.000106	(0.000570)	0.000167	(0.000672)	0.000197	(0.000688)
POP	-0.0428	(0.0554)	-0.0493	(0.0583)	-0.0512	(0.0579)
NEAR_TOURISTIC_SITE	0.580***	(0.215)	0.635***	(0.226)	0.680***	(0.217)
DISTANCE_BIG_CITY	0.00499	(0.00445)	0.00543	(0.00428)	0.00566	(0.00420)
COUNTY_BORDER	0.0650	(0.292)	0.0866	(0.292)	0.104	(0.286)
STATE_BORDER	-0.247	(0.308)	-0.276	(0.341)	-0.312	(0.355)
NUM_NEIGHBOURS	0.0992	(0.132)	0.0742	(0.133)	0.0544	(0.141)
ABSOLUTE_MAJORITY	-0.180	(0.326)	-0.216	(0.331)	-0.233	(0.344)
ONLINE	0.0832	(0.250)	0.0934	(0.264)	0.119	(0.257)
VERBANDSGEMEINDE_1	-0.124	(0.664)	-0.123	(0.712)	-0.0942	(0.724)
VERBANDSGEMEINDE_2	0.794***	(0.258)	0.858***	(0.293)	0.846***	(0.300)
Observations	**1,206**		**1,206**		**1,206**	
Time Interval Dummies	**Yes**		**Yes**		**Yes**	
State Fixed Effects	**Yes**		**Yes**		**Yes**	
Clustered Standard Errors (State)	**Yes**		**Yes**		**Yes**	

Table A3: Regression results; basic model 3 with *BP_AROUND* 5, 6, 7 times

VARIABLES	(16)		(17)		(18)	
	Coeff	Std. Err	Coeff	Std. Err	Coeff	Std. Err
S-P	0.571***	(0.180)				
NUMSIM_STAYS_PC	0.521***	(0.157)	0.600***	(0.130)	0.907***	(0.161)
BP_AROUND	1.276***	(0.285)			0.124	(0.413)
S-P*BP_AROUND	-1.257***	(0.388)				
B-P			0.572*	(0.327)		
B-P*NUMSIM_STAYS_PC			-0.539***	(0.191)		
BP_AROUND*NUMSIM_STAYS_PC					-0.214	(0.248)
NUMSIM_TAX_REV_PC	-0.0286	(0.0927)	-0.0653	(0.0435)	-0.0143	(0.0821)
NUMSIM_EXP_OV_REV	0.144**	(0.0702)	0.0925**	(0.0444)	0.0276	(0.0656)
NUMSIM_POP	0.118	(0.0741)	0.0617	(0.0717)	0.0744	(0.104)
EXP_OV_REV	0.813*	(0.478)	0.341	(0.348)	1.372**	(0.610)
TAX_REV_PC	-9.12e-05	(0.000369)	-0.000180	(0.000384)	-5.28e-05	(0.000653)
POP	-0.0385***	(0.0147)	-0.0342***	(0.00789)	-0.0413	(0.0626)
NEAR_TOURISTIC_SITE	0.490***	(0.156)	0.308***	(0.0849)	0.550***	(0.213)
DISTANCE_BIG_CITY	0.00339**	(0.00151)	0.00422***	(0.000976)	0.00442	(0.00462)
COUNTY_BORDER	-0.136	(0.230)	-0.122	(0.185)	0.178	(0.281)
STATE_BORDER	0.0759	(0.170)	-0.184	(0.246)	-0.374	(0.262)
NUM_NEIGHBOURS	-0.0439	(0.112)	0.103*	(0.0530)	0.108	(0.117)
ABSOLUTE_MAJORITY	-0.00555	(0.106)	0.0371	(0.191)	-0.182	(0.286)
ONLINE	0.199	(0.170)	0.157	(0.254)	0.0688	(0.268)
VERBANDSGEMEINDE_1	-0.451	(0.328)	-0.353**	(0.166)	-0.198	(0.684)
VERBANDSGEMEINDE_2	0.464***	(0.0970)	0.610***	(0.101)	1.010***	(0.223)
Observations	**2,063**		**2,438**		**1,206**	
Time Interval Dummies	**Yes**		**Yes**		**Yes**	
State Fixed Effects	**Yes**		**Yes**		**Yes**	
Clustered Standard Errors (State)	**Yes**		**Yes**		**Yes**	

Table A4: Regression results; *NUMSIM_STAYS_PC* (20 %)

VARIABLES	(19)		(20)		(21)	
	Coeff	Std. Err	Coeff	Std. Err	Coeff	Std. Err
S-P	0.469**	(0.230)				
NUMSIM_STAYS_PC	0.337***	(0.125)	0.373***	(0.0721)	0.678***	(0.0859)
BP_AROUND	1.304***	(0.328)			0.611	(0.601)
S-P*BP_AROUND	-1.182***	(0.439)				
B-P			0.546**	(0.257)		
B-P*NUMSIM_STAYS_PC			-0.391***	(0.120)		
BP_AROUND*NUMSIM_STAYS_PC					-0.412**	(0.170)
NUMSIM_TAX_REV_PC	-0.0322	(0.0920)	-0.0611	(0.0443)	-0.00331	(0.0815)
NUMSIM_EXP_OV_REV	0.150**	(0.0742)	0.0931**	(0.0474)	0.0314	(0.0701)
NUMSIM_POP	0.114	(0.0765)	0.0695	(0.0731)	0.0786	(0.114)
EXP_OV_REV	0.883**	(0.444)	0.372	(0.340)	1.239**	(0.616)
TAX_REV_PC	-0.000125	(0.000419)	-0.000127	(0.000382)	5.62e-05	(0.000668)
POP	-0.0378**	(0.0158)	-0.0338***	(0.00855)	-0.0441	(0.0615)
NEAR_TOURISTIC_SITE	0.505***	(0.164)	0.331***	(0.0964)	0.601***	(0.228)
DISTANCE_BIG_CITY	0.00336**	(0.00154)	0.00414***	(0.000979)	0.00469	(0.00453)
COUNTY_BORDER	-0.150	(0.234)	-0.136	(0.203)	0.125	(0.261)
STATE_BORDER	0.103	(0.188)	-0.161	(0.236)	-0.287	(0.294)
NUM_NEIGHBOURS	-0.0649	(0.116)	0.100**	(0.0498)	0.0884	(0.124)
ABSOLUTE_MAJORITY	-0.0134	(0.104)	0.0182	(0.201)	-0.229	(0.292)
ONLINE	0.187	(0.171)	0.148	(0.246)	0.0891	(0.262)
VERBANDSGEMEINDE_1	-0.479	(0.296)	-0.422***	(0.142)	-0.113	(0.648)
VERBANDSGEMEINDE_2	0.409***	(0.0741)	0.530***	(0.0973)	0.847***	(0.260)
Observations	**2,063**		**2,438**		**1,206**	
Time Interval Dummies	**Yes**		**Yes**		**Yes**	
State Fixed Effects	**Yes**		**Yes**		**Yes**	
Clustered Standard Errors (State)	**Yes**		**Yes**		**Yes**	

Table A5: Regression results; *NUMSIM_STAYS_PC* (33 %)

VARIABLES	(22)		(23)		(24)	
	Coeff	Std.Err	Coeff	Std.Err	Coeff	Std.Err
S-P	-0.169	(0.200)				
NUMSIM_STAYS_PC	0.231	(0.185)	0.363**	(0.159)	0.587***	(0.171)
BP_AROUND	0.941***	(0.323)			1.629***	(0.434)
S-P*BP_AROUND	-0.559**	(0.282)				
B-P			0.591***	(0.190)		
BP*NUMSIM_STAYS_PC			-0.340**	(0.162)		
BP_AROUND*NUMSIM_STAYS_PC					-0.833***	(0.149)
NUMSIM_TAX_REV_PC	-0.0422	(0.114)	-0.0712	(0.0826)	-0.0976	(0.112)
NUMSIM_EXP_OV_REV	0.108**	(0.0444)	0.0398	(0.0851)	0.181**	(0.0835)
NUMSIM_POP	0.0746	(0.0783)	0.00371	(0.0731)	0.255**	(0.101)
EXP_OV_REV	0.765	(0.896)	0.305	(0.714)	-0.194	(1.211)
TAX_REV_PC	-0.000553	(0.000669)	-0.000458	(0.000538)	-0.000219	(0.000704)
POP	-0.00246	(0.00483)	0.000686	(0.00287)	-0.0522	(0.0732)
NEAR_TOURISTIC_SITE	0.256	(0.219)	0.0873	(0.215)	0.516	(0.473)
DISTANCE_BIG_CITY	0.00359***	(0.00134)	0.00568**	(0.00231)	-0.000833	(0.00382)
COUNTY_BORDER	0.000479	(0.174)	0.0790	(0.0908)	0.139	(0.251)
STATE_BORDER	0.0445	(0.286)	-0.288	(0.298)	-0.615	(0.595)
NUM_NEIGHBOURS	-0.0849	(0.121)	0.106	(0.0736)	-0.155	(0.142)
ABSOLUTE_MAJORITY	-0.0773	(0.220)	-0.0365	(0.161)	-0.534	(0.471)
ONLINE	-0.100	(0.209)	-0.0351	(0.215)	0.212	(0.257)
VERBANDSGEMEINDE_1	-0.257	(0.380)	-0.174	(0.347)	-0.182	(0.484)
VERBANDSGEMEINDE_2	0.750***	(0.144)	0.693***	(0.156)	1.515***	(0.578)
Observations	**2,312**		**2,591**		**1,240**	
Time Interval Dummies	**Yes**		**Yes**		**Yes**	
State Fixed Effects	**Yes**		**Yes**		**Yes**	
Clustered Standard Errors (States)	**Yes**		**Yes**		**Yes**	

Table A6: Regression results; robustness check with alternative time lag (mean values of *t*-1 and *t*-2)

Appendix B: Chapter 4

VARIABLES	(1)		(2)		(3)	
	Coeff	Std. Err	Coeff	Std. Err	Coeff	Std. Err
BORN_IN_RESIDENCE	0.0228	-0,141	-0.0440	0,192	0.177	0,204
ACTIVE	-0.470***	0,152	-0.500**	0,196	-0.584***	0,217
RESIDENTAL_PROPERTY	0.168	0,173	0.200	0,237	0.190	0,253
S_BAD	0.859***	0,11	0.637***	0,189	0.883***	0,171
TRUST_LOCAL_GOV	-0.291**	0,13	-0.440**	0,177	-0.289	0,186
IMC_REDUCE_INFLUENCE	-1.478***	0,135	-1.389***	0,188	-1.984***	0,209
MUNICIPAL_PERFORMANCE_DECLINE	0.522***	0,134	0.457**	0,184	0.862***	0,196
FEMALE	0.0276	0,139	-0.298	0,187	0.340*	0,2
AGE	0.0103*	0,00604	0.0122	0,00788	0.0108	0,00857
HIGH_EDU	0.439***	0,13	0.415**	0,175	0.632***	0,187
ASSUMES_COOPERATION	0.00558	0,141	-0.0310	0,194	0.0650	0,201
ASSUMES_NO_COOPERATION	0.364	0,305	0.290	0,381	0.678	0,433
INFORMS_REG_NP	-0.0533	0,145	-0.169	0,198	0.0102	0,202
COMMUTER	-0.0396	0,144	0.0441	0,192	-0.146	0,208
PARENTS	-0.0444	0,161	-0.221	0,22	0.210	0,231
HH_INCOME_PC	0.000148**	7,11E-05	0.000146	8,99E-05	0.000200**	0,000102
Constant	-0.701	0,689	-1.031	0,861	-0.326	1,221
Municipal Fixed Effects	**Yes**		**Yes**		**Yes**	
Field Fixed Effects	**No**		**No**		**No**	
Wald χ^2	**38943.34*** **		**169.64*** **		**186.23*** **	
Observations	**3,884**		**1,935**		**1,945**	
Number of index	**981**		**979**		**981**	

Table B1: sensitivity analysis; fixed effects

Variables	(1)		(2)		(3)		(4)		(5)		(6)	
	ME	Std. Err.	ME	Std. Err.	ME	Std. Err.	ME	Std. Err.	ME	Std. Err.	ME	Std. Err.
BORN_IN_RESIDENCE	-0,0114	0,0378	0,0568	0,037	-0,0132	0,0371	0,0488	0,0365	-0,0335	0,046	0,027	0,0442
ACTIVE	-0.1071***	0,0391	-0.0897**	0,037	-0.1067***	0,0385	-0.0899**	0,0365	-0.1046**	0,0498	-0.0789*	0,0462
RESIDENTAL_PROPERTY	0,0391	0,0439	0,0353	0,0469	0,0348	0,0441	0,0248	0,0457	0,0302	0,0631	0,0628	0,0667
S_BAD	0.1321***	0,0391	0.1351***	0,0306	0.1241***	0,0391	0.1255***	0,0302	0.1408***	0,0493	0.1129***	0,0369
TRUST_LOCAL_GOV	-0.1152***	0,0345	-0.1126***	0,0347	-0.0962***	0,0343	-0.0817**	0,0346	-0.0957**	0,0421	-0.1085**	0,0428
IMC_REDUCE_INFLUENCE	-0.2705***	0,0312	-0.4325***	0,0382	-0.2622***	0,0312	-0.4114***	0,0377	-0.2534***	0,0379	-0.3962***	0,0473
MUNICIPAL_PERFORMANCE_DECLINE					0.0796**	0,0344	0.1423***	0,0351	0.1365***	0,0443	0.1696***	0,0451
FEMALE	-0,0534	0,0363	0,0561	0,0375	-0.0605*	0,0359	0,0516	0,0365	-0,0468	0,0452	0.0815*	0,0459
AGE	0,002	0,0015	0,002	0,0015	0,002	0,0015	0,0018	0,0015	0,0017	0,0019	0,0018	0,0018
HIGH_EDU	0.0567*	0,0337	0.1088***	0,0345	0,053	0,0332	0.1079***	0,0334	0.0723*	0,0407	0.1239***	0,0416
ASSUMES_COOPERATION	-0,0071	0,0369	0,0206	0,0365	0,0003	0,0364	0,0297	0,0356	-0,0038	0,0466	0,0449	0,0459
ASSUMES_NO_COOPERATION	0,0387	0,0737	0.1438**	0,0665	0,0336	0,0726	0.1303*	0,0671	0,0862	0,0958	0,1368	0,0864
INFORMS_REG_NP	-0,0204	0,0385	-0,0022	0,0376	-0,0195	0,0377	-0,0061	0,0365				
COMMUTER	0,0122	0,0383	-0,0264	0,0381	0,0093	0,0377	-0,035	0,0375	0,0476	0,0475	0,0163	0,0458
PARENTS	-0,027	0,0443	0,0341	0,0439	-0,033	0,0434	0,0359	0,0426	0,035	0,0558	-0,0049	0,0538
HH_INCOME_PC	0.0001*	0,0001	0.0001**	0,0001	0.0001*	0,0001	0.0001**	0,0001	0.0001	0,0001	0,0001	0,0001
DEBT	0,0056	0,0248	-0,008	0,0265	0,0229	0,023	0,0061	0,0239	0,0067	0,0317	0,0197	0,0324
EXP/REV	0.4921**	0,206	0,1016	0,2027	0,2456	0,1942	-0,0526	0,1869	0,1861	0,2476	-0,2455	0,2404
SL_MED_DEBT	-0.0812**	0,0409	0,0365	0,0452	-0.0808**	0,0394	0,0344	0,0432	-0.0962*	0,0501	0,0252	0,0515
SL_MED_EXP/REV	0,4992	0,4226	0,4028	0,4153	0,2508	0,4116	0,2685	0,4017	0,3916	0,5354	-0,1623	0,5246
POP	0,0052	0,0041	-0,001	0,0042					0,0072	0,0054	0,0024	0,0052
SL_MED_POP	-0.0225***	0,0083	-0,007	0,008					-0,0092	0,0111	0,0102	0,0102
SMALL_LARGE_NEIGHBORS					-0.0696***	0,02	-0,0216	0,0196				
LARGE_SMALL_NEIGHBORS					0,0294	0,0179	0,0225	0,0197				
NUM_SIM_NONGERMAN	-0,0137	0,0273	-0,0168	0,0272	-0,0323	0,0271	-0,0154	0,0268	-0,0224	0,0333	-0,0288	0,0327
NUM_SIM_CHILDREN	-0,0064	0,0139	0,0021	0,0142	-0,0084	0,0139	0,0001	0,0141	0,0158	0,0172	0,0102	0,0175
SAME_MAYORS_PARTY	-0,0042	0,011	-0,0094	0,0111	-0,0063	0,0106	-0,0104	0,0107	0,0017	0,0142	-0,015	0,0134
NUMBER_NEIGHBORS	0.0251*	0,0149	0,0041	0,0149	0.0369**	0,0154	0,0047	0,0151	0,01	0,0187	0,0042	0,0185
AVERAGE_TRAVEL_TIME	-0,0098	0,006	-0,0091	0,0059	-0.011**	0,0055	-0,0085	0,0054	-0,0115	0,0073	-0,0094	0,007
BORDERING_KS	-0,0657	0,0524	-0.144**	0,0567	-0,0634	0,0477	-0.146***	0,0495	-0,0374	0,0642	-0.1455**	0,0679
County Fixed Effects	**Yes**		**Yes**		**Yes**		**Yes**		**Yes**		**Yes**	
Field Fixed Effects	**Yes**		**Yes**		**Yes**		**Yes**		**Yes**		**Yes**	
Wald χ^2	126.71***		152.55***		133.15***		158.41***		90.07***		105.80***	
Observations	1874		1881		1869		1875		1342		1347	
Groups	949		949		946		946		679		679	

Table B2: Sensitivity analysis; weighted regressions

Appendix C: Chapter 5

Variable	Obs	Mean	Std. Dev.	Min	Max
BELONGS_MAYORS_FRACTION	676	0.3446746	0.475614	0	1
POSITION_IN_COUNCIL	668	0.4221557	0.4942732	0	1
YEARS_OF_OFFICE	642	10.20132	8.765807	0.5	45
NEXT_ELECTION	670	0.6119403	0.4876724	0	1
IMC_REDUCE_INFLUENCE	675	0.3140741	0.4644902	0	1
FEMALE	664	0.2319277	0.4223813	0	1
AGE	644	53.64907	12.15854	22	80
HIGH_EDU	660	0.5651515	0.4961131	0	1

Table C1: Descriptive statistics of individual-level variables

The variable *ADMIN_OTHER_MUNI* is 1 for delegates who hold a position in the local council, e.g. party leader or chair of the municipal steering committee and that some delegates work in the local administration of a nearby municipality (0 else). These delegates may have insights other delegates do not have. Delegates who are emotionally attached to their home municipality may fear a loss of identity if their municipality cooperates with neighbouring municipalities. We capture emotional attachment using two variables. We expect attachment to be higher among delegates born in the current place of residence. The variable *BORN_IN_RESIDENCE* takes on the value 1 if the respondent is born in residence, otherwise 0. Similarly, emotional attachment is likely to be stronger among delegates who are active members of local sports clubs, cultural initiatives, the local fire brigade etc. Variable *ACTIVE* is 1 for active people (0 else). We expect negative coefficients for *BORN_IN_RESIDENCE* and *ACTIVE*. We further introduce a dummy variable *RESIDENTIAL_PROPERTY* that is 1 for all subjects living in a self-owned house or flat (0 else).The dummy-variable *COMMUTER* is 1 for all delegates whose way to work exceeds the median distance reported in the survey (0 else). We control for respondents' status as parents of juvenile children using a *PARENTS*-dummy. Parents are primarily affected by IMC in the two contact services (child-care and infrastructure for private households).

Variables	**(1)**		**(2)**		**(3)**	
	Coeff	**Std. Err**	**Coeff**	**Std. Err**	**Coeff**	**Std. Err**
BELONGS_MAYORS_FRACTION	-0.9769***	0,2215	-0.794**	0,3053	-1.163***	0,2602
POSITION_IN_COUNCIL	0,0889	0,1622	-0.1381	0,2286	0.2843	0,1943
YEARS_OF_OFFICE	-0,0139	0,0104	-0.0212	0,0155	-0.0105	0,0128
NEXT_ELECTION	0,0848	0,1807	0.225	0,2484	-0.0401	0,2191
BORN_IN_RESIDENCE	0,0462	0,162	-0.00343	0,2347	0.0835	0,1937
ACTIVE	0,3814	0,2813	0.641	0,4226	0.194	0,3479
RESIDENTIAL PROPERTY	0,2208	0,2424	0.423	0,3637	0,1771	0,284
IMC_REDUCE_INFLUENCE	-0.898***	0,1911	-0.849***	0,2711	-0.9766***	0,2168
FEMALE	-0,3288	0,1883	-0.249	0,2654	-0.4739**	0,2335
AGE	0,0019	0,0102	0.0213	0,0146	-0.0169	0,0114
HIGH_EDU	0.8549***	0,1737	1.003***	0,2562	0.7968***	0,1995
COMMUTER	0,0508	0,1977	0.336	0,2843	-0,1877	0,2184
PARENT	-0,0528	0,2565	-0.528	0,3687	0,4405	0,2856
ADMIN_OTHER_MUNI	0,081	0,3322	-0.388	0,5199	0.510	0,412
Constant	0.187	0,9804	-0.188	1,2423	1.507**	1,0103
Municipality Fixed Effects	**Yes**		**Yes**		**Yes**	
County Fixed Effects	**No**		**No**		**No**	
Field Fixed Effects	**Yes**		**Yes**		**Yes**	
Party Fixed Effects	**Yes**		**Yes**		**Yes**	
Observations	2,117		1,033		1,048	
Groups	534		520		527	
Wald χ^2	304.56***		101.64***		140.25***	

Table C2: Sensitivity analyses; individual characteristics

Variable	Obs	Mean	Std. Dev.	Min	Max
DEBT_PC	676	1.115255	0.867641	0.112	5.1194
EXPENDITURES_OVER_REVENUES	676	0.0232653	0.103073	-0.2140332	0.3929547
POP	676	8.365451	5.332197	0.644	27.417
SL_DEBT	662	1.080269	0.549987	0.3792	3.4392
SL_EXPENDITURES_OVER_REV	662	0.0153106	0.05693	-0.0596851	0.2750563
SL_POP	662	6.783843	2.240892	2.125	14.84
NUM_SIM_NONGERMAN	662	2.042296	0.962862	1	5
NUM_SIM_CHILDREN	662	3.02568	1.676826	1	8
SAME_MAYORS_PARTY	662	2.205438	2.083746	0	7
NUMBER_NEIGHBORS	676	4.673077	1.984663	0	9
AV_TRAVEL_TIME	663	14.41747	3.2254	8.3333	27
BORDERING_KS	676	0.2292899	0.420687	0	1
COUNTY_BORDER	676	0.75	0.433333	0	1

Table C3: Descriptive statistics of municipal-level variables

References

Alesina, A. and E. Spolaore (1997). On the Number and Size of Nations. The Quarterly Journal of Economics, November 1997: 1027-1056.

Alesina, A. and E. Spolaore (2003). The Size of Nations. Cambridge, MA. MIT Press.

Alesina, A., R. Baqir, and C. Hoxby (2004). Political Jurisdictions in Heterogeneous Communities. Journal of Political Economy 112: 348-396.

Allers, M. (2012). Yardstick competition, fiscal disparities, and equalization. Economic Letters 117: 4-6.

Allers, M. and J. Geertsema (2014). The Effects of Local Government Amalgamation on Public Spending and Service Levels: Evidence from 15 years of Municipal Boundary Reform. University of Groningen, Faculty of Economics and Business.

Allison, P. (1982). Discrete-Time Methods for the Analysis for Event Histories. Sociological Methodology 13: 61-98.

Andrew, S. (2009). Regional Integration through contracting networks. An empirical analysis of Institutional Collective Action Framework. Urban Affairs Review 44: 378-402.

Andrew, S. and C. Hawkins (2012). Regional cooperation and multilateral agreements in the provision of public safety. The American Review of Public Administration 43: 460-475.

Baedeker Allianz Reiseführer Deutschland (1997). Ostfildern-Kemnat. Baedeker.

Bartolini, D. and F. Fiorillo (2011). Cooperation among Local Councils for the Provision of Public Goods. Rivista italiana degli economisti 16: 85-108.

Baskaran, T. and M. Lopez da Fonseca (2016). Electoral competition and endogenous political institutions: quasi-experimental evidence from Germany, Journal of Economic Behavior & Organization 122: 43-61.

Bel, G., Fageda, X. and M. Mur (2011). Privatization, cooperation and costs of solid waste service in small towns. IREA Working Paper 2011/11.

Bel, G., Fageda, X. and M. Mur (2012). Does cooperation reduce service delivery costs? Evidence from residential solid waste services. Journal of Public Administration Research and Theory, online 1.23.

Bel, G., Fageda, X. and M. Mur (2013). Why do municipalities cooperate to provide local public services? An empirical analysis. Local Government Studies 39: 435-454.

Bel, G. and M. Warner (2015). Inter-municipal Cooperation and Costs: Expectations and Evidence. Public Administration 93: 52-67.

Bel, G. and M. Warner (2016). Factors explaining inter-municipal cooperation in service delivery: a meta-regression analysis. Journal of Economic Policy Reform 19: 91-115.

Bhatti, Y. and K. Hansen (2011). Who ‘marries’ whom? The influence of societal connectedness, economic and political homogeneity, and population size on jurisdictional consolidations.

Bischoff, I. and L. Siemers (2013). Biased beliefs and retrospective voting: why democracies choose mediocre policies. Public Choice 156: 163-180.

Bischoff, I., Bergholz, C. and F. Blaeschke (2014). Bürgerpräferenzen zum Thema Interkommunale Zusammenarbeit Ergebnisse einer Befragung in drei hessischen Landkreisen. Expertise for the Hessian Ministry of the Interior and Sports (http://www.uni-kassel.de/fb07/fileadmin/datas/fb07/5Institute/IVWL/Bischoff/Gutachten_IKZ_HMDIS.pdf).

Bischoff, I. and S. Krabel (2016). Local taxes and political influence: evidence from locally dominant firms in German municipalities. International Tax and Public Finance, online first: DOI 10.1007/s10797-016-9419-y.

Blaeschke, F. (2014). What drives small municipalities to cooperate? Evidence from Hessian municipalities. MAGKS Discussion Paper No. 14-2014.

Blaeschke, F. and P. Haug (2014). Does Intermunicipal Cooperation Increase Efficiency? Evidence from the Hessian Waste Water Sector. IWH Discussion Papers Nr. 11, 2014.

Blesse, S. and T. Baskaran (2016). Do municipal mergers reduce cost? Evidence from a German Federal State. Regional Science and Urban Economics 59: 54-74.

Blesse, S. and F. Rösel (2017). Gebietsreformen: Hoffnungen, Risiken und Alternativen. Ifo Working Paper No. 234.

Blume, L. and T. Blume (2007). The economic effects of local authority mergers: empirical evidence for German city regions. Annals of Regional Science, 41: 689–713.

Blom-Hansen, J., Houlberg, K. and S. Serritzlew (2014). Size, democracy, and the economic costs of running the political system. American Journal of Political Science 58: 790-803.

Borck, R. (2002). Jurisdiction size, political participation and the allocation of resources. Public Choice 113: 251-263.

Brasington, D. (1999). Joint provision of goods: The consolidation of school districts. In: Journal of Public Economics 73: 373–393.

Brasington. D. (2003). Size and School District Consolidations: Do Opposites Attract? Economica 70: 673-690.

Cameron, A. and P. Trivedi (2009). Microeconometrics: methods and applications. Cambridge University Press. Cambridge.

Caplan, B. (2008). The myth of the rational voter. Why democracies choose bad policies. Cambridge, Mass. Princeton University Press.

Coase, R. (1960). The Problem of Social Cost. Journal of Law and Economics 3: 1 – 44.

Dafflon, B. (2006). The assignment of functions to decentralized government: from theory and practice. In: Ahmad, E. and G. Brosio (eds.). Handbook of fiscal federalism. Cheltenham.

Dafflon, B. (2012). Voluntary amalgamation of local governments: the Swiss debate in the European context. International Center for Public Policy Working Paper Series 426.

De Andrade Lima, R. and R. da Mota Silveira Neto (2017). Secession of municipalities and economies of scale: Evidence from Brazil. Journal of Regional Science. forthcoming.

De Mello, L. and S. Lago-Penas (2013). Local government cooperation for joint provision: the experiences of Brazil and Spain with inter-municipal consortia. In: Lago-Penas, S. and J. Martinez-Vazquez (eds.). The Challenge of Local Government Size. UK. Edward Elgar.

Di Porto, E., Merlin, V. and S. Paty (2013). Cooperation among local governments to deliver public services: a "structural" bivariate response model with fixed effects and endogenous covariate. Grouped' analyse et de theorie´ economique Lyon - St Etienne Working Papers 1304.

Di Porto, E., Parenti, A., Paty, S. and Z. Abidi (2016). Local government cooperation at work: a control function approach. Journal of Economic Geography: 1-29.

Di Liddo and Giuranno (2016). Asymmetric yardstick competition and municipal cooperation. Economics Letters 141: 64-66.

Eichenberger, R. and B. Frey (2006). Functional, overlapping and competing jurisdictions (FOCJ). A complement and alternative to today's federalism. In: Ahmad, E. and G. Brosio (eds.). Handbook of fiscal federalism. Cheltenham.

Elliot, D. (1991). Weighting for non-response. Office of Population Consensus and Surveys, Social Survey Division, London.

European Commission (2014). EU Anti-Corruption Report. Brussels.

Feiock, R. (2004). Metropolitan Governance: Conflict, Competition and Cooperation. Washington DC. Georgetown University Press.

Feiock, R. (2007). Rational choice and regional governance. Journal of Urban Affairs 29: 47–63.

Feiock, R., Steinacker, A. and H. Park (2009). Institutional Collective Action and Economic Development Joint Ventures. Public Administration Review 69: 256–70.

Feiock, R. and J. Scholz, eds. *(*2010). Self-Organizing Federalism: Collaborative Mechanisms to Mitigate Institutional Collective Action Dilemmas. New York: Cambridge University Press.

Ferris, J. and E. Graddy (1988). Production choices for local government services. Journal of Urban Affairs 10: 273–289.

Fritz, B. and L. Feld (2015). The Political Economy of Municipal Amalgamation – Evidence of Common Pool Effects and Local Public Debt, CESifo Working Paper Nr. 5676. Munich.

Geys, B. Heinemann, F. and A. Kalb (2008). Local Governments at the Wake of Demographic Change: Evidence from German Municipalities. Finanzarchiv 64: 434-457.

Gjertsen, A. (2014). Legitimacy in interlocal partnerships: Balancing efficiency and democracy. Urban Studies 51(9): 1926-1942.

Gordon, N. and B. Knight (1999). A spatial merger estimator with an application to school district consolidation. Journal of Public Economics 93: 752-765.

Hanes, N and M. Wikström (2012). Does the Local Government Structure Affect Population and Income Growth? An Empirical Analysis of the 1952 Municipal Reform in Sweden. Regional Studies 42: 593-604.

Hanes, N., Wikström, M. and E. Wangmar (2012). Municipal Preferences for State-imposed Amalgamations: An Empirical Study Based on the Swedish Municipal Reform of 1952. Urban Studies 49: 2733-2750.

Hansen, S. (2015). The Democratic Costs of Size: How Increasing Size Affects Citizen Satisfaction with Local Government. Political Studies 63: 373–389.

Heinemann, F. and B. Tanz (2008). The Impact of Trust on Reforms. Journal of Economic Policy Reforms 11: 173-185.

Heinz, W. (2007). Inter-Municipal Cooperation in Germany: The Mismatch Between Existing Necessities and Suboptimal Solutions. In: Hulst, R. and A. van Montfort (eds.). Intermunicipal Cooperation in Europe. Dordrecht.

Hesse, J. and A. Götz (2006). Kooperation statt Fusion. Interkommunale Zusammenarbeit in den Flächenländern. Baden-Baden. Nomos-Verl.-Ges.

Hollbach-Grömig, B. (2005). Interkommunale Kooperation in der Wirtschafts- und Infrastrukturpolitik. Berlin. Deutsches Institut für Urbanistik.

Hulst, R. and A. van Monfort (2007). Inter-municipal cooperation in Europe. Berlin.

Hulst, R., van Monfort, A., Haveri, A., Airaksinen, J. and J. Kelly (2009). Institutional Shift In Inter-Municipal Service Delivery. An analysis of developments in eight Western European countries. Public Organization Review 9: 263-285.

Jenkins, S. (2005). Survival Analysis. University of Essex: Mimeo.

Kwon, S. and R. Feiock (2010). Overcoming the Barriers to Cooperation: Intergovernmental Service Agreements. Public Administration Review 70: 876–884.

Krueger, S. and E. Bernick (2010). State rules and local governance choices. Publius: The Journal of Federalism 40: 697–718.

Lackey, S., Freshwater, D. and A. Rupasingha (2002). Factors Influencing Local Government Cooperation in Rural Areas: Evidence from the Tennessee Valley. Economic Development Quarterly 16: 138–154.

Lassen, D., and S. Serritzlew (2011). Jurisdiction Size and Local Democracy: Evidence on Internal Efficacy from Large-scale Municipal Reform. The American Political Science Review 105: 238-258.

Lee, I.-W., Lee, Y. and R. Feiock (2012). Competitors and cooperators: A mirco-level analysis of regional economic development collaboration networks. Public Administration Review 72: 253-262.

LeRoux, K. and J. Carr (2007). Explaining Local Government Cooperation on Public Works: Evidence from Michigan. Public Works Management & Policy 12: 344-358.

LeRoux, K., Brandenburger, P. and S. Pandey (2010). Interlocal Service Cooperation in U.S. Cities: A Social Network Explanation. Public Administration Review 70: 268–278.

LeSage, J. (2014). What Regional Scientists Need to Know about Spatial Econometrics. The Review of Regional Studies 44: 13-32.

Lewis, R. and D. Nguyen (2015). Display advertising´s competitive spillovers to consumer search. Quantitative Marketing and Economics 13: 93-115.

Lipscomb, M. und A. Mobarak (2017). Decentralization and Pollution Spillovers: Evidence from the Re-drawing of County Borders in Brazil. Review of Economic Studies 84: 464– 502

Lintz, G. (2015). A Conceptual Framework for Analysing Inter-municipal Cooperation on the Environment, Regional Studies, DOI: 10.1080/00343404.2015.1020776.

Lopez, R., Liu, Y. and C. Zhu (2015). TV advertising spillovers and demand for private labels: the case of carbonated soft drinks. Applied Economics 47: 2563-2576.

Lösche, P. (2008). Präsidaldemokratie. Bundeszentrale für politische Bildung (ed). Dossier USA, Bonn 2008 (online version, http://www.bpb.de/internationales/amerika/usa/10640/praesidialdemokratie, accessed on 14.11.2016).

Miceli, T. (1993). The Decision to Regionalize in the Provision of Education: An Application of the Tiebout Model. Journal of Urban Economics 33: 344-360.

Moisio, A. and R. Uusitalo (2013). The impact of municipality mergers on local public expenditures in Finland. Public Finance and Management 13: 148–166.

Mullin, M. (2007). Do Special Districts Act Alone? Exploring the Relationship Between Flexible Boundaries and Intergovernmental Cooperation. Working Group on Interlocal Services Cooperation Paper 27.

Nelson, M. (1990). Decentralization of the Subnational Public Sector: An Empirical Analy-sis of the Determinants of Local Government Structure in Metropolitan Areas in the U.S. Southern Economic Journal 57: 443-457.

Norris, D. (2001). Prospects for Regional Governance Under the New Regionalism: Economic Imperatives Versus Political Impediments. Journal of Urban Affairs 23: 557-571.

Oates, W. (1972). Fiscal federalism. Cheltenham. Edward Elgar Publishing Limited.

Oates, W. (1999). An essay on fiscal federalism. Journal of Economic Literature 37: 1120–1149.

Oates, W. (2005). Toward a second generation theory of fiscal federalism. International Tax and Public Finance, 12: 349–373.

Olson, M. (1965). The Logic of Collective Action: Public Goods and the Theory of Groups. Cambridge: Harvard University Press.

Olson, M. and R. Zeckhauser (1966). An Economic Theory of Alliances. The Review of Economics and Statistics 48: 266-279

Osborne, M., Rosenthal, J. and M. Turner (2000). Meetings with Costly Participation. American Economic Review 90: 927-943.

Pigou, A. (1920). The Economics of Welfare. New York: Macmillan.

Reingewertz, Y. (2012). Do municipal amalgamations work? Evidence from municipalities in Israel. Journal of Urban Economics 72: 240-251.

Rodrik, D. (1996). Understanding Economic Policy Reform. Journal of Economic Literature 34: 9-41.

Rosenfeld, M., Bischoff, I., Bergholz, C., Melch, S., Haug, P., and F. Blaeschke. (2016). Im Fokus: Interkommunale Kooperation ist deutlich im Kommen–Ergebnisse einer Kommunalbefragung des IWH und der Universität Kassel. Wirtschaft im Wandel 22: 9-12.

Saarimaa, T. and J. Tukiainen (2014). I don´t Care to Belong to Any Club That Will Have Me as a Member: Empirical Analysis of Municipal Mergers. Political Science and Research Methods 2: 97-117.

Sahni, N. (2016). Advertising Spillovers: Evidence from Online Field Experiments and Implications for Returns on Advertising. Journal of Marketing Research 53: 459-478.

Schulitz, A. and B. Knoblauch (2011). Interkommunale Kooperation schrumpfender Kleinstädte. Martin Meidenbauer Verlagsbuchhandlung, München.

Shapiro, B. (2017). Positive Spillovers and Free Riding in Advertising of Prescription Pharmaceuticals: The Case of Antidepressants. Journal of Political Economy. forthcoming.

Shrestha, M. and R. Feiock (2011). Transaction Cost, Exchange Embeddedness, and Interlocal Cooperation in Local Public Goods Supply. Political Research Quarterly 64: 573-5872.

Solon, G., Haider, S. and J. Wooldridge (2015). What are we weighting for? The Journal of Human Resources 50: 301-316.

Steiner, R. (2003). The causes spread and effects of intermunicipal cooperation and municipal mergers in Switzerland. Public Management Review 5: 551–571.

Swianiewicz, P. (2002). Size of Local Government, Local Democracy and Efficiency in Delivery of Local Services: International Context and Theoretical Framework. In: P. Swianiewicz (ed.) Consolidation or Fragmentation? The Size of Local Government in Central and Eastern Europe. Budapest. Open Society Institute.

Tanguay, G. and D. Wihry (2008). Voters' preferences regarding municipal consolidation: Evidence from the Quebec de-merger referenda. Journal of Urban Affairs 30: 325-345.

Thurmaier, K. and C. Wood (2002). Interlocal agreements as social networks: Picket fence regionalism in metropolitan Kansas City. Public Administration Review 62: 585–598.

Vardanyan, M. and V. Tremblay (2006). The Measurement of Marketing Efficiency in the Presence of Spillovers: Theory and Evidence. Managerial and Decision Economics 27: 319–331.

Vaubel, R. (1994). The public choice analysis of European integration: A survey. European Journal of Political Economy 10: 227-249.

Vo, D. (2010). The economics of fiscal decentralization. Journal of Economic Survey 24: 657–679.

von Alemann, U. (2010). Das Parteiensystem der Bundesrepublik Deutschland, 4th edition, Opladen.

Weese, E. (2013). Political mergers as Coalition Formation: An Analysis of the Heisei Municipal Amalgamations. Economic Growth Center Yale University, Economic Growth Center Discussion Paper No 1022.

Williamson, O. E. (1985). The economic institutions of capitalism. New York.

Zimmermann, H. (2009). Kommunalfinanzen: Eine Einführung in die Finanzwissenschaftliche Analyse der kommunalen Finanzwirtschaft. 2nd ed. Vol. 211. Schriften zur öffentlichen Verwaltung und öffentlichen Wirtschaft. Berlin. Berliner Wiss.-Verl.

Online sources

Statistisches Bundesamt (2016).

URL: https://de.statista.com/statistik/daten/studie/29514/umfrage/gaesteuebernachtungen-in-deutschland-seit-1992/ 09.04.2017

Kompetenzzentrum für Interkommunale Zusammenarbeit (2016). URL: http://www.ikz-hessen.de/foerderung/foerderprogramm 09.04.2017