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Local council members' view on inter-municipal cooperation:

Does office-related self interest matter?

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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.

JEL: H77, D72

Key words: inter-municipal cooperation, politicians, survey, Germany, public choice

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 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.

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).¹

However, the benefits from IMC come at a cost: IMC reduces the possibility to tailor public

¹

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.

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 Monfort, 2007; Lintz 2015). Especially Germany has witnessed a substantial increase in the level of cooperation (e.g., Blaeschke, 2014; Rosenfeld et al., 2016). A number of papers have analyzed factors driving the emergence of IMC (see Blaeschke, 2014 or Bel et al., 2015 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 et al., 2015). 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.² 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., Heinze, 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 (Bergholz and Bischoff, 2016). The latter addresses the question why some citizens support IMC while others oppose it. Bergholz and Bischoff (2016) 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.

²

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.

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 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).

[Table 1 about here]

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 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., Blaschke, 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.³ 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.

[Figure 1 about here]

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 1

³ Next to the SPD, members of the Green Party and the Party "Die Linke" are counted as leftwing.

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. 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.⁴ 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).⁵ In addition, the following argument of Alesina et al. (2004) applies to these services. Accordingly, IMC increases their frequency interaction 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; Bergholz and Bischoff, 2016).

⁴ For details, see <http://www.ikz-hessen.de/projekte>.

⁵ 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.

In total, 679 delegates from 59 municipalities answered the questions and sent back the questionnaire. Their support for close IMC differs markedly across field of government activity (see table 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).

[Table 2 about here]

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., 2013).

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 ($f = 1, \dots, 4$) and analyze them in a panel logit model. Our dependent variable IMC_{if} is calculated using delegates' answers presented in table 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-munic-

ipality (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.⁶ Descriptive statistics are provided in Appendix A.

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 existing in other countries (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

⁶ Full correlation tables are available in the supplementary material.

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.

[Table 3 about here]

The regression results are presented in table 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.⁷

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:

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Detailed results are presented in the supplementary material.

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:

$$IMC_CLOSE_{if} = f(Political\ Power_i, Controls_i, X_m, FE_f) \quad (2)$$

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 A.

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 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.⁸

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,

⁸ 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.

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 – 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 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 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 4. The latter perform like they do in table 3.

[Table 4 about here]

The baseline model in column 1 contains all individual-level variables used in model 1 of table 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 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 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 necessity 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 significance. 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.

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 (child-care 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 effects 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.⁹ Again, however, the 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

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The theoretical model by Di Liddo and Giuranno (2016) refers to “administrators”.

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).

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Appendix A: Descriptive statistics and correlation tables

Table A1: Descriptive statistics of individual-level variables

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

Table A2: Descriptive statistics of municipal-level variables

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

Table 1: Descriptive statistics on municipalities in the sample

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

Figure 1: Survey question on our dependent variable

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 2: Frequency of policy preference among delegates in percent

Stated preference	Task			
	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 3: Regression results: the role of delegates' individual characteristics

Variables	(1)		(2)		(3)	
	ME	Std. Err	ME	Std. Err	ME	Std. Err
<i>BELONGS_MAYORS_FRACTION</i>	-0.1555***	0.0325	-0.1010***	0.0375	-0.2014***	0.0413
<i>POSITION_IN_COUNCIL</i>	0.0218	0.0260	-0.0084	0.0303	0.0529	0.0326
<i>YEARS_OF_OFFICE</i>	-0.0026	0.0017	-0.0026	0.0020	-0.0027	0.0021
<i>NEXT_ELECTION</i>	0.0008	0.0271	0.02481	0.0320	-0.0250	0.0346
<i>IMC_REDUCE_INFLUENCE</i>	-0.1331***	0.0284	-0.0858***	0.0323	-0.1779**	0.0368
<i>FEMALE</i>	-0.0554*	0.0292	-0.0304	0.0331	-0.0849	0.0384
<i>AGE</i>	-0.0002	0.0012	0.0007	0.0014	-0.0012	0.0015
<i>HIGH_EDU</i>	0.1244***	0.0264	0.1332***	0.03169	0.1066***	0.0328
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	2395		1173		1186	
Groups	604		590		597	
Wald χ^2	331.90***		109.49***		150.45***	

Table 4: Regression results: the role of municipal-level factors

Variables	(1)		(2)		(3)		(4)		(5)		(6)	
	ME	SE	ME	SE	ME	SE	ME	SE	ME	SE	ME	SE
<i>DEBT</i>	0.064***	0.0233	0.0381	0.0253	0.0899**	0.0306	0.0848**	0.0243	0.0541**	0.0259	0.1167***	0.0319
<i>EXPENDITURES_BY_REVENUES</i>	0.3938**	0.1708	0.4234**	0.2012	0.4204*	0.2205	0.1225	0.1745	0.175	0.2035	0.1225	0.2272
<i>SL_DEBT</i>	-0.0239	0.0407	-0.0082	0.0466	-0.0367	0.061	-0.0069	0.0399	0.009	0.0461	-0.0158	0.0593
<i>SL_EXPENDITURES_BY_REV</i>	0.4202	0.3396	0.6509	0.435	0.1047	0.4314	0.1549	0.3666	0.3947	0.4737	-0.1497	0.4439
<i>POP</i>	0.018***	0.0038	0.0157***	0.0045	0.0189***	0.0047	0.0189***	0.0039	0.017***	0.0045	0.02***	0.0049
<i>SL_POP</i>	-0.0373***	0.0071	-0.025***	0.0089	-0.0492***	0.0087						
<i>NUM_SIM_POP</i>							-0.0266	0.0244	0.0105	0.0301	-0.0594**	0.0296
<i>NUM_SIM_NONGERMAN</i>	0.0861***	0.0256	0.0662**	0.0306	0.0849***	0.0315	0.1036***	0.0262	0.0795***	0.0304	0.1069***	0.0323
<i>NUM_SIM_CHILDREN</i>	-0.0098	0.0124	-0.0208	0.0147	0.0067	0.0165	-0.0102	0.013	-0.0205	0.0149	0.0035	0.0168
<i>SAME_MAYORS_PARTY</i>	0.0245**	0.01	0.0243**	0.0116	0.025*	0.0128	0.0299**	0.0106	0.0272**	0.012	0.033**	0.0133
<i>NUMBER_NEIGHBORS</i>	-0.0413**	0.0142	-0.025	0.0173	-0.0602***	0.0174	-0.0405*	0.0157	-0.0309	0.0189	-0.05***	0.0184
<i>AV_TRAVEL_TIME</i>	-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***	