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Citizens' preferences for inter-municipal cooperation in rural areas: Evidence from a survey in three Hessian counties

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**Citizens' preferences for inter-municipal cooperation in rural areas:
evidence from a survey in three Hessian counties**

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Abstract

In rural areas, small and medium-sized municipalities are challenged by demographic change and intensified competition for capital and high-skilled labor. Inter-municipal cooperation (IMC) is often regarded as a significant element of a strategy to meet these challenges. Based on a survey in three rural counties in the German state of Hesse, we present first evidence on citizens' policy preferences regarding IMC. Policy preferences are found to be driven primarily by individual characteristics. The strongest factor reducing citizens' support is the belief that IMC reduces citizens' influence and control. Support is higher among citizens who assess the current service quality as low and/or assess the future perspective of their home municipality as negative. Trust in local politicians and a high degree of emotional attachment to the home municipality have a negative impact on subjects' support for IMC. None of the municipal characteristics like municipal size or fiscal stress, nor the availability of suitable partner municipalities are found to drive citizens' preferences.

JEL: H77, D72

Key words: fiscal federalism, inter-municipal cooperation, voter preferences, survey, Germany

1. Introduction

In recent years, local and regional authorities have become increasingly interested in the topic of inter-municipal cooperation (hereafter IMC). IMC is regarded a way by which small and medium-sized municipalities can cope with the intensified interregional competition for capital and high-skilled labor (e.g., Hulst and Mulfort, 2007). Through IMC, they can ease the fiscal pressure and regain budgetary room for manoeuvre. The need to ease fiscal pressure and regain budgetary room for manoeuvre is particularly large in rural areas because rural municipalities have to deal with the consequences of demographic change and a general decline in population as well (e.g., Geys et al., 2008).

Through 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 (e.g., Hanes and Wikström 2012; Hanes et al., 2012). 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 and are able to produce these services efficiently. The reforms were in most cases initiated by state or federal governments and evoked massive resistance among citizens of the affected municipalities (e.g., Hanes et al., 2012). Nowadays, many countries and regions encourage voluntary mergers of municipalities. 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 but take place in all fields of local public activities. Thus, the economics of scale and scope from merging come at the price of having to live with compromises in all other fields of municipal policy (e.g., Alesina and Spolaore, 1997).

This is where IMC comes in. IMC is much less radical than voluntary mergers or top-down local sector reforms. Under IMC, cooperation is limited to the production of certain public services while municipal autonomy in other fields remains untouched. In addition, the municipalities can cooperate with different partners in different fields of public service production. If the underlying constellation changes, IMC-agreements can be renegotiated or cancelled at acceptable costs. It is these arguments that lead public administration scholars and politicians to conclude that citizens' resistance against IMC will be much lower than the resistance against structural reforms or voluntary mergers (e.g. Heinz, 2007). And indeed, IMC has become increasingly widespread in recent years. Still, many scholars see citizens' resistance to be the main obstacle to IMC (e.g., Heinz, 2007; Hulst and Munfort, 2007). So far, we are lacking systematic evidence on the factors that shape citizens' preferences towards IMC: Why do some citizens oppose IMC while others support it?

The current paper delivers first empirical evidence on the factors in shaping individual citizens' policy preferences regarding IMC. Its contribution is twofold: First, it accounts for citizens' individual characteristics as well as for the characteristics of the municipality they live in. Second, we take into account the characteristics of the neighboring municipalities because these municipalities are the likely partners in IMC. We use data from a survey among 1400 citizens in 59 municipalities in the German state of Hesse conducted in summer 2013. Our focus rests on IMC in rural areas; 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 closely in four fields of activities where economies of scale and/or scope are feasible (i.e., childcare, road maintenance and winter services, household-related cultural and recreational infrastructure and general public administration). In addition, it elicits a large array of personal characteristics and beliefs. We combine the data from the survey with municipal-level data from official and other publicly available sources to answer two main

questions: 1) Do municipal-level factors drive policy-preferences on individual level? In other words: Do citizens consider the characteristics of their home municipality and the potential partner municipalities when deciding whether they support or oppose IMC? 2) Which factors on individual level shape citizens' policy preferences?

Our results can be summarized as follows: Policy preferences are found to be primarily driven by individual characteristics. Most importantly, subjects who expect that IMC reduces the influence and control of citizens are more likely to oppose IMC. Support is higher among citizens who assess the current service quality as low and/or assess the financial and demographic perspectives of the home-municipality as negative. Subjects who are emotionally attached to the home municipality are less supportive of IMC. The same holds for subjects whose trust in the local government is high. Regarding the role of municipal-level factors in shaping citizens' policy preferences, the answer is largely negative: Neither the characteristics of the home municipality, nor the availability of suitable cooperation partners among the directly neighboring municipalities are found to matter. We also tested whether subjects are concerned with entering negotiations on IMC from an economically weak position but found little support for this notion.

The remaining paper proceeds as follows. Section 2 reviews the relevant literature. The data is presented in section 3. Section 4 reports the empirical results. The results are discussed in section 5. Section 6 concludes.

2. Review of literature

Before reviewing the literature, we want to give a brief definition of the term IMC. In this paper, the term IMC is used for the voluntary cooperation between otherwise independent municipalities (or other jurisdictions) in fulfilling their obligatory or voluntary tasks and providing public goods and services (e.g., Blaeschke, 2014). The cooperation is limited to a distinctly

defined set of tasks or public goods and services while the jurisdictions remain autonomous in their decisions on all other issues.¹ IMC can be settled in different ways including informal hand-shakes, formal contracts among municipalities and the foundation of joint ventures. In some cases, IMC can lead to the formation of jurisdiction-like entities like the “Verbandsgemeinden” in Germany, the special districts in the US (e.g., Mullin, 2007) or the “Etablissements Publics de Cooperation Intercommunale” in France (e.g., di Porto et al., 2013).

When citizens decide whether they support or oppose IMC, they are expected to assess the benefits and costs resulting from it. The underlying trade-off is not new to fiscal federalism scholars: Essentially, the same trade-off applies to the choice of municipal size. The larger the number of citizens, the lower the per capita costs of providing services characterized by increasing returns to scale (e.g., Miceli, 1993; Alesina et al., 2004). On the other hand, large groups of citizens encompass a wider range of policy preferences. Thus, the average disparity between what the individual citizen considers to be the optimal amount and quality of public services and the actual amount and quality he gets increases in municipal size (e.g., Alesina et al., 2004).² Alesina et al. (2004) argue that additional costs of heterogeneity arise for those public goods and services for which consumption goes along with meeting and interacting with

¹ This definition does not cover cooperation for a single incident in time, e.g. for organizing a common cultural festival once. A permanent cooperation in the field of organizing cultural events is, however, included in our definition of IMC.

² These costs of heterogeneity are larger the more effective Tiebout-sorting has been in the past and thus the greater the inter-jurisdictional differences in policy preferences. At the same time, the foundation of large communities makes Tiebout-sorting more costly: As the size of municipalities increases, citizens are less likely to find a place to live that is close to an attractive place to work and simultaneously offers a bundle of public services that suits the families policy preferences.

other consumers (see also Brasington, 2003). Accordingly, citizens who prefer to interact with citizens that are similar to themselves witness losses in utility from joint production if this increases the probability of having to interact with people not belonging to their own peer group. This applies to household-related infrastructure like public libraries, community centers, playgrounds and especially to public schools (e.g., Alesina et al., 2004).

Given the general trade-off sketched above, a certain municipality m should only seek cooperation with other municipalities if the net gains from economies of scale outweigh the net costs due to heterogeneity for home municipality m . At the same time, any municipality will only succeed to cooperate with other municipalities if their government expects a net gain from cooperation as well (in general and with the particular municipality m). This leads to a number of testable hypothesis regarding the emergence of IMC. Numerous scholars have used data from different countries to test these hypotheses (for a detailed review of literature, see Blaeschke, 2014). The first essential hypothesis addressed in these studies refers to municipal size: The smaller a municipality is, the larger the economies of scale it can expect from cooperation and thus the larger the support for IMC in this municipality. A second hypothesis states that fiscal pressure increases the municipalities' willingness to cooperate. Based on survey data from Swiss municipalities, Steiner (2003) shows that IMC occurs more frequently among small and economically weak municipalities. Bel et al. (2011) finds similar results in their study on municipalities in the region of Aragon (Spain). Di Porto et al. (2013) use official data on the decision of French municipalities to join the so-called "Etablissements Publics de Cooperation Intercommunale" (EPCI). They find that municipalities with a small number of inhabitants and high unemployment rates are more likely to join an EPCI. A number of studies from other countries support the notion that municipalities under fiscal pressure are more likely to cooperate (e.g. Lackey et al. 2002; LeRoux and Carr, 2007; Feiock, 2007; Krueger and Bernick, 2010; Blaeschke, 2014).

Another important hypothesis refers to the costs of heterogeneity coming along with IMC. It states that the larger the differences in demand for local public services between a certain municipality m and its potential partners are, the less likely municipality m is to cooperate. Using data from a US-wide survey among local city governments, Feiock et al. (2009) find that the probability to participate in joint economic development ventures decreases in the heterogeneity in income within the region. The importance of heterogeneity is also confirmed in a number of studies on IMC in the metropolitan areas of the United States conducted by public administration scholars. Among other things, they show that the more demographically and fiscally different potential cooperation partners are, the less likely they are to cooperate (e.g., Kwon and Feiock, 2010, LeRoux and Carr, 2007). These studies are inspired by the so-called Institutional Collective Action framework proposed by Richard Feiock and co-authors. This framework provides an alternative explanation for the fact that heterogeneity between municipalities reduces the probability of cooperation. They point out that negotiating, implementing and controlling IMC-contracts causes substantial transaction costs (e.g., Feiock and Scholz, 2010). Other things equal, transaction costs involved in IMC are higher the more heterogeneous the partners are. The relevance of transaction costs for the emergence of IMC is supported by the central finding according to which close networks between municipal officials increase the probability of cooperation (e.g., LeRoux et al. 2010, Kwon and Feiock, 2010).³

³ In metropolitan areas, much of the IMC is motivated by regional spillovers (rather than by economies of scale). 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). Blaeschke (2014) also points out that the emergence of IMC can be analyzed from a Public Choice perspective. Accordingly, self-interested local politicians and bureaucrats can push IMC even when it is not beneficial for the municipal population or they can prevent potentially beneficial IMC-projects for self-interest reasons. As the current paper focuses on the

Two other strands of literature contain important hints regarding the impact of municipal characteristics on citizens' policy preferences on IMC. The first one focuses on school districts in the US. In many US-states, the task of public schooling is not pursued by the general-purpose governments (i.e. municipalities or counties), but by so-called school districts. School districts are single-purpose governments that decide about all major issues on primary and secondary public education. They are governed by officials elected by the citizens living in the school district. Their expenditures are funded by vertical grants from the state government. In addition, they have the right to levy taxes on all residents living in the school district (e.g., Mullin, 2007). The Bureau of Census provides a comprehensive data base on school districts. This database can be used to explain why some school districts merge and why others do not. In addition and more importantly, the database enables researchers to explain the choice of partner districts to merge with. Brasington (1999) finds a dominance of asymmetric mergers: Small districts often merge with large districts. Symmetric mergers and mergers involving medium-sized districts 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 new merged school 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). A number of other studies use school-district data to

citizens' policy preferences, the self-interest of local politicians and bureaucrats is of minor importance for the upcoming analysis.

analyze the impact of inter-jurisdictional heterogeneity on the probability of mergers. Brasington (2003) finds that heterogeneity in property values in the municipalities underlying the school districts prevent mergers: Especially municipalities with high property values oppose mergers.⁴

Finally, Tanguay and Wihry (2008) use data from referenda in Quebec (Canada) in 2004 to analyze the factors driving the level of citizens' resistance against forced mergers. Here, the central government has forced a large number of municipalities to merge. Later in the process, 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 de-merger as dependent variable. The most important exogenous variable is taken from publications of the provincial government. In these publications, the provincial governments informed citizens about the estimated change in municipal expenditures per capita and in tax liability per capita that is estimated to go along with the merger. Tanguay and Wihry (2008) find the share of votes in favor of de-mergers to rise in the estimated change in expenditures per capita but fall in the estimated tax liability. In addition, vote-shares rise in the income differences between the municipalities to be merged and in the difference in share of citizens who consider French to be their first language.

4

Heterogeneity in income and racial composition are also found to reduce the probability of school-district mergers in some constellations (see also Gordon and Knight, 2009). A related strand of literature builds on the trade-off sketched above and analyzes the relationship between heterogeneity within a certain region and the number and size of municipalities or school districts (e.g., Nelson, 1990, Alesina and Spoloare, 1997, Alesina et al., 2004). Heterogeneity is found to influence number and size of municipalities.

Summing up, the studies reviewed above clearly show that the prospect of economies of scale and scope promotes IMC and school district mergers while inter-jurisdictional heterogeneity is an obstacle (except for heterogeneity in population size). Data from referenda on municipal amalgamations imposed by supra-ordinate governments show that the same factors are also driving voters' policy preferences on the related issue of municipal mergers. This paper addresses the question whether these factors play a similar role when it comes to shaping citizens' policy preferences regarding IMC. So far, this question has not been analyzed empirically. Furthermore, we provide – to the best of our knowledge – the first large scale econometric study that investigates the impact of citizens' individual characteristics and beliefs on their policy preferences.

3. Data

Our analysis builds on an online survey among citizens of three peripheral counties in the German state of Hesse. The survey was conducted in summer 2013. Overall, 1,413 persons from 59 municipalities participated.⁵ The questionnaire consists of 60 questions: the first section asks participants to assess the quality of local services in their home municipality and state their expectations regarding the financial and demographic perspectives of their home municipality. The second section asks subjects for their policy preferences for IMC (see section below for the exact question). In addition, there are questions on citizens' expectation regarding the

⁵ We choose 30.000 citizens in all 60 municipalities at random and invited them to participate in the online-survey. We also invited the broad public in these counties to participate in the survey (via articles in local newspapers and announcements on many municipal homepages). Unfortunately, only very few citizens made use of this possibility.

impact of IMC on production costs, quality of services and democratic control. Later sections contain questions about trust in local authorities and a number of biographical questions.

3.1 Endogenous variables

Table 1 presents the question we use to elicit the individual policy preferences regarding IMC. Next to IMC in the field of 1) childcare services, we asked for policy preferences for IMC in the field of 2) road maintenance and winter services, 3) infrastructure for private households (such as community centers, sports facilities etc.) and 4) public administration (registration of- fice, regulatory agency, public construction authorities).

[Table 1 about here]

Table 2 gives an overview over subjects' answers to this question. It clearly shows that there is no closed front of resistance against IMC. The support for close IMC ranges from one third to 60 percent of all respondents. We construct four dummy variables – one for each task. These take on the value 1 if the subject supports close IMC, i.e. ticked the first option in table 1 (0 else).

[Table 2 about here]⁶

3.2 Exogenous variables

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. We focus on two main questions: 1) Do the municipal-level factors found to drive the emergence of IMC –

⁶ The descriptive statistics reported here are calculated without accounting for an over-representation of subjects from certain municipalities, female subjects and subjects with home-ownership and high-school education. Weight-corrected statistics do not differ significantly.

factors capturing the costs and potential benefits of IMC for the municipality as a whole – drive policy-preferences on individual level? In other words: Do citizens consider the characteristics of their home municipality and the potential partner municipalities when deciding whether they support or oppose IMC? The second question reads: 2) Which factors on individual level shape citizens' policy preferences? We employ four categories of factors (see table 3). The following subsections introduce them in detail. Descriptive statistics are provided in Appendix A.

[Table 3 about here]

3.2.1 Individual characteristics

1) Citizens' expectations regarding the impact of IMC

The literature in section 2 clearly indicates that citizens' support for IMC depends on what they expect IMC to effectuate (e.g., Tanguay and Wihry, 2008; Dafflon, 2012). We ask subjects whether they expect IMC a) to reduce costs of public service provision and b) to improve the quality of public services. A dummy variable is constructed, taking on the value 1 if the respondent partly or completely agrees to the statement that IMC leads to cost saving effects, otherwise 0 (*IMC_SAVE_COST*). Similarly, the second dummy variable takes on the value 1 if the respondent partly or completely agrees that IMC improves quality, otherwise 0 (*IMC_RAISE_QUALITY*). We expect a positive sign for the coefficients of both variables. A negative sign is expected for the dummy variable (*IMC_REDUCE_INFLUENCE*). It takes on the value 1 if the respondent agrees with the notion that IMC goes along with a loss in control and influence for the citizens, otherwise 0 (e.g., Dafflon, 2012).

2) Emotional attachment to the home municipality

Citizens who are born in residence are expected to be emotionally more strongly attached to their municipality than citizens who moved to it at a later stage of their life. To capture this effect, we construct a dummy variable that takes on the value 1 if the respondent is born in

residence, otherwise 0 (*BORN_IN_RESIDENCE*). Similarly, emotional attachment is likely to be stronger among citizens who are active members of local sports clubs, cultural initiatives, the local fire brigade or other local clubs and initiatives. To capture this kind of activity, we construct the dummy variable *ACTIVE* that is 1 for active people (0 else). We expect citizens emotionally attached to their home municipality to fear a loss of identity and thus utility if their municipality cooperates with neighboring municipalities. Consequently, we expect a negative coefficient for the dummy variables *BORN_IN_RESIDENCE* and *ACTIVE*.

3) Conditional drivers of IMC-related policy preferences

There are a number of individual-level factors whose impact on citizens' policy preferences depend on their expectations regarding the consequences of IMC. More specifically, these factors are expected to have an impact only for those citizens who believe that IMC has a positive influence on the prosperity of the local population, e.g. by reducing the costs of public service production or improving service quality.

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 assessed the quality of service *s* as bad (0 else). We expect a positive relationship between this variable and subjects' support for IMC – again provided they expect IMC to have a positive effect.

It is straight forward to assume that citizens' support for IMC depends on their expectation concerning the financial and demographical perspectives of their home municipality: The more negative their expectations are, the more likely citizens are to support IMC – provided they assume that IMC has a positive effect. We 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*).

In our survey, we elicit subjects' trust in local government. We construct a dummy variable that takes on the value 1 if respondents state that they have much trust or very much trust in local politicians, otherwise 0 (*TRUST_LOCAL_GOV*). The literature on political reforms shows that trust in political institutions is crucial for citizens' support for reforms (Rodrik, 1996; Heinemann and Tanz, 2008; Heinemann and Hennighausen, 2012). Citizens who trust their local government are more willing to support IMC because they are more confident that the local representatives will act in their interest. This argument is particularly important in the context of IMC. Here, political representatives cannot be directly controlled by their electorates. Instead, they have substantial leeway when negotiating with political representatives of other municipalities. This argument suggests that citizens who trust their government are more likely to support IMC – provided they also believe that IMC has a positive effect. On the other hand, it is possible to argue that citizens who trust their government oppose IMC because they are more reluctant to see their trusted government share political power with other agents. Thus, we have no clear prediction regarding the impact of *TRUST_LOCAL_GOV*.

4) Control variables on individual level

Finally, we introduce a number of individual-level control variables. 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 6 km (0 else)⁷. The variable *HIGH_EDU* takes on the value 1 for subjects who have a high-school diploma and 0 for all others. We also ask subjects about their knowledge regarding the current degree of inter-mu-

⁷ The distance of 6 km represents the median of the respondents' distance to work, school or university.

nicipal cooperation of their home municipality (with no specific reference to the fields of cooperation). Approximately 45 percent stated that they do not know. We introduce two dummy variables *ASSUME_COOP* and *ASSUME_NOCOOP* that take on the value 1 for subjects who state that their municipality cooperates (does not cooperate) with other municipalities (0 else). Including these variables is a measure of caution to control for the possibility that subjects have a different understanding of our central question in table 1 depending on whether or not they are convinced that their home municipality engages in IMC already.⁸

3.2.2 Characteristics of the home municipality

The literature reviewed in section 2 shows that the emergence of IMC is driven by the characteristics of the home municipality. First, we control for its population size (*POP*). Our sample does not contain big municipalities – the largest being Baunatal with a population of less than 30.000. Thus, we expect a negative relationship between the probability that a certain individual supports IMC and the size of his or her home municipality. We use five indicators to capture the impact of fiscal stress. Specifically, we use debt per capita (*DEBT*), tax revenues per capita (*TAXES*)⁹, the ratio of running expenditures over regular revenues (*EXP_OVER_REV*)¹⁰ and the rate of population change (*POPCHANGE*)¹¹ – all calculated as

⁸ Note, however, that the correlation between *ASSUME_COOP* and the municipal-level variable *ACTUALLY_COOP* capturing whether a municipality actually cooperates or not is below 0.15. This shows that subjects' knowledge about the true level of inter-municipal cooperation is limited.

⁹ This variable captures tax revenues from local business and land taxes and from tax-sharing arrangements.

¹⁰ This variable is calculated using expenditures and revenues in municipality *m*'s administrative budget.

¹¹ Especially small rural municipalities are affected by demographic change. Declining populations result in rising per capita costs of public services (Haug, 2004; Moss, 2008). IMC can be a way to compensate for

five-year averages between 2009 and 2013. Finally, we include the local level of unemployment (*UNEMPLOYMENT*) in the year of the survey.¹² The smaller *TAXES* and *POPCHANGE* and the larger the other variables are, the higher the fiscal pressure in municipality *m* and thus the higher the support for IMC among its citizens is expected to be. The variables *DEBT*, *TAXES* and *EXP_OVER_REV* are more closely related to the fiscal stress in municipality *m* than the other two variables are – yet many citizens may not be aware of this information (e.g. Caplan, 2008). The local level of unemployment and the population dynamics is much more visible yet less closely related to municipality *m*'s budgetary situation. It is difficult to predict which of these indicators – if any – citizens take into account when forming their policy preferences on IMC. Thus, including all variables is an act of caution.

In addition, we introduce the variable *AV_TRAVEL_TIME* capturing the average travel time from 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 less likely subjects are to support IMC.

A number of municipal-level control variables are used. We include the number of municipality *m*'s direct neighbors (*NUM_NEIGHBORS*) and dummy variables for two of the counties (namely *ODENWALDKREIS* and *WERRA-MEISSNER-KREIS*). The dummy-variable *COUNTY_BORDER* is 1 for municipalities that lie on a county border (0 else). A special

this rise in costs. Therefore, we expect citizens in shrinking municipalities to be more likely to support IMC than citizens from growing or demographically stable municipalities.

¹² The unemployment level is calculated as ratio of unemployed persons to total population. Data on the unemployment rate is not available on municipal level.

dummy-variable *BORDERING_KS* marks all municipalities that border the city of Kassel (ca. 200.000 inhabitants).

3.2.3 Availability of suitable partners

The literature reviewed in section 2 tells us that the characteristics of the partner municipalities crucially drive the potential costs and benefits that municipality *m* can expect from IMC. For the citizen who has to decide whether or not to support IMC, one essential question reads: Are their suitable partners among the neighboring municipalities? To capture the availability of suitable partners, we look at four different dimensions. First, we look at similarities in the degree of fiscal stress. To this end, we calculate the number of neighbors that are similar to municipality *m* with respect to our five indicators for fiscal stress. For instance, the variable *NUM_SIM_UNEMP* represents the number of neighboring municipalities whose level of unemployment differs by less than one third from the one of municipality *m*. The variables for the other four indicators are calculated accordingly. The rationale behind these variables is the following: The larger the difference in characteristics between municipality *m* and its neighbors, the larger the difference in fiscal stress is expected to be. Differences in fiscal stress lead to differences in preferred quantity and quality of public services. Thus, the variables above capture the likelihood of finding a partner municipality where the differences in preferred quantity and quality is low. Looking at the raw data reveals that these indicators are highly correlated with each other and with the other variables calculated from our five fiscal stress indicators (see section 3.2.2 and 3.2.4). Therefore, we use a compound measure *NUM_SIM_OVERALL_FISCAL* that sums up the *NUM_SIM*-variables for all five dimensions. The larger this compound variable, the more suitable the neighboring municipalities are. Thus, we expect a positive sign for all six variables.

Second, we account for the argument of Alesina et al. (2004) according to which citizens are more supportive of IMC if the partner municipalities involved are similar to their home

municipality in their ethnic composition. The most suitable indicator for ethnic diversity in rural Hesse is the share of non-German population. The variable *NUM_SIM_NONGERMAN* captures the number of direct neighbors whose share in non-German population differs by less than one third from the share in municipality *m*. Following Alesina et al. (2004), we expect a positive sign for this variable.

The third dimension captures similarities in municipal government. Variable *NUM_SIM_SHARELEFT* calculates the number of neighbors with a similar share of leftwing members in the municipal council (calculated in the same way as the previous variables). The variable *SAME_STRONGEST_PARTY* captures the share of neighboring municipalities that have the same strongest party in the municipal council as municipality *m*. Both variables are proxy variables for the similarity in residents' tastes for public services. Thus, we expect a positive sign for both variables.

Fourth, we account for the results of Brasington (1999). He suggests that IMC-arrangements are more likely to occur among municipalities which differ considerably in size. To account for Brasington's argument, we construct two variables. *M_SMALL_N_LARGE* 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, *M_LARGE_N_SMALL* captures the number of small neighbors of large municipalities. The argument of Brasington (1999) suggests that both variables yield positive coefficient estimators.

3.2.4 Municipality *m*'s bargaining position

Finally, we introduce a number of variables to capture municipality *m*'s bargaining position in case it negotiates an IMC-contract with its neighbors. If municipality *m* enters the negotiation with a strong threat point, it can expect to reach a favorable agreement in the end. The

weaker the threat point, the less bargaining power and thus the less favorable the final IMC-arrangement. As proxy for the arrangement, we use the relative position of municipality m in the group of potential partners. Based on our five variables for fiscal stress, we develop indicators that capture the degree to which municipality m is in a weak bargaining position. The dummy RP_UNEMP_LARGE captures municipality m 's relative position in the unemployment level:

$$RP_UNEMP_LARGE = \begin{cases} 1 & \text{if } \frac{\text{unempl. level of } m - \text{smallest unempl. level among pot. partners}}{\text{range of unempl. levels in group of pot. partners}} > 0.8 \\ 0 & \text{else} \end{cases}$$

The dummy RP_TAX_SMALL captures municipality m 's position in taxes per capita:

$$RP_TAXES_SMALL = \begin{cases} 1 & \text{if } \frac{\text{taxes p.c. of } m - \text{smallest taxes p.c. among pot. partners}}{\text{range of taxes p.c. in group of potential partners}} < 0.2 \\ 0 & \text{else} \end{cases}$$

If $RP_UNEMP_LARGE = 1$ and/or $RP_TAXES_SMALL = 1$, municipality m is in a weak bargaining position. Similar dummies are calculated for the other three fiscal-stress indicators. Finally, we calculate a compound variable $RP_WEAK_OVERALL$ by adding up the five RP-variables. We expect a negative sign for all six variables.

4. Empirical analysis

The central aim of our study is to explain citizens' policy preferences regarding IMC. Specifically, we want to identify factors that explain why some citizens support a close IMC of their home municipality while others oppose it. To this end, we use a logit panel approach:

$$IMC_CLOSE_{is} = f(IND_SERVICE_{is}, IND_i, CHAR_m, NUM_SIM_{m,-m}, RP_{m,-m}, FE_s)$$

The endogenous variable IMC_CLOSE takes on the value 1 if subject i supports close inter-municipal cooperation in service s (see section 3.1). The first matrix $IND_SERVICE_{is}$ contains the exogenous variables that take reference to the quality resp. demand for the specific service

s (see section 3.2.1). The second matrix IND_i contains exogenous variables on the individual level that do not vary across services (see section 3.2.1). The third matrix $CHAR_m$ contains variables characterizing municipality m in which individual i lives (see section 3.2.2). The matrices $NUM_SIM_{m,-m}$ and $RP_{m,-m}$ contain variables informing us about the availability of suitable cooperation partners and the bargaining position of municipality m in possible IMC-negotiations (see section 3.2.3 and 3.2.4). Finally, FE_s stands for fixed effects for the different services.

In section 3, we argued that many individual-level factors only have impact on policy preferences for IMC if the individual assumes that IMC has positive effects on the service quality or on provision costs. In fact, one can argue that the impact of many municipal-level factors also depends on whether or not subjects expect IMC to have a positive impact. For instance, living in a fiscally weak municipalities does not increase support for IMC among citizens who are not convinced that it brings relief for the fiscal budget. In our sample, 92 percent of all respondents expect IMC to reduce costs and/or improve public service quality. Thus, the normal approach using interaction terms to test for the impact of conditional factors cannot be applied due to collinearity problems. Instead, we reduce the sample to those 92 percent who expect IMC to have a positive effect. The conditional factors are included directly in the set of exogenous variables.

[Table 4 about here]

Table 4 reports six different models. These models differ in the indicators for fiscal stress (and the corresponding NUM_SIM - and RP -variables). The baseline model in column 1 uses all five fiscal-stress indicators to characterize municipality m and – to avoid collinearity – the compound measures $NUM_SIM_OVERALL_FISCAL$ and $RP_WEAK_OVERALL$. The models 2 to 5 use one fiscal-stress indicator and the corresponding NUM_SIM - and RP - variable only. Finally, model 6 combines all five indicators for fiscal stress in municipality m with the variables

RP_UNEMP_LARGE and *NUM_SIM_EXP_OVER_REV* that proved significant in models 2 to 5.

The results of these models can be summarized as follows: First, we take a look at the variables on individual level. The variable *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. The variables *TRUST_LOCAL_GOV* and *ACTIVE* are significant and negative while *BORN_IN_RESIDENCE* yields only insignificant coefficient estimators. Citizens' assessment of current service quality (*S_BAD*) has a significant influence. Subjects who consider service quality to be poor are more supportive of IMC. Finally, *HIGH_EDU* and *AGE* are significantly positive. Looking at the marginal 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 27 percentage points. The variables *S_BAD* and *MUNICIPAL_PERFORMANCE_DECLINE* yield a marginal effect of approximately 10 and 14 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. All other marginal effects are well below 10 percentage points.

On municipal level, only one of our five indicators for fiscal stress is significant – though with a sign that contradicts our prediction: Citizens from municipalities with high tax revenues per capita are more likely to support IMC. Among the measures for the availability of suitable neighbors and municipality m's bargaining position, only *RP_UNEMP_LARGE* and *NUM_SIM_EXP_OVER_REV* are significant. The negative sign of *RP_UNEMP_LARGE* is in line with our prediction while the sign for *NUM_SIM_EXP_OVER_REV* is not. When these two variables are used instead of the compound measures in the baseline model (see model 7) *RP_UNEMP_LARGE* turns weakly significant and *TAXES* turns insignificant.

The other municipal-level variables perform extremely weak. Population size, the variables capturing similarity in ethnic composition (*NUM_SIM_NONGERMAN*) and the variables capturing similarities in local government (*NUM_SIM_SHARELEFT* and *NUM_SAME_STRONGEST_PARTY*) are never significant. The average travel time to the neighboring municipality (*AV_TRAVEL_TIME*) yields negative coefficient estimators that are (weakly) significant in three of seven models. Finally, we find the predicted positive sign for *M_BIG_N_SMALL* and for *M_SMALL_N_BIG*, we find negative rather than the predicted positive coefficient estimators – though both are insignificant. Thus, our results do not support Brasington’s argument according to which an asymmetry in size generates more support for IMC. For all of the seven models we ran joint significance tests of the following groups of variables: *municipal_characteristics*¹³, *available_partners*¹⁴, *brasington*¹⁵. In the first model we additionally tested the joint significance of all five fiscal stress variables as well as the compound measures *RP_WEAK_OVERALL* and *NUM_SIM_OVERALL_FISCAL*. In the models 2 to 6 we tested the five fiscal stress variables and its respective *NUM_SIM* and *RP* variables. Finally, in model 7 a group is tested consisting of the five fiscal stress variables including the significant *NUM_SIM* and *RP* variables of the former models (*NUM_SIM_EXP_OVER_REV*, *RP_UNEMP_LARGE*). None of the groups show significant results.¹⁶

[Table 5 about here]

¹³ The group *municipal_characteristics* contains the variables *POP*, *AV_TRAVEL_TIME*.

¹⁴ The group *available_partners* contains the variables *NUM_NEIGHBORS*, *NUM_SIM_NONGERMAN*, *NUM_SIM_SHARELEFT*, *SAME_STRONGEST_PARTY*.

¹⁵ The group *brasington* contains the variables *M_SMALL_N_LARGE*, *M_LARGE_N_SMALL*.

¹⁶ Results of the joint significance test are available on request.

Table 5 reports six additional models. The first row repeats the baseline model from table 4 to make the comparison easier. In the second model, we drop the variable *MUNICIPAL_PERFORMANCE_DECLINE* for the following reason: One might argue that subjects in small municipalities or municipalities under fiscal stress are more likely to support IMC and at the same time, they are more likely to have negative expectations regarding the financial and demographical perspectives of their home municipality. In this case, the fact that municipal size and our variables for fiscal stress are largely insignificant in table 4 may be due to the fact that the variable *MUNICIPAL_PERFORMANCE_DECLINE* covers up the impact of the most relevant municipal characteristics. However, the performance of the other municipal-level variables remains unchanged even if *MUNICIPAL_PERFORMANCE_DECLINE* is dropped. In particular, neither population size nor the fiscal-stress related variables improve in performance. At the same time, *ACTIVE* and *TAXES* become weakly significant and *AV_TRAVEL_TIME* jumps to significant.

In model 3, we rerun the regressions using the full sample, including those 8 percent of participants who do not expect IMC to improve quality or reduce costs. We control for these expectations using two dummy variables *IMC_SAVE_COST* and *IMC_RAISE_QUALITY*. The dummy-variables are highly significant and positive while *ACTIVE* drops to weakly significant. Like in model 2, *AV_TRAVEL_TIME* and *TAXES* jump to weakly significant. The performance of all other variables is in line with the previous models.

Parallel to running our survey among citizens, we contacted the municipal authorities and asked them whether or not they cooperate in the specific fields we covered in our main survey. We use this information to split our observations. In column 4, we excluded all observations for fields and municipalities, for which the home municipality report cooperation. In column 5, we excluded all observations, for which the home municipality report NO cooperation. The variable *ACTIVE* is insignificant in column 5 and *TRUST_LOCAL_GOV* drops to weakly significant

in column 4 and 5. Furthermore, *M_SMALL_N_BIG* jumps to significant in column 4 and weakly significant in column 5 with negative signs in both cases. In model 5, *RP_WEAK_OVERALL* jumps to weakly significant and negative. Apart from that, there are no differences.

Finally, column 6 reports a model with municipal fixed effects to account for possibly omitted municipal-level factors. The performance of the individual-level variables is qualitatively unchanged.

We perform a number of sensitivity analyses to test the robustness of our results and to take a look at a number of side issues. In particular, we analyze the impact of additional variables on both individual and municipal level. None of these variables contributes much to explaining individual policy preferences in our sample. The variables are presented in more detail in Appendix B. Finally, we rerun the models in table 4 but replace our *NUM_SIM*-variables capturing the availability of suitable partner-municipalities by variables that capture the degree of heterogeneity between municipality *m* and its direct neighbors. While we are convinced that our *NUM_SIM*-variables are more suitable for our analysis, we test the performance of heterogeneity-measures because they are often used in the literature (see section 2). The heterogeneity-measures are not significant and their introduction does not change the performance of the other variables.

5. Discussion

The analyses presented in the previous section aimed at shedding light upon two questions: 1) Do citizens consider the characteristics of their home municipality and the potential partner municipalities when deciding whether they support or oppose IMC? 2) Which factors on individual level shape citizens' policy preferences for IMC?

Regarding the first question, the answer is largely No: Municipal-level factors do not shape citizens' policy preferences. The average travel time to the next municipality shows the expected negative sign but is rarely significant. We do not find evidence that municipal size influences citizens' policy preferences. Nor do we find support for Brasington's argument according to which support should be higher for partnership that are asymmetric in size. In particular, support for IMC is not larger among citizens in small municipalities with big neighbors. 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 fiscal situation, local government composition or the share of non-German population. The performance of our five indicators for fiscal stress provides absolutely no support for the hypothesis that fiscal stress boosts citizens' support for IMC. The only significant variable *TAXES* points in the opposite direction: Subjects in fiscally strong municipalities are more likely to support IMC. The indicators for municipality *m*'s bargaining position are rarely significant.

The poor performance of municipal-level factors is in line with the prediction of the rationally uninformed voter (e.g., Caplan, 2008). And while voters sometimes pick up pieces of relevant information about their home-country without specifically searching for it (e.g., Bischoff and Siemers, 2011), this form of acquiring politically relevant information is less likely relevant when it comes to information about the home municipality – not to mention the situation of the neighboring municipalities. Thus, voters regularly lack the basis of judgement when forming policy preferences regarding IMC in their home municipality. This was different in the de-merger referenda in Quebec underlying the study of Tanguay and Wihry (2008). Here, voters were provided with projections regarding the expected effects on IMC and used this information when deciding to vote for or against a de-merger.

Regarding the second question, we find a number individual 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 population and fiscal capacity. Citizens that are active in local initiatives or clubs and are thus more emotionally attached to the home municipality are more reluctant to support IMC. Ironically, reforms are more difficult if citizens' trust in the local government is high. While trust in politicians usually makes reforms more feasible, this does not seem to be true in the context of IMC. Instead, our result supports the rationale put forth in section 3.2.1: Citizens who trust their local government do not want to see this government share political power with other persons and institutions. The factor with the largest marginal effect by far is the expectation that citizens will lose influence and control when municipalities cooperate. Subjects holding this belief are by 27 percentage points more likely to oppose IMC. This indicates that a significant share of citizens follow Dafflon (2012) in being skeptical about IMC because it bears the danger of reducing citizens' influence and control over local politicians.

Our study 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, 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. In fact, here lies one important contribution for this paper. Second, our survey is not fully representative of the population underlying the sample. Male and well-educated subjects as well as subjects owning local real estate are over-represented and the feedback rate differs across municipalities. In our empirical analysis, the exogenous variables control for the factors (e.g. by the FEMALE-Dummy or by using municipal fixed effects). In fact, we controlled for important factors that were usually not even elicited in this kind of survey. The most important factors in this respect is our dummy variable *ACTIVE*

measuring subjects' local civic involvement and the subjective assessment of home municipality m's economic and demographic perspective. Through our 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.). We even went one step further and calculated weights that corrected for possible selection biases in sex, education, local real-estate ownership and the difference in response rates across municipalities (e.g., Elliot, 1991). We used these weights in count-data models using the number of fields for which subjects supported close IMC as endogenous variable. We obtain results that are qualitatively identical to the ones reported above. As count-data models do not account for the differences across fields of potential cooperation and do not allow for the use of municipal fixed effects, they are less suitable for our purpose. Thus, we do not report them here.

Beyond the limits of the data used, our analysis suffers from another limitation: 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 economic and demographic perspectives (see the performance of *MUNICIPAL_PERFORMANCE_DECLINE*). However, citizens' subjective assessment of their home municipality's economic and

demographic perspective is only loosely related to the development of the corresponding indicators in the years prior to the survey. In regressions using *MUNICIPAL_PERFORMANCE_DECLINE* as endogenous variable, *UNEMPLOYMENT*, and an *EXP_OVER_REV* are significant. At the same time, the performance of demographic variables is insignificant and the direct correlation between citizens' assessment and the different indicators for fiscal stress never exceeds 0.2.¹⁷ 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*. It is also 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?" They had the possibility to choose between a) "cooperating 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.

What can politicians learn from our analysis? Two political implications are noteworthy: First, governments who want to engage in IMC have to meet the concern of citizens fearing to lose influence and control. To this end, in-official handshake-deals are not the type of arrangement that seem suitable. Instead, IMC should be reached in a transparent political process and formalized in institutional arrangements that maintain transparency and accountability. Second, municipalities have to be aware of a negative side-effect of IMC that is difficult to estimate yet potentially crucial: If IMC is put through against the will of especially those citizens who are

¹⁷

Results are available with the authors upon request.

active in local sports clubs, cultural initiatives, voluntary fire-brigades etc., their willingness to keep up their engagement may decline. Especially in Germany, but also in many other countries all over the world, the honorary commitment of these people is a vital backbone of the local community. Thus, governments who want to engage in IMC are advised to pay particular attention to the sensitivities of locally active citizens.

6. Conclusion

This paper aims at providing evidence on the factors that drive individual citizens' preferences for IMC. It analyses data from a survey among citizens from 59 small and medium-sized municipalities in the rural areas of the German state Hesse. More than 90 percent of the respondents entertain positive expectations regarding the impact of IMC on costs of public service provision and/or public service quality. Depending on the type of service, between one third and 60 percent support a close cooperation between their home municipality and neighboring municipalities. The aim of our research was to learn more about the factors that explain why some subjects support IMC while others do not. Our data-base allows us to analyze both individual-level factors and factors related to the characteristics of citizens' home municipalities and their neighbors. We find that citizens' policy preferences regarding IMC are mainly shaped by individual characteristics and beliefs. Most importantly, the belief that IMC comes along with a loss in citizens' political influence and control reduces support for IMC massively. Believing that their home municipality's fiscal and demographic perspectives are negative leads to increased support for IMC. However, this belief is only loosely related to the objective indicators describing the municipality in the pre-survey years. Regarding the impact of municipal-level factors, the bottom line is the following: Citizens do not consider the characteristics of their home municipality and the potential partner municipalities when deciding whether they support or oppose IMC. Municipal size, the severity of fiscal stress are not found to matter, nor do we find any evidence that the support for IMC depends on the availability of suitable partners. We also test

for the possible influence of municipality m 's bargaining position in IMC-negotiations – a factor that received little attention in the literature so far. But this is not found to matter either.

As this is one of the first studies on citizens' policy preferences on IMC, much more research is needed. It is necessary to run more studies IMC-related policy preferences in rural areas and see whether our conclusions hold. Future studies may also focus on urban areas and fields of government activities where the predominant motive driving IMC is the internalization of regional spillovers. Beyond the focus of citizens' policy preferences, it seems worthwhile to take a closer look at the behavior of local governments. The question most directly following from our research is the following: Why are small and economically weak municipalities more likely to cooperate – as it is suggested by the studies reviewed in section 2 – when the voters in precisely these municipalities are not more likely to support this? Are local politicians ignoring voters' (biased) preferences to the benefit of their municipality or are there opportunistic motives at work? Summing up, there are still many interesting under-researched questions in the political economy of IMC.

References

- Alesina, A. and E. Spolaore (1997). On the Number and Size of Nations. *The Quarterly Journal of Economics*, November 1997. P. 1027-1056.
- Alesina, A., R. Baqir, and C. Hoxby (2004). Political Jurisdictions in Heterogeneous Communities. *Journal of Political Economy* 112. P. 348-396.
- Bel, G., X. Fageda and M. Mur (2011). Why do municipalities cooperate to provide local public services? An empirical analysis. *Local Government Studies* 39, P. 435-454.
- Bischoff, I. and Siemers, L. H-R. (2013). Biased beliefs and retrospective voting: why democracies choose mediocre policies. *Public Choice* 156., P. 163-180.
- Blaeschke, F. (2014). What drives small municipalities to cooperate? Evidence from Hessian municipalities. *MAGKS Discussion Paper No. 14-2014*.
- Brasington, D. M. (1999). Joint provision of goods: The consolidation of school districts. In: *Journal of Public Economics* 73, P. 373–393.
- Brasington, D. M. (2003). Size and School District Consolidations: Do Opposites Attract? *Economica* 70. P. 673-690.
- Cameron C, and P. Trivedi (2005). *Microeconometrics – methods and applications*. Cambridge. Cambridge University Press.
- Caplan, B. D. (2008). *The myth of the rational voter. Why democracies choose bad policies*. Cambridge, Mass., Princeton University Press.
- Dafflon, B. (2012). Voluntary amalgamation of local governments: the Swiss debate in the European context. *International Center for Public Policy Working Paper Series* 426.
- Di Porto, E., V. Merlin, 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.
- Elliot, D. (1991). *Weighting for non-response*. Office of Population Census and Surveys, Social Survey Division, London.
- Feiock, R. C. (2007). Rational choice and regional governance. *Journal of Urban Affairs* 29. P. 47-63.

- Feiock, R., Steinacker, A. und H. J. Park (2009). Institutional Collective Action and Economic Development Joint Ventures. *Public Administration Review* 69. P. 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.
- Geys, B., Heinemann, F. and Kalb, A. (2008). Local Governments at the Wake of Demographic Change: Evidence from German Municipalities. *Finanzarchiv* 64. P. 434-457.
- Gordon, N. and B. Knight (2009). A spatial merger estimator with an application to school district consolidation. *Journal of Public Economics* 93. P. 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. P. 593-604.
- Hanes, N., M. Wikström and E. Wangmar (2012). Municipal Preferences for State-imposed Amalgamations: An Empirical Study Based on the Swedish Municipal Reform of 1952. *Urban Studies* 49. P. 2733-2750.
- Haug, P. (2004). Declining Population and rising costs for municipal services. *Economy in Change* 11/2004. P. 306-312.
- Heinemann, F. and B. Tanz (2008). The Impact of Trust on Reforms. *Journal of Economic Policy Reforms* 11. P. 173-185.
- Heinemann, F. and T. Hennighausen (2012). Understanding Public Debt Preferences. *Finanz Archiv: Public Finance Analysis* 86. P. 406-430.
- Heinz, W. (2007). Inter-Municipal Cooperation In Germany: ‘The Mismatch Between Existing Necessities And Suboptimal Solutions’. Hulst, R. und A. van Montfort (Hrsg.), *Inter-municipal Cooperation in Europe*, Dordrecht. P. 91-115.
- Hulst, R. and A. Monfort (2007). *Inter-municipal cooperation in Europe*. Berlin.
- Krueger, S. and E. M. Bernick (2010). State rules and local governance choices. *Publius: The Journal of Federalism* 40. P. 697–718.
- Kwon, S. W. and R. C. Feiock (2010). Overcoming the Barriers to Cooperation: Intergovernmental Service Agreements. *Public Administration Review* 70. P. 876–884.

- Lackey, S. B., D. Freshwater, and A. Rupasingha (2002). Factors Influencing Local Government Cooperation in Rural Areas: Evidence from the Tennessee Valley. *Economic Development Quarterly* 16. P. 138–154.
- LeRoux, K. and J. B. Carr (2007). Explaining Local Government Cooperation on Public Works: Evidence from Michigan. *Public Works Management & Policy* 12. P. 344-358.
- LeRoux, K., P. W. Brandenburger, and S. K. Pandey (2010). Interlocal Service Cooperation in U.S. Cities: A Social Network Explanation. *Public Administration Review* 70. P. 268–278.
- Miceli, T. (1993). The Decision to Regionalize in the Provision of Education: An Application of the Tiebout Model. *Journal of Urban Economics* 33. P. 344-360.
- Moss, T. (2008). “Cold spots” of Urban Infrastructure: “Shrinking” Processes in Eastern Germany and the Modern Infrastructural Ideal. *International Journal of Urban and Regional Research* 32(2), P. 436-451.
- 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. A. (1990). Decentralization of the Subnational Public Sector: An Empirical Analysis of the Determinants of Local Government Structure in Metropolitan Areas in the U.S. *Southern Economic Journal* 57. P. 443-457.
- Rodrik, D. (1996). Understanding Economic Policy Reform. *Journal of Economic Literature* 34. P. 9-41.
- Solon, G., Haider, S. J. and J. Wooldridge (2013), WHAT ARE WE WEIGHTING FOR? NBER WORKING PAPER SERIES 18859.
- Steiner, R. (2003). The causes spread and effects of intermunicipal cooperation and municipal mergers in Switzerland. *Public Management Review* 5. P. 551–571.
- Tanguay, G. A. and Wihry, D. F. (2008). Voters’ preferences regarding municipal consolidation: Evidence from the Quebec de-merger referenda. *Journal of Urban Affairs* 30. P. 325-345.

Appendix A: Data

Variable	Description	Obs	Mean	Std. Dev.	Min	Max
<i>IMC_SAVE_COST</i>	1 if the respondent believes that municipalities are able to save costs through intermunicipal cooperation, otherwise 0	5108	0.8668755	0.3397425	0	1
<i>IMC_RAISE_QUALITY</i>	1 if the respondent believes that municipalities are able to improve quality through intermunicipal cooperation, otherwise 0	5112	0.8082942	0.3936813	0	1
<i>IMC_REDUCE_INFLUENCE</i>	1 if the respondent believes that citizens lose influence through intermunicipal cooperation, otherwise 0	5096	0.3422292	0.4745024	0	1
<i>BORN_IN_RESIDENCE</i>	1 if the respondent is born in residence, otherwise 0	5080	0.2322835	0.4223304	0	1
<i>ACTIVE</i>	1 if the respondent is active in local clubs like sports clubs, volunteer fire brigade etc., otherwise 0	4996	0.7301847	0.4439084	0	1
<i>S_BAD</i>	1 if the respondent states the service of field f as bad or very bad, otherwise 0	5008	0.2559904	0.43646	0	1
<i>MUNICIPAL_PERFORMANCE_DECLINE</i>	1 if the respondent believes that the performance level of the hometown will get worse within the next 10 years, otherwise 0	5032	0.4666137	0.4989337	0	1
<i>TRUST_LOCAL_GOV</i>	1 if the respondent states to have much or very much trust in local government, otherwise 0	5112	0.4107987	0.4920268	0	1
<i>FEMALE</i>	1 if the respondent is female, otherwise 0	5108	0.3320282	0.4709872	0	1
<i>PARENT</i>	1 if the respondent is a parent, otherwise 0	5020	0.7697217	0.4210532	0	1
<i>AGE</i>	respondent's age in years	5132	52.59704	14.43395	18	86
<i>COMMUTER</i>	1 if the respondent commutes to work, university, school etc., otherwise 0	4952	0.5145396	0.499839	0	1
<i>HIGH_EDU</i>	1 if the respondent has a high school diploma, otherwise 0	5060	0.5288538	0.4992167	0	1
<i>ASSUME_COOP</i>	1 if the respondent assumes that her hometown already cooperates	5116	0.6145426	0.4867508	0	1
<i>ASSUME_NOCOOP</i>	1 if the respondent assumes that her hometown does not cooperate	5116	0.0594214	0.2364349	0	1
<i>POP</i>	population size of respondent's hometown (in units of 1000 inhabitants)	5132	8.407257	5.349457	644	27417
<i>DEBT</i>	five years average of debt per capita of respondent's hometown	5132	1123.084	797.9644	112	5119.4
<i>TAXES</i>	five years average tax revenues per capita of respondent's hometown	5132	686.3167	372.4333	315.2585	2228.697
<i>EXP_OVER_REV</i>	five years average of administrative budget expenditures divided by administrative budget revenues of respondent's hometown	5132	1.0254	0.1023136	0.7859668	1.392955
<i>POPCHANGE</i>	the change in population size in 2009 compared to 2013 (in percentage terms)	5132	-2.556641	2.282603	-9.296994	3.666667
<i>UNEMPLOYMENT</i>	unemployed persons to population ratio in respondent's hometown	5132	0.0417822	0.0112261	0.0226716	0.0765264
<i>AV_TRAVEL_TIME</i>	average travel time to the neighboring municipalities of respondent's hometown	5028	14.23333	3.193254	8.3333	27
<i>NUM_NEIGHBORS</i>	Number of municipalities that border the respondent's hometown	5064	4.924177	1.900283	1	9
<i>ODENWALKREIS</i>	1 if respondent's hometown is located in the county "Odenwaldkreis", otherwise 0	5132	0.1886204	0.3912449	0	1
<i>WERRA-MEISSNER-KREIS</i>	1 if respondent's hometown is located in the county "Werra-Meißner-Kreis", otherwise 0	5132	0.1862822	0.3893721	0	1
<i>COUNTY_BORDER</i>	1, if respondent's hometown is located at the county border, otherwise 0	5132	0.7404521	0.4384293	0	1
<i>BORDERING_KS</i>	1, if respondent's hometown borders the city Kassel, otherwise 0	5132	0.2969602	0.4569634	0	1
<i>NUM_SIM_DEBT</i>	number of direkt neighbors whose average debt per capita (2009-2013) differs by less than 1/3 from the average debt per capita of respondent's hometown	5064	1.744076	1.462435	0	6

<i>NUM_SIM_TAXES</i>	number of direkt neighbors whose average tax revenues (2009-2013) differs by less than 1/3 from the average tax revenues of respondent's hometown	5064	3.813733	2.12943	0	9
<i>NUM_SIM_EXP_OVER_REV</i>	number of direct neighbors whose expenditures revenues ratio differs by less than 1/3 from the expenditures revenues ratio of respondent's hometown	5064	4.609313	1.901379	1	9
<i>NUM_SIM_POPCHANGE</i>	number of direkt neighbors whose average tax revenues (2009-2013) differs by less than 1/3 from the average tax revenues of respondent's hometown	5064	1.376777	1.344854	0	5
<i>NUM_SIM_UNEMP</i>	number of direct neighbors whose unemployed to population ratio differs by less than 1/3 from the unemployed to population ratio of respondent's hometown	5064	3.07109	1.811064	0	8
<i>NUM_SIM_OVERALL_FISCAL</i>	sum of the variables NUM_SIM_UNEMP, NUM_SIM_DEBT, NUM_SIM_TAXES, NUM_SIM_POPCHANGE and NUM_SIM_EXP_OVER_REV	5064	14.2654	7.268167	1	29
<i>NUM_SIM_NONGERMAN</i>	number of direct neighbors whose share in non-German population differs by less than 1/3 from the share in respondent's homemunicipality	5064	1.887836	1.567009	0	6
<i>NUM_SIM_SHARELEFT</i>	number of direct neighbors whose share in leftwing parties in the municipal council differs by less than 1/3 from the share in respondent's hometown's council	5064	3.556082	1.898161	0	8
<i>SAME_STRONGEST_PARTY</i>	number of neighboring municipalities with the same strongest party in the municipal council as the responent's hometown	5064	3.862559	2.19674	0	9
<i>M_SMALL_N_LARGE</i>	number of large neighbors (pop. > 10.000) for respondent's hometown – provided the latter is small (pop. < 5.000), 0 for all municipalities that are not small or do not have large neighbors	5064	0.3364929	0.8426016	0	4
<i>M_LARGE_N_SMALL</i>	number of small neighbors (pop. < 5.000) for respondent's hometown – provided the latter is large (pop. > 10.000), 0 for all municipalities that are not large or do not have small neighbors	5064	0.4210111	0.9231164	0	5
<i>RP_DEBT_LARGE</i>	1 if debt p.c. of respondent's hometown minus the smallest value among pot. partners divided by the range of debt p.c. in group of potential partners is greater 0.8, otherwise 0	5064	0.3033175	0.4597366	0	1
<i>RP_TAX_SMALL</i>	1 if the average tax revenues per capita (2009-2013) of respondent's hometown minus the smallest value among pot. partner divided by the range of tax revenues per capita of pot. partners is smaller than 0.2, otherwise 0	5064	0.3906867	0.4879524	0	1
<i>RP_EXP_OVER_REV_LARGE</i>	1 if the expenditures revenues ratio of respondent's hometown minus the smallest value among pot. partners divided by the expenditures revenues ratio in group of pot. partners is greater 0.8, otherwise 0	5064	0.2391476	0.4266051	0	1
<i>RP_POPCHANGE_SMALL</i>	1 if population change between 2009 and 2013 of respondent's hometown minus the smallest value among pot. partners divided by the range of debt p.c. in group of potential partners is smaller 0.2, otherwise 0	5064	0.3736177	0.4838117	0	1
<i>RP_UNEMP_LARGE</i>	1 if unemployed to population ratio of respondent's h+B27ometown minus the smallest value among pot. partners divided by the range of unemployed to population ratios in group of pot. partners is greater 0.8, otherwise 0	5064	0.2827804	0.4503951	0	1
<i>RP_WEAK_OVERALL</i>	sum of the variales RP_TAX_SMALL, RP_UNEMP_LARGE, RP_DEBT_LARGE, RP_TAX_SMALL, RP_POPCHANGE_SMALL, RP_EXP_OVER_REV_LARGE	5064	1.589258	1.147407	0	4
<i>CHILDCARE</i>	1, if this observation is about child care, otherwise 0	5132	0.25	0.4330549	0	1
<i>CIT_ORIENTED_INFRA</i>	1, if this observation is about citizen oriented infrastructure, otherwise 0	5132	0.25	0.4330549	0	1
<i>LOCAL_ROADS</i>	1, if this observation is about local roads and winterservices, otherwise 0	5132	0.25	0.4330549	0	1
<i>HET_UNEMPLOYMENT</i>	standard deviaton of unemployed persons to population ratio of respondent's hometown and its direct neighbors	5064	0.0100919	0.00351	0.0041077	0.0213789
<i>HET_DEBT</i>	debt per capita's standard deviaton of respondent's hometown and its direct neighbors	5064	606.765	395.7861	104.5104	1984.373
<i>HET_TAX</i>	tax per capita's standard deviaton of respondent's hometown and its direct neighbors	5064	241.0785	356.3519	38.06163	1471.37
<i>HET_POPCHANGE</i>	population change's standard deviaton of respondent's hometown and its direct neighbors	5064	1.565746	0.6900449	0.3337487	2.965931
<i>HET_EXP_OVER_REVENUES</i>	expenditures revenues ratio's standard deviation of respondent's hometown and its direct neighbors	5064	0.1089336	0.0942748	0.016112	10.4376984

Appendix B: Extended model

Next to the ones used in the regressions reported above, we analyzed a number of additional exogenous variables on both on individual and on municipal level. On individual level, we included household income which we did not include it in the main regressions because it was frequently not reported and would thus reduce the number of observations considerably. Next, we included a variable capturing citizens' expectations regarding the bargaining process between municipalities. The literature tells us that fairness issues may have a strong influence on citizens' policy preferences (e.g., Heinemann et al., 2009). We expect that subjects are more likely to support IMC if they expect the bargaining process to result in a compromise – other things equal. Support is lower if they expect the outcome to follow the interest of the largest municipality or the municipality with the highest or lowest level of public services. The dummy variable *IMC_COMPROMISE* takes on the value 1 for subjects expecting a compromise and 0 for subjects who do not. We also asked participants whether they own the house or flat they currently live in. The answer is captured by a dummy variable (*OWN_HOUSE*) that takes on the value 1 for homeowners, 0 else. Unlike tenants, homeowners share a vital interest in the prosperity of their home municipality because the prices of their assets are highly correlated with the municipality's prosperity. In our sample, most municipalities suffer from declining population and a loss in economic strength. As IMC may be an instrument that helps to ensure municipal prosperity, we expect homeowners who believe that IMC has a positive effect to be more likely to support IMC than tenants. Next to trust in local government, we controlled for subjects' trust in the public administration (*TRUST_PUBLIC_ADMIN*).

Following Blaeschke (2014) we account for the possible impact of intra-municipal transaction costs. The first variable is an institutional one: As a result of regional reforms of the 1960s and 1970s, there is a large number of municipalities that consist of several small and formerly independent villages. The newly installed municipalities lack a unified settlement area. Thus, the decision where to locate public services (e.g. sports facilities, kindergartens) is likely to be more controversial than in municipalities with a unified settlement area. We control for this effect by including a variable consisting of the number of districts per municipality (*NUMBER_DISTRICTS*). In addition, we control for the existence of an absolute majority in the municipal council. The variable *ABS_MAJ* takes on the value 1 if one political party holds more than 50% of the seats in the municipal council (0 else). It accounts for the fact that political decision-making procedures in those municipalities run much more smoothly than in municipalities with existing coalitions. We capture ethnic heterogeneity among local residents within municipality

m by including the share of non-German citizens (*NON_GERMANS*). Both variables are introduced to capture possible differences in inner-municipal political transaction costs. We control for the share of left-wing parties in the municipal council (*SHARELEFT*). In addition, the variable *SHAREFREE* captures the share of seats held by the so-called “Freie Wählergemeinschaft” (free voters’ union). The distinct feature of these unions is that they are not part of a nationwide party with well-defined political positions. The existence of strong free voter unions can thus be used as a proxy for a high level of citizens’ influence on local politics (e.g., Blaeschke, 2014). We also controlled for the number of neighboring municipalities that are similar in the share of free voters in the municipal council (*NUM_SIM_SHAREFREE*). If we calculate the relative position with respect to population size, we arrive at an alternative way to capture Brasington’s argument that IMC is more likely among municipalities that differ considerably in size. For the corresponding variables *RP_POP_LARGE* and *RP_POP_SMALL*, a positive sign is expected. Finally, we control for the distance to the next city with a population exceeding 100.000 (*DISTANCE_NEXT_CITY*). The closer the next city is, the more likely citizens are to find/keep a job and the more likely they are to consume an attractive bundle of public services even if the home municipality suffers from population decline and fiscal stress. None of these variables prove significant, nor do they change the performance of the other variables. The regression tables – including those using heterogeneity-measures - are available with the authors upon request.

Table 1: Survey question on our endogenous 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 respondents (in percent)

Stated preference	Field / service s			
	Childcare	road maintenance, winter services	Infrastructure for private households	Administration
Cooperate closely	36.5	60.4	46.2	46.2
Cooperate loosely	56.1	35.0	43.6	37.0
No cooperation	5.4	3.8	7.3	13.4
Don't know	2.0	0.8	3.0	3.4

Table 3: Categories of exogenous variables

Section	Indicator category	Data source
3.2.1	Respondents' individual characteristics and beliefs	Survey (individual level data)
3.2.2	Characteristics of respondents' home municipality m	Official statistics (municipal level data)
3.2.3	Availability of suitable cooperation partners (comparing home municipality and its direct neighbors)	Official statistics (municipal level data)
3.2.4	Bargaining position of municipality m	Official statistics (municipal level data)

Table 4: Basic regression models

Variables/Models	(1)		(2)		(3)		(4)		(5)		(6)		(7)	
	Coeff.	ME	Coeff.	ME	Coeff.	ME	Coeff.	ME	Coeff.	ME	Coeff.	ME	Coeff.	ME
Respondents' individual characteristics and beliefs														
<i>BORN_IN_RESIDENCE</i>	-0.0605 (0.147)	-0.0117 (0.0285)	-0.0444 (0.146)	-0.0086 (0.0284)	-0.0644 (0.146)	-0.0125 (0.0283)	-0.0492 (0.146)	-0.0095 (0.0283)	-0.0590 (0.146)	-0.0115 (0.0284)	-0.0599 (0.146)	-0.0116 (0.0283)	-0.0655 (0.147)	-0.0127 (0.0283)
<i>ACTIVE</i>	-0.297** (0.140)	-0.0575** (0.0271)	-0.336** (0.14)	-0.0651** (0.0269)	-0.313** (0.140)	-0.0608** (0.027)	-0.294** (0.140)	-0.057** (0.0271)	-0.324** (0.140)	-0.0628** (0.0269)	-0.323** (0.140)	-0.0627** (0.0269)	-0.307** (0.140)	-0.0594** (0.027)
<i>S_BAD</i>	0.494*** (0.107)	0.0974*** (0.0211)	0.497*** (0.106)	0.0982*** (0.0211)	0.498*** (0.107)	0.0985*** (0.0212)	0.501*** (0.107)	0.099*** (0.0211)	0.493*** (0.106)	0.0975*** (0.0212)	0.488*** (0.107)	0.0965*** (0.0212)	0.488*** (0.107)	0.0961*** (0.0211)
<i>IMC_REDUCE_INFLUENCE</i>	-1.373*** (0.136)	-0.2744** (0.0253)	-1.380*** (0.136)	-0.276*** (0.0252)	-1.373*** (0.136)	-0.275*** (0.0253)	-1.369*** (0.136)	-0.274*** (0.0253)	-1.386*** (0.136)	-0.2774*** (0.0253)	-1.383*** (0.136)	-0.2765*** (0.0252)	-1.376*** (0.136)	-0.2742*** (0.0251)
<i>TRUST_LOCAL_GOV</i>	-0.371*** (0.130)	-0.0727** (0.0255)	-0.364*** (0.129)	-0.0714*** (0.0253)	-0.371*** (0.129)	-0.0728*** (0.0255)	-0.371*** (0.129)	-0.0728*** (0.0254)	-0.369*** (0.129)	-0.0726*** (0.0254)	-0.354*** (0.129)	-0.0694*** (0.0255)	-0.352*** (0.129)	-0.0689*** (0.0253)
<i>MUNICIPAL_PERFORMANCE_DECLINE</i>	0.699*** (0.129)	0.1389*** (0.0257)	0.737*** (0.129)	0.1466*** (0.0256)	0.724*** (0.128)	0.1442*** (0.0254)	0.712*** (0.128)	0.1418*** (0.0254)	0.730*** (0.129)	0.1455*** (0.0255)	0.734*** (0.128)	0.1462*** (0.0255)	0.703*** (0.129)	0.1395*** (0.0255)
<i>FEMALE</i>	0.0449 (0.135)	0.0087 (0.0262)	0.0372 (0.135)	0.0072 (0.0262)	0.0420 (0.135)	0.0081 (0.0262)	0.0619 (0.135)	0.012 (0.0261)	0.0458 (0.135)	0.0089 (0.0262)	0.0613 (0.135)	0.0119 (0.0262)	0.0523 (0.135)	0.0101 (0.0261)
<i>AGE</i>	0.0207*** (0.00560)	0.004*** (0.0011)	0.0211*** (0.00558)	0.0041*** (0.0011)	0.0210*** (0.00559)	0.0041*** (0.0011)	0.0211*** (0.00559)	0.0041*** (0.0011)	0.0216*** (0.00559)	0.0042*** (0.0011)	0.0215*** (0.00562)	0.0042*** (0.0011)	0.0215*** (0.00558)	0.0042*** (0.0011)
<i>HIGH_EDU</i>	0.516*** (0.126)	0.1005*** (0.0243)	0.508*** (0.125)	0.099*** (0.0242)	0.496*** (0.125)	0.0968*** (0.0242)	0.507*** (0.125)	0.0988*** (0.0242)	0.503*** (0.125)	0.0981*** (0.0242)	0.509*** (0.126)	0.0993*** (0.0243)	0.535*** (0.126)	0.1038*** (0.0242)
<i>ASSUME_COOP</i>	0.0471 (0.138)	0.0091 (0.0268)	0.0373 (0.137)	0.0072 (0.0266)	0.0632 (0.138)	0.0123 (0.0267)	0.0207 (0.137)	0.004 (0.0266)	0.0330 (0.137)	0.0064 (0.0267)	0.0131 (0.138)	0.0025 (0.0268)	0.0370 (0.137)	0.0072 (0.0266)
<i>ASSUME_NOCOOP</i>	0.373 (0.281)	0.0721 (0.0539)	0.398 (0.279)	0.077 (0.0535)	0.411 (0.280)	0.0796 (0.0537)	0.404 (0.279)	0.0782 (0.0535)	0.402 (0.279)	0.078 (0.0536)	0.394 (0.281)	0.0763 (0.0539)	0.369 (0.280)	0.0712 (0.0536)
<i>COMMUTER</i>	0.0904 (0.142)	0.0175 (0.0275)	0.0728 (0.142)	0.0141 (0.0275)	0.0748 (0.142)	0.0145 (0.0275)	0.0916 (0.142)	0.0178 (0.0275)	0.0899 (0.142)	0.0175 (0.0275)	0.0942 (0.142)	0.0183 (0.0275)	0.0905 (0.142)	0.0175 (0.0274)
<i>PARENT</i>	-0.103 (0.160)	-0.0199 (0.0309)	-0.112 (0.160)	-0.0216 (0.0309)	-0.117 (0.160)	-0.0228 (0.031)	-0.115 (0.160)	-0.0223 (0.0309)	-0.114 (0.160)	-0.0222 (0.031)	-0.126 (0.160)	-0.0245 (0.0309)	-0.119 (0.160)	-0.0229 (0.0308)
Characteristics of respondents' home municipality m														
<i>POP</i>	-0.00775 (0.0268)	-0.0015 (0.0052)	0.00737 (0.0224)	0.0014 (0.0043)	-0.00656 (0.0191)	-0.0013 (0.0037)	-0.0264 (0.0213)	-0.0051 (0.0041)	-0.00775 (0.0183)	-0.0015 (0.0036)	-0.00623 (0.0186)	-0.0012 (0.0036)	0.0105 (0.0281)	0.002 (0.0054)
<i>AV_TRAVEL_TIME</i>	-0.0438* (0.0240)	-0.0085* (0.0046)	-0.0325 (0.0224)	-0.0063 (0.0043)	-0.0387* (0.0232)	-0.0075* (0.0045)	-0.0427* (0.0232)	-0.0083* (0.0045)	-0.0276 (0.0226)	-0.0054 (0.0044)	-0.0260 (0.0228)	-0.0051 (0.0044)	-0.0269 (0.0240)	-0.0052 (0.0046)
<i>UNEMPLOYMENT</i>	-2.150 (8.680)	-0.4167 (1.6824)	10.51 (10.15)	2.0388 (1.9678)									9.275 (10.38)	1.7935 (2.006)
<i>DEBT</i>	0.000100 (9.41e-05)	0.00002 (0.00002)			0.000182 (0.000112)	0.00004 (0.00002)							8.15e-05 (9.42e-05)	0.00002 (0.00002)
<i>TAXES</i>	0.000372 (0.000268)	0.0001 (0.0001)					0.000670** (0.000296)	0.0001** (0.0001)					0.000249 (0.000266)	0.00005 (0.0001)
<i>POPCHANGE</i>	-0.0480 (0.0355)	-0.0093 (0.0069)							-0.0537 (0.0395)	-0.0104 (0.0077)			-0.0492 (0.0338)	-0.0095 (0.0065)
<i>EXP_OVER_REV</i>	1.335 (1.089)	0.2587 (0.2107)									-0.0263 (1.019)	-0.0051 (0.1978)	0.362 (0.830)	0.0701 (0.1605)

Table 5: Additional regression models

Variables/Models	(1)		(2)		(3)		(4)		(5)		(6)	
	Coeff.	ME	Coeff.	ME	Coeff.	ME	Coeff.	ME	Coeff.	ME	Coeff.	ME
Respondents' individual characteristics and beliefs												
<i>IMC_SAVE_COST</i>					1.320***	0.2389***						
					(0.208)	(0.0367)						
<i>IMC_RAISE_QUALITY</i>					0.962***	0.1741***						
					(0.174)	(0.0309)						
<i>BORN_IN_RESIDENCE</i>	-0.0605	-0.0117	-0.0401	-0.0079	-0.0937	-0.017	-0.139	-0.0277	0.0216	0.0037	-0.0693	-0.0138
	(0.147)	(0.0285)	(0.150)	(0.0294)	(0.145)	(0.0263)	(0.173)	(0.0344)	(0.238)	(0.0406)	(0.131)	(0.0262)
<i>ACTIVE</i>	-0.297**	-0.0575**	-0.265*	-0.0521*	-0.263*	-0.0477*	-0.392**	-0.0787**	0.0321	0.0055	-0.306**	-0.0611**
	(0.140)	(0.0271)	(0.143)	(0.028)	(0.139)	(0.0251)	(0.163)	(0.0326)	(0.228)	(0.0391)	(0.127)	(0.0252)
<i>S_BAD</i>	0.494***	0.0974***	0.531***	0.1062***	0.486***	0.0895***	0.574***	0.1174***	0.697***	0.1194***	0.820***	0.1636***
	(0.107)	(0.0211)	(0.107)	(0.0214)	(0.105)	(0.0194)	(0.137)	(0.0282)	(0.225)	(0.0373)	(0.0975)	(0.0187)
<i>IMC_REDUCE_INFLUENCE</i>	-1.373***	-0.2744***	-1.387***	-0.2815***	-1.170***	-0.2212***	-1.306***	-0.2638***	-1.555***	-0.286***	-1.200***	-0.2395***
	(0.136)	(0.0253)	(0.138)	(0.026)	(0.137)	(0.0252)	(0.163)	(0.0301)	(0.241)	(0.0399)	(0.120)	(0.0219)
<i>TRUST_LOCAL_GOV</i>	-0.371***	-0.0727***	-0.472***	-0.0939***	-0.421***	-0.077***	-0.267*	-0.0537*	-0.356*	-0.0617*	-0.234**	-0.0467**
	(0.130)	(0.0255)	(0.131)	(0.026)	(0.127)	(0.0234)	(0.152)	(0.0306)	(0.214)	(0.0371)	(0.115)	(0.0229)
<i>MUNICIPAL_PERFORMANCE_DECLINE</i>	0.699***	0.1389***			0.589***	0.109***	0.646***	0.1312***	0.886***	0.1568***	0.624***	0.1246***
	(0.129)	(0.0257)			(0.127)	(0.0236)	(0.153)	(0.0308)	(0.219)	(0.0379)	(0.119)	(0.0232)
<i>FEMALE</i>	0.0449	0.0087	-0.00163	-0.0003	-0.0264	-0.0048	0.104	0.0208	-0.111	-0.019	0.0282	0.0056
	(0.135)	(0.0262)	(0.137)	(0.027)	(0.133)	(0.0241)	(0.157)	(0.0313)	(0.219)	(0.0378)	(0.121)	(0.0242)
<i>AGE</i>	0.0207***	0.004***	0.0228***	0.0045***	0.0160***	0.0029***	0.0198***	0.0039***	0.0321***	0.0055***	0.0192***	0.0038***
	(0.00560)	(0.0011)	(0.00569)	(0.0011)	(0.00551)	(0.001)	(0.00658)	(0.0013)	(0.00938)	(0.0015)	(0.00506)	(0.001)
<i>HIGH_EDU</i>	0.516***	0.1005***	0.509***	0.1005***	0.491***	0.0893***	0.403***	0.0806***	0.730***	0.1257***	0.529***	0.1056***
	(0.126)	(0.0243)	(0.128)	(0.0251)	(0.123)	(0.0223)	(0.147)	(0.0293)	(0.210)	(0.0349)	(0.113)	(0.0221)
<i>ASSUME_COOP</i>	0.0471	0.0091	0.0478	0.0094	0.0473	0.0086	-0.194	-0.0388	0.453*	0.0789*	-0.0151	-0.003
	(0.138)	(0.0268)	(0.141)	(0.0276)	(0.136)	(0.0246)	(0.160)	(0.032)	(0.236)	(0.0414)	(0.127)	(0.0253)
<i>ASSUME_NOCOOP</i>	0.373	0.0721	0.485*	0.0949*	0.349	0.0632	0.441	0.0883	0.547	0.0912	0.373	0.0745
	(0.281)	(0.0539)	(0.286)	(0.0551)	(0.272)	(0.049)	(0.324)	(0.0646)	(0.512)	(0.082)	(0.259)	(0.0516)
<i>COMMUTER</i>	0.0904	0.0175	0.166	0.0326	0.0829	0.015	0.0526	0.0105	0.0874	0.0149	0.0908	0.0181
	(0.142)	(0.0275)	(0.144)	(0.0281)	(0.140)	(0.0253)	(0.167)	(0.0333)	(0.226)	(0.0386)	(0.127)	(0.0254)
<i>PARENT</i>	-0.103	-0.0199	-0.105	-0.0206	-0.0584	-0.0106	-0.113	-0.0225	-0.155	-0.0264	-0.126	-0.0252
	(0.160)	(0.0309)	(0.163)	(0.0319)	(0.158)	(0.0286)	(0.188)	(0.0376)	(0.259)	(0.0437)	(0.142)	(0.0283)

Characteristics of respondents' home municipality m											
<i>POP</i>	-0.00775 (0.0268)	-0.0015 (0.0052)	-0.0168 (0.0273)	-0.0033 (0.0054)	-0.0275 (0.0263)	-0.005 (0.0048)	-0.00232 (0.0334)	-0.0005 (0.0067)	0.0379 (0.0506)	0.0065 (0.0086)	
<i>AV_TRAVEL_TIME</i>	-0.0438* (0.0240)	-0.0085* (0.0046)	-0.0501** (0.0244)	-0.0099** (0.0048)	-0.0503** (0.0236)	-0.0091** (0.0043)	-0.0554* (0.0284)	-0.011** (0.0056)	-0.0325 (0.0425)	-0.0056 (0.0073)	
<i>UNEMPLOYMENT</i>	-2.150 (8.680)	-0.4167 (1.6824)	2.581 (8.821)	0.5075 (1.7344)	1.518 (8.498)	0.2748 (1.5386)	-5.751 (11.51)	-1.1466 (2.2943)	-21.40 (22.13)	-3.6625 (3.7785)	
<i>DEBT</i>	0.000100 (9.41e-05)	0.00002 (0.00002)	0.000107 (9.57e-05)	0.00002 (0.00002)	6.17e-05 (9.17e-05)	0.00001 (0.00002)	3.62e-05 (0.000109)	0.00001 (0.00002)	0.000300 (0.000321)	0.0001 (0.0001)	
<i>TAXES</i>	0.000372 (0.000268)	0.0001 (0.0001)	0.000503* (0.000273)	0.0001* (0.0001)	0.000447* (0.000262)	0.0001* (0.00005)	0.000108 (0.000321)	0.00002 (0.0001)	0.000225 (0.000497)	0.00004 (0.0001)	
<i>POPCHANGE</i>	-0.0480 (0.0355)	-0.0093 (0.0069)	-0.0561 (0.0361)	-0.011 (0.0071)	-0.0340 (0.0350)	-0.0062 (0.0063)	-0.00666 (0.0444)	-0.0013 (0.0088)	-0.138 (0.0928)	-0.0237 (0.0157)	
<i>EXP_OVER_REV</i>	1.335 (1.089)	0.2587 (0.2107)	1.851* (1.107)	0.364* (0.2171)	1.070 (1.069)	0.1938 (0.1935)	1.710 (1.474)	0.341 (0.2934)	2.417 (2.796)	0.4137 (0.4767)	
Availability of suitable cooperation partners											
<i>NUM_SIM_OVERALL</i>	-0.00241 (0.0345)	-0.0005 (0.0067)	0.00496 (0.0351)	0.001 (0.0069)	0.00226 (0.0337)	0.0004 (0.0061)	-0.0566 (0.0402)	-0.0113 (0.008)	-0.0334 (0.0744)	-0.0057 (0.0127)	
<i>NUM_SIM_NONGERMAN</i>	0.0240 (0.0715)	0.0047 (0.0139)	0.0370 (0.0728)	0.0073 (0.0143)	0.0154 (0.0706)	0.0028 (0.0128)	0.00965 (0.0825)	0.0019 (0.0165)	0.0984 (0.118)	0.0168 (0.0202)	
<i>NUM_SIM_SHARELEFT</i>	0.0526 (0.0681)	0.0102 (0.0132)	0.0381 (0.0692)	0.0075 (0.0136)	0.0633 (0.0670)	0.0115 (0.0121)	0.0235 (0.0836)	0.0047 (0.0167)	-0.255* (0.132)	-0.0436** (0.0222)	
<i>SAME_STRONGEST_PARTY</i>	-0.00927 (0.0616)	-0.0018 (0.0119)	0.0141 (0.0627)	0.0028 (0.0123)	-0.0303 (0.0606)	-0.0055 (0.011)	-0.0281 (0.0747)	-0.0056 (0.0149)	0.0779 (0.120)	0.0133 (0.0204)	
<i>M_SMALL_N_BIG</i>	-0.141 (0.107)	-0.0274 (0.0208)	-0.154 (0.109)	-0.0303 (0.0215)	-0.166 (0.106)	-0.0301 (0.0192)	-0.265** (0.125)	-0.0529** (0.0248)	-0.334* (0.196)	-0.0571* (0.0332)	
<i>M_BIG_N_SMALL</i>	0.116 (0.0874)	0.0224 (0.0169)	0.102 (0.0891)	0.0201 (0.0175)	0.116 (0.0861)	0.0211 (0.0156)	0.0989 (0.126)	0.0197 (0.0251)	0.0678 (0.184)	0.0116 (0.0315)	
Bargaining position of municipality m											
<i>RP_WEAK_OVERALL</i>	-0.114 (0.0884)	-0.022 (0.0171)	-0.136 (0.0899)	-0.0268 (0.0176)	-0.0918 (0.0870)	-0.0166 (0.0157)	-0.0676 (0.105)	-0.0135 (0.0209)	-0.334* (0.180)	-0.0572* (0.0304)	
Constant	-1.935* (1.140)		-2.417** (1.158)		-3.350*** (1.144)		-1.744 (1.383)		-3.324 (2.781)		-2.078*** (0.466)
Field Fixed Effects		Yes		Yes		Yes		Yes		Yes	No
Municipal Fixed Effects		No		No		No		No		No	Yes
Regional Controls		Yes		Yes		Yes		Yes		Yes	No
Observations		4,128		4,139		4,441		2,382		1,247	4,260
Number of index		1,043		1,046		1,123		917		767	1,076