Local Government Efficiency and Anti-immigrant Violence

Conrad Ziller, University of Cologne
Sara Wallace Goodman, University of California, Irvine

Communities provide a crucial experiential context for native-immigrant interactions, yet we know little about the impact of local government performance on shaping public responses to immigrants. Building on arguments considering efficient governments as critical factors in facilitating immigrant integration and mitigating denizens’ political deprivation, we argue that efficient local governments also play a significant role in reducing anti-immigrant behavior. Using cost efficiency modeling to generate a measure of local government efficiency (LGE), we show high LGE is associated with fewer incidents of anti-immigrant violence in Germany during its unprecedented refugee intake in 2015. Testing the broader implications of our theory, we employ longitudinal data on LGE of Dutch municipalities merged with police records of criminal offenses against immigrants (2012–15). Results from two-way fixed effects models show a systematic, negative link between efficiency and violence. Our results suggest that improving local governance can have salutary benefits on intergroup relations.

In 2015, over 1 million asylum seekers came to Germany, the single largest intake by any European country since World War II. Germany proved an attractive destination because of its robust labor market and preexisting migrant communities but also because of Chancellor Angela Merkel’s unilateral suspension of European Union rules that require states to send refugees back to their country of entry (Dublin Convention). This open door was initially supported by a deliberate Willkommenskultur (welcome culture) and Wir schaffen das (We can do it) spirit, to assist and encourage positive attitudes toward migrants. At the same time, rising macro-indicators of xenophobia—like anti-immigrant marches organized by Patriotische Europäer gegen die Islamisierung des Abendlandes (PEGIDA) and the popularity and 2017 electoral success of the anti-immigrant Alternative für Deutschland (AfD)—suggest that tolerance is not universal. Germany has also seen a sharp rise in anti-refugee and anti-Muslim violence, from arson attacks of accommodation centers to assault (Benček and Strasheim 2016). Yet, notably, these attacks have occurred with substantial spatial clustering, suggesting a critical role of local and regional context.

We argue that local government performance is a key factor that explains subnational variation in anti-immigrant violence. We define local government performance as efficiency of delivering services to denizens given limited financial resources. We argue that greater local government efficiency (LGE) reduces anti-immigrant violence by facilitating immigrant incorporation and mitigating perceptions of political deprivation. Our focus on LGE is a novel theoretical account for explaining subnational variation in native-immigrant relations. The literature on anti-immigrant behavior highlights factors such as perceived resource availability (Dancygier 2010; Falk, Kuhn, and Zweimüller 2011), out-group size (Schneider 2008), sudden demographic shifts (Hopkins 2010; van Heerden and Ruedin 2019), political opportunity (Karapin 2002; Koopmans 1996), and residential segregation and intergroup contact (Petigrew 1998). LGE—that is, the institutional context for these interactions—is largely missing from existing accounts.

Our approach provides novel theoretical and methodological contributions. In terms of theory, we move the focus away from questions of national-level policy design (the dominant framework in the study of native-immigrant relations) and...
toward the understudied role of local-level implementation (cf. Eule 2016). This pivot also inserts the thus far overlooked role of local context into the debate about determinants of anti-immigrant attitudes and behavior, a discussion largely preoccupied with positioning economic versus cultural motives against one another. Therefore, by emphasizing local government performance, we take seriously the community among the most basic contexts of interaction that immigrants and natives share, thus playing a critical role in improving immigrant integration, reducing political deprivation with respect to citizen-state relations, and building social solidarity more generally. To study local government performance, we present a measure of LGE centered on efficiency in public spending and show that this measure operates distinctively from spending or wealth per se. We first test the effects of LGE on anti-immigrant behavior using cross-sectional data from Germany, to examine the relationship between LGE and anti-refugee violence in 2015 (study 1). We then extend this study using longitudinal data on LGE of Dutch municipalities and time-varying information from Dutch police records of criminal offenses against immigrants in 2012–15 (study 2). Our central finding—that higher levels of LGE are related to substantially lower levels of anti-immigrant violence—has practical implications for political and administrative governance in mitigating out-group behavior and, ultimately, the role of local governance in fostering community cohesion. These findings suggest that when local governments improve their efficiency of public services they provide, they improve not only the quality of cities and satisfaction of residents but also intergroup relations.

**LINKING LOCAL GOVERNMENT AND ANTI-IMMIGRANT BEHAVIOR**

With surging populist parties employing explicit racial cues and incidences of anti-Muslim behavior at its highest since 9/11 (Kishi 2016), identifying determinants of natives’ views about—and treatment of—in-migrant minorities has specific and immediate implications for democratic governance and social cohesion. The literature on anti-immigrant attitudes is large and diverse, with early accounts emphasizing individual attributes (Allport 1954; Altemeyer 1981; Sidanius and Pratto 1999) and more recent work addressing sociotropic factors (Hainmueller and Hopkins 2015), macrolevel social contact (Christ et al. 2014), economic dissatisfaction (Sides and Citrin 2007), and cultural threat (Sniderman, Hagendoorn, and Prior 2004). Accounts of anti-immigrant violence portray more agreement, pointing to the role of contagion and the far right (Jäckle and König 2017; Koopmans and Olzak 2004). Other accounts highlight the local ethnic context (Green, Strolovitch, and Wong 1998), competition over political and economic resources (Dancygier 2010), and, from a psychological perspective, the role of emotional orientations (Bar-Tal 2007; Petersen 2002; Spanovic et al. 2010).

Yet, each of these approaches neglects the role of local governance in shaping anti-immigrant violence. Local governments are an important node of contact between denizen and the state. It is both where immediate problems (from trash collection to public transport and child care) get resolved (or not) and where national policies (from acquiring welfare benefits to participating in language and integration courses) get implemented (and, oftentimes, funded). These exchanges convert local service providers into “street-level bureaucrats”: even if national policies structure the parameter of activity, local bureaucratic actors are responsible for policy implementation and often enjoy significant discretion and autonomy in balancing the conflicting demands of delivering high-quality service and budgetary constraints (Lipsky 1980). Given the distance between public service workers and the upper echelons of policy making, local governments “take measures for all their residents, regardless of legal status” (Daamen and Doornink 2014, 553), to “help overcome some of the barriers to access and utilization” (Marrow 2012, 85). We maintain that, as a locus for native-immigrant interaction, local governance plays a direct and independent role in shaping anti-immigrant attitudes and behavior.

Local government performance refers to the administrative ability and success in providing public sector activities and services to residents (Afonso and Fernandes 2006; Borge, Falch, and Tovmo 2008). In Europe, municipal-level actors are responsible for a bevy of provisions, including the allocation of public funds to schools, social and family services, health care, education, housing, waste collection, surfacing public roads, and other infrastructure, to name but a few. In other words, local governments are central providers of welfare and other services for citizen and immigrant denizens alike. Therefore, at this local level, the management of resources and the integration of immigrants depend on local government and its administrative capacity and efficiency (Andrews et al. 2013).

We understand “good government” here as efficiency, where both cost minimization and quality public service delivery are prioritized (Shah 2005). Efficiency is an operationally relative concept, defined “as some ratio of input-to-output indicators” (Asatryan and De Witte 2015, 58–59) or as a “ratio between total output and available resources” (Borge et al. 2008, 476). Bureaucracies traditionally lack incentives to be cost effective in providing public goods on their own (Ostrom and Ostrom 1971), but political competition (Ashworth,
Geys, and Heyndels 2006), participation (Borge et al. 2008), and strict budgetary rules (von Hagen 1991) can improve public sector efficiency. Local governments with high revenue can provide more services than low-revenue counterparts, but ability to spend is not the same as efficiency, where the most benefit is achieved in the most cost-effective way possible. In fact, Borge et al. (2008, 480) observe “substantial variation in aggregate output between local governments with similar levels of revenue, i.e., some local governments seem to be more efficient than others.” In sum, the concept of local government performance—which captures overall operating efficiency—reflects governmental and administrative skills rather than simply the level of monetary resources.

Why does LGE matter for anti-immigrant behavior? We situate our argument in bureaucratic incorporation theory, in which local civil servants, rather than elected politicians, are “initiating substantive responsiveness” to matters of immigrant incorporation (Marrow 2009, 756; Jones-Correa 2005). Bureaucratic incorporation is particularly suitable for understanding intergroup relations. Not only are local service bureaucracies largely indifferent to legal status, but local-level public servants, like school administrators (Jones-Correa 2008; Marrow 2009) and law enforcement (Lewis and Ramakrishnan 2007), often exhibit a more positive response to immigrants than do politicians. Daamen and Doornink (2014, 563–64) even show how the exercise of local discretion—in this case, refraining from asking residents in a US county for their immigration status after a bus shooting by an unauthorized immigrant—was a move to guarantee public safety. Here, the police preserved an informal, service-oriented approach to foster accessibility and close contact with immigrant communities as a means for obtaining information and preventing crime. Local governance actors may thus be “active facilitators of responsive democratic functioning” (Marrow 2009, 773), reducing anti-democratic outcomes, like violence. In a related vein, Lyons, Vélez, and Santoro (2013) show that when immigrants are represented in municipalities as politicians or public officials, there is a reduction in neighborhood violent crime. They speculate that the political incorporation of immigrants enhances trust and public social control within immigrant neighborhoods.

Our argument also acknowledges the general fiscal and managerial challenges of population change. Communities with sudden influxes of new residents—be they immigrants (as in a sudden refugee “crisis”) or citizens (with the opening of a new company headquarters or factory)—must respond by reallocation of resources to meet denizen needs. Thus, local governments not only face the administrative challenges of absorbing and servicing newcomers; they must also sustain the quality of regular public services (Andrews et al. 2013). Given finite resources, conflict between immigrants and native-born residents may emerge (Dancygier 2010), especially where the latter perceive the allocation of resources and services as insufficient or unfair.

These perceptions of an efficient resource distribution may draw on personal encounters with resource scarcity due to immigration (e.g., local sports halls used by asylum seekers). But local government–citizen relations are also embedded in a public discourse at the local level that shapes personal assessments. For example, Hillje (2018) investigates German cities with high AfD vote share to find that—in addition to immigration and crimes conducted by immigrants—the lack of infrastructure (e.g., insufficient public transport or increasingly long distances to grocery stores and supermarkets) triggers feelings of political deprivation. This suggests that in light of increasing out-group presence due to demographic changes, LGE becomes increasingly salient among receiving-society residents. Negative evaluations of local governments and their responsiveness to denizens’ needs increase feelings of discontent and frustration, including negative sentiments of or even hostility toward immigrants.

In contrast, citizens infer efficient and reliable local governments from well-functioning services and responsive public officials. This should ensure citizens that local governments maintain an efficient distribution of public services even in the presence of external shocks—an argument linked to debates on community and urban resilience (Cutter, Ash, and Emrich 2014; Norris et al. 2008). In a related vein, theories of government quality state that efficient governments strengthen citizens’ confidence that dishonest and exploitative behavior will be sanctioned, which in turn increases their social trust and readiness for collective action (Brehm and Rahn 1997; 2013).}

---

1. For example, some municipalities engage in service consolidation, often undergoing “shared service” with private partners, to achieve efficient outcomes that do not compromise the equality or reach of service.

2. Institutional fairness can be defined as a standard of political equality where public officials comply with the law and treat citizens equally without any privileging because of personal reasons (Rothstein and Teorell 2008, 170). Fair outcomes of government activity are those that emphasize equality (of opportunity), while efficiency refers to converting inputs to outputs in an optimizing way (e.g., production of public goods in a cost- or time-saving manner). Fairness and efficiency are often related to one another, but cases in which local governments operate fairly but inefficiently, or vice versa, are possible as well. Institutional fairness likely improves denizens’ perceptions of politics and society in a general way. Nonetheless, during critical events (and as indicated by research on disaster management), community efforts of sustaining services in an efficient way should be particularly conducive to public perceptions of LGE and responsiveness (Ono 2017).
Rothstein and Stolle 2008; Rothstein and Teorell 2008). Local
governments may improve community social cohesion and
increase the potential for collective action by reducing neigh-
borhood disadvantage through, for example, sufficient staff
for public order offices and youth services, removal of physical
disorder, sustaining safety, general infrastructure investments
and improvement projects, and promoting neighborhood
initiatives and volunteer associations. As high levels of neigh-
borhood quality and social cohesion prove effective in ame-
liorating dynamics of urban violence (Morenoff, Sampson,
and Raudenbush 2001), we test its potential scope by extend-
ing our analysis to include incidences of anti-immigrant vio-
ence, in light of a high public salience of immigration and a
propensity for resource competition.

**STUDY 1: LGE AND ANTI-REFUGEE VIOLENCE
IN GERMANY, 2015**

We examine the effects of LGE on anti-immigrant behavior
with cross-sectional data from Germany, assessing the rela-
tionship between LGE and anti-refugee violence. As the larg-
est recipient of asylum seekers during the 2015 crisis, Ger-
many is a case of intrinsic importance. Moreover, asylees in
Germany have limited mobility and employment opportu-
nities until refugee status is granted. This establishes a strong
tie between locale and individual and is reflected in, for ex-
ample, variation in types of refugee accommodation. Some
districts have placed refugees in shared collective homes or
tents, while others have placed refugees in more decentralized
flats, managed by local governments, welfare organizations, or
private companies. And these modes of accommodation can
persist for years. Other factors involving local authorities and
administration include the provision of integration and lan-
guage courses, the distribution of pecuniary and nonpecuniary
welfare benefits in accordance with the Asylbewerberleistungs-
gesetz (AsylbLG), health services, child care, and schooling.

For our dependent variable—anti-refugee violence—we
use the incidence of violence directed against refugees at the
district level. To measure services (i.e., outputs), we collect
district-level information on general sociostructural charac-
teristics, to indicate the general volume of services needed in
a local context (i.e., number of households, welfare recipients,
people older than 65, and populated surface area), and spe-
cific indicators of local service provision represented by av-
erage distances of residents to reach public transportation,
main roads, secondary roads, and family physicians. In
sum, these output variables capture major local government
activities (e.g., general administrative work; the mainten-
ance of roads and buildings; management of schools and sports
facilities; and social, child and youth, and health services) and
represent about 70–80% of average local government spend-
ing (Arnold et al. 2015, 22).

To estimate how efficient local governments are, we adopt
data envelopment analysis, which assesses how cost-efficient
local governments are in terms of service delivery (i.e., out-
put production; see app. sec. A2 for full details). Data en-
velopment analysis uses information on local governments
with the most efficient use of expenditures (input) given a set
of community characteristics and delivered services (output
production) to determine an “efficiency frontier” (Badun-
enko, Henderson, and Kumbhakar 2012). Each local gov-
ernment below the frontier is evaluated in terms of ineffi-
ciency. The distance to the frontier thus reflects the degree
to which cost savings are possible without reducing output.
Efficient local governments situated on the frontier obtain
an efficiency score of 1; lower scores indicate relative ineffi-
ciency. To account for returns-to-scale effects (e.g., gov-
ernments with large revenues are more likely to achieve
scaling effects), we include a convexity constraint, ensuring
that local governments of similar size are compared to each
other. We account for possible measurement error using a
bootstrap procedure. Our estimated, bias-corrected LGE scores
range between 0.45 and 0.93, where higher values indicate
greater LGE.

Our argument holds that LGE has a causal effect on anti-
immigrant violence in Germany. There are two main threats
to causal identification given the observational nature of

3. In 2015, 402 districts exist that refer to 107 cities (Kreisfreie Städte)
and 295 Kreise (which largely correspond to counties in the United States).
Because of incompatible reporting practices across states, expenditure data
on municipality spending are only available for 8 of the 16 states (267 of
402 districts). Expenditures per district are highly correlated with munici-
pality revenues ($r = .9997$) or tax revenues ($r = .9674$). The latter data are
available for all 402 districts. We thus report results for government effi-
ciency based on tax revenues in 2013 as inputs, which we expect to be in-
dicative of the financial potential of local governments in the subsequent
year. Results for government efficiency calculations based on expenditures
are presented as a robustness test.
these data. The first is endogenous sorting, although refugee settlement choice is initially constrained in that quota-based distribution system (the Königsteiner Schlüssel) determines a refugee’s state (Bundesland) residence. This procedure—based on tax revenue and population figures—has unevenly placed migrants across states, where North Rhine-Westphalia (21.2%), Bavaria (15.2%), and Baden-Wuerttemberg (12.9%) hosted the most Syrian refugees in 2015. By contrast, Bremen hosts under 1%. Still, a refugee’s settlement within a state is subject to market and political considerations (e.g., housing availability) and individual preference, once movement becomes possible. Hence, it could be that certain types of migrants self-select into municipalities that are particularly prone to anti-immigrant violence. This is theoretically possible but unlikely in practice. First, as noted above, refugees in Germany have limited mobility and employment opportunities until refugee status is granted and are therefore unlikely to be selecting particular locales to settle. Moreover, even if they were able to self-select by municipality, it would be surprising if they chose those places with lower levels of LGE in ways that would generate a negative association between LGE and anti-immigrant violence.

Another, more relevant threat to causal identification is confounding: districts have high government efficiency as well as low levels of anti-immigrant violence because of factors unrelated to the causal relationship between the two. It could be that some municipalities are easier to govern or have higher levels of social capital or public spiritedness. If so, then these municipalities would have both higher levels of government efficiency and lower levels of anti-immigrant violence, but not because the former causes the latter. It could also be that municipalities with low government efficiency have more right-wing extremists who are responsible for anti-immigrant violence. Local political leanings might accordingly confound the relationship between LGE and anti-immigrant violence.

To address these inferential issues, first, we rely on a number of controls that allow us to capture those factors that could explain both LGE and anti-immigrant violence. To measure social capital, we use an indicator of people’s membership in nonprofit associations obtained from a large-N survey on social cohesion in Germany (Arant, Dragolov, and Boehnke 2017) and aggregated to a regional level. We also include district-level crime rates to capture local levels of criminal behavior that might generate anti-immigrant violence. We further include a measure of electoral success (average of the 2013 federal and the 2014 European Parliament elections) of (populist) radical right parties (AfD, Die Rechte, Nationaldemokratische Partei Deutschlands, Pro Deutschland, Pro NRW, and Die Republikaner) to indicate anti-immigrant cli-

mate or the political opportunity structures of anti-immigrant violence. Left-wing party successes (as proportions of voters for the social democratic party [Sozialdemokratische Partei Deutschlands] and the socialist party [Die Linke]) at the federal election in 2013 capture constituencies per district with a preference for active government and social spending.

As basic controls, we include the number of residents, population density, and state fixed effects to account for a wide range of region-specific differences in LGE and anti-immigrant sentiment. We control for the stock of refugees per 1,000 inhabitants, which would reflect both the opportunity for attacks and also a source of stress on local administrative capacity. We also include proportions of immigrants (distinct from refugees), to indicate degrees of prior exposure (of denizens and local administrations) to immigration. Gross domestic product per capita and unemployment rates are included to capture structural sources of resource competition. These same variables should also capture latent social pressures that might also affect government efficiency.

Second, we include a lagged dependent variable (i.e., attacks on refugees in 2014) as an additional specification to model the path dependency in crimes of these nature and the corresponding mechanisms of spatial contagion (e.g., number of violent criminals or social norms related to hate crime). This also allows us to distinguish the effect of past anti-immigrant violence from the LGE coefficient estimate, which amounts to a strict test of our argument.

**Validation of the efficiency measure**

Considering the heterogeneity of public service provision and given the limited availability of public data on administrative activity, cost-efficiency modeling provides a theoretically and empirically meaningful way to estimate comparative efficiency scores. At the same time, we acknowledge that our measure of LGE is indirect—that is, it only approximates efficiency via spending and coarse indicators of administrative output. While we apply an extensive control strategy, we cannot entirely rule out that LGE as measured through this metric might be related to factors such as social capital, community wealth, or local economic conditions. Moreover, generating efficiency scores is based on an estimation procedure that involves uncertainty. While we apply a bias correction using a bootstrapping method, attenuation bias in estimates (e.g., due to measurement error) is still a possible consequence of this procedure.

That being said, to validate our measure of LGE, we compare the obtained efficiency scores with observational data on perceived local government performance from the German country sample of the Life in Transition Survey 2016, a survey project administered by the European Bank for Reconstruction
and Development. These data come from a two-stage sampling procedure (randomly selected respondents from randomly selected municipalities). Respondents were asked, "Please rate the overall performance of local government" (scored on a five-point Likert scale, from 1 = "very bad" to 5 = "very good"). To account for individual differences that might influence judgments of local government performance, we regress the perception indicator on length of stay in the community (in years), a dummy variable on having interacted with public officials in the past 12 months (1 = yes), gender (1 = female), age in years, a dummy variable on having children (1 = yes), educational level (eight-point scale), coping on income (three-point scale), and a dummy variable on social distance toward immigrants (whether people of different race, ethnic, or immigration background are unwanted as neighbors; coded as 1 if any of these groups apply). The residuals from this regression were saved and aggregated to municipality means: these comprise a measure of municipality-level perceptions of local government performance that is adjusted for individual-level variation in responses. Efficiency scores were computed according to district-level scores using corresponding municipality information on expenditures and outputs.

Figure 1 reveals a positive and statistically significant association (Pearson’s $r = .56$) between calculated LGE scores and our aggregated measure of perceived local government performance. People who live in objectively more efficient communities are more likely to perceive local governments as high performing, on average. The results validate a key assumption that underlies our theoretical argument: residents in municipalities with high LGE believe that they live in municipalities with high-performing government.

**Method**

To estimate the relationship between LGE and anti-immigrant violence, we fit regression models for count data, with a negative binomial regression as our baseline specification. Continuous predictor variables were linearly transformed to range between 0 and 1, which facilitates interpretation of the regression coefficients in terms of effects associated with moving from the least to the most efficient district. We report average marginal effects, which can be interpreted as the predicted number of violent events due to a one-unit change in each explanatory variable, holding the influence of all other covariates constant. To account for clustering at a below-state regional level, we use cluster-robust standard errors.

**Results**

Figure 2 depicts the bivariate relationship between LGE scores and number of anti-refugee attacks. As expected, we observe fewer anti-refugee incidents in more efficient districts. At least two districts appear to be influential cases (Dresden and Sächsische Schweiz-Osterzgebirge). While the main specification contains all the data, the appendix also includes a model without these outlying points.

We report our main results in table 1. Model 1 with basic control variables and state fixed effects demonstrates that LGE is associated with less anti-refugee violence in Germany in 2015. Since all predictor variables have been linearly transformed, moving from the least efficient to the most efficient district corresponds to about 4.4 fewer incidents. Given the average of 3.7 incidents per district and a standard deviation of 7.5, this effect is substantively large. Apart from LGE, systematically more attacks against refugees can be found in highly populated areas.

Model 2 includes economic indicators, the stock of nonnationals, and refugees per district as additional covariates.
These variables appear to be less systematically related to anti-refugee violence, and the estimated effect of government efficiency remains stable. The results are inconsistent with the arguments that districts with higher LGE witness less anti-immigrant violence because they have lower levels of resource stress, fewer refugees, or more extensive prior immigration. Model 3 includes crime rates and a measure of structural social capital (proportions of members of nonprofit associations). While the sign of the coefficients of both additional variables is in the expected direction, the estimates are not statistically significant, and the coefficient of LGE is virtually unchanged. Regarding political variables (model 4), we find a systematic and positive relationship between radical right support and anti-immigrant violence (but not left-wing support). The coefficient of LGE is slightly reduced but remains negative, substantial in magnitude, and statistically significant.

Model 5 includes a lagged dependent variable, attacks on refugees in 2014. As expected, this variable is strongly related to attacks in the following year. The lagged dependent variable absorbs the predictive capacity of radical right party support, but the link between LGE and anti-immigrant violence remains intact. Hence, the lagged dependent variable appears to capture a hostile climate toward immigrants that leads to violent acts but does not confound the link between LGE and violence. In sum, the empirical results show that LGE is distinctly related to lower anti-immigrant attacks, over and above local demographic setups, economic prosperity, crime, and contagion due to persons ready to use violence toward immigrants or an anti-immigrant social climate.7

To further ensure that our results are robust to alternate specifications, we run additional checks and present the results in the appendix. Using efficiency scores based on expenditures (instead of tax returns) as inputs leads to a comparative coefficient estimate of LGE (see table A4). A reanalysis without the two outlying cases leads to similar results (see table A5). Testing whether the computed LGE scores operate empirically differently from the volume of expenditures, we find LGE to be positively correlated with expenditures per capita (r = .37, p < .001). Reestimating the models using expenditures as a predictor produces statistically insignificant findings (table A6), suggesting that LGE operates differently from expenditures per se.

We might worry that the stock of refugees is endogenous to LGE, which might lead us to overestimate the effect of LGE on violence if refugees also settle on the basis of anticipated anti-refugee violence. Although we maintain that the distribution of refugees across districts is largely exogenous because of legislative procedures, there is still a possibility that refugees select systematically along the criterion of efficiency/non-efficiency. To rule out this, we estimate a linear regression model using refugees in 2015 per 1,000 inhabitants as an outcome (table A7). The results show that LGE is not systematically related to shares of refugees.

In another specification (table A8), we include aggregated regional measures of social trust and volunteering as dimensions of attitudinal social capital or public spiritedness (along with structural social capital regarding membership in nonprofit associations). Once again, our substantive conclusions about the effect of LGE remain unchanged. Finally, we reestimate the main models using zero-inflated negative binomial estimation. This accounts for selection processes that hinder some units from experiencing an event. In our case, this inflation process might be related to the number of refugees per district. Using number of refugees per 1,000 inhabitants as an

---

7. Regressing attacks on control variables only (presented in table A3; tables A1–A9, B1–B6 are available online) shows that attacks are related to the number of inhabitants and proportion of nonnationals and that an inclusion of LGE in part absorbs their relationships with anti-immigrant violence. In terms of explained variance (pseudo $R^2$), the inclusion of the LGE measure leads to an improved fit to the data compared to models without this variable.

8. Most plausibly, refugees would select into more efficient municipalities, which means—given that refugees’ selections reflect the opportunity structure for attacks—we would underestimate the real causal effect of government efficiency.
STUDY 2: LGE AND ANTI-IMMIGRANT VIOLENCE IN THE NETHERLANDS, 2012–15

We extend the analysis from study 1 by using Dutch police records on the number of criminal offenses against immigrants per municipality and year and a time-varying indicator of LGE. This study expands on the initial study in three ways. First, we study the relationship in another national context, which gives us greater confidence that our argument is not specific to Germany. Second, we employ longitudinal data, which offers us repeated observations over time to adjust for unobserved municipality-level heterogeneity. Third, we branch out from refugees to immigrants as a wider category of “otherness.” Thus, extending our analysis to include data from the Netherlands increases both the external and internal validity of our findings.

For our outcome measure, we use police data on criminal records that involved racial or ethnic minorities as victims per municipality and year (2012, 2013, 2014, and 2015). As Moroccan, Turkish, Surinamese, Indonesian, and other immigrants (and their descendants) represent major ethnic minority groups in the Netherlands, ethnicity and immigration are closely linked in the Dutch context. Data on anti-immigrant acts are based on (regional) police reports and have been collected and edited by the Verwey-Jonker Institute (Tierolf et al. 2015). Incidents of racial discrimination refer to indictable actions by native Dutch individuals aimed at people with a non-Dutch ethnic or racial background as indicated in police reports. This includes group-based insults, hate speech, and violent acts. For a number of incidences, multiple bases of discrimination apply (e.g., religion and ethnicity), which were also counted as incidents of racial discrimination.

As in the German data set, our main independent variable is LGE, calculated using the data envelopment methodology described above. Input data on government expenditure come from the Open Spending project that collects and publishes data used in this study, insults of police staff have been excluded, because these incidents oftentimes followed up law enforcement of other criminal acts (e.g., in the course of fining or arresting suspects).

9. Violent acts are the most frequent form within the reported offenses (about 42% in 2011), followed by insults (about 19% in 2011). In 2011, suspects were 88% male and age 27 on average. About one-quarter of the incidents were committed in groups (Tierolf et al. 2013). For the data used in this study, insults of police staff have been excluded, because these incidents oftentimes followed up law enforcement of other criminal acts (e.g., in the course of fining or arresting suspects).
recipients, number of people over 65, and populated area) as well as indicators of service delivery (i.e., averaged distances to public transport, elementary schools, secondary schools, and family physicians). All these data were obtained from geospatial shape files obtained from the Central Bureau of Statistics (Wijk-en buurtkaart, 2012–15). Bias-corrected efficiency scores serve as our central predictor variable, ranging between 0.49 and 0.94, where higher values indicate greater efficiency.

As in the analysis of German data, to identify the effect of LGE on violent behavior, we control for a number of time-varying confounding municipality-level variables including number of residents, population density, average income levels, proportions of non-Western immigrants to indicate opportunity structures, and unemployment rates to indicate resource stress. We also include time-varying municipality indicators on the number of criminal suspects per capita and the number of associations per capita (with focus on culture, sports, and recreation) to indicate (changes) in local levels of criminal behavior and social capital. As political context variables, we include municipality measures of electoral support of the radical right (Partij voor de Vrijheid) and left-wing parties (Socialistische Partij, Partij van de Arbeid, and GroenLinks) at two points in time: the election of the Second Chamber (House of Representatives) in 2012 and the European Parliament election in 2014. In an additional specification, we include anti-immigrant violence as a lagged dependent variable. All variable descriptions and descriptive statistics are presented in appendix B1. The longitudinal structure of our data also allows us to adjust for unobserved municipality characteristics (see below). To facilitate the interpretation of the results in substantive terms, all continuous variables have been rescaled to range from 0 to 1.

Method
To empirically estimate how LGE relates to relevant outcome variables, we adopt a generalized difference-in-differences framework using municipality and time fixed effects. Municipality fixed effects adjust for all time-invariant differences across municipalities that could explain both LGE and violence.12 Time fixed effects control for temporal variations common to all municipalities under study (e.g., changes in national policy or anti-immigrant social climate). We observe 252 municipalities over four time points, leading to 1,008 observations in total. We use negative binomial regressions to model count data as outcomes.13 Cluster-robust standard errors at the level of provinces account for regional spatial dependence and heteroskedasticity. To facilitate interpretation of the coefficient estimates, we report average marginal effects as above.

Difference-in-differences designs rely on an assumption of “parallel trends,” implying biased estimates if differences in over-time trends in anti-immigrant violence between municipalities with increasing versus decreasing government efficiency are not fully accounted for by the fixed effects and time-varying control variables. This would be the case if there are, for example, systematic (but unobserved) over-time selection processes of immigrants with specific characteristics (e.g., immigrants with a high degree of assimilation and who are thus less prone to encounter violence select themselves systematically into highly performing municipalities). To account for such a possibility, we additionally include municipality-specific constants and slopes that control for the possibility of divergent trends (Brüderl and Ludwig 2015) as a robustness check.

Results
The results of the fixed effects specifications are shown in table 2. Model 6 contains basic controls and shows a negative and statistically significant coefficient of LGE on anti-immigrant violence. Moving from the least to the most efficient municipality is associated with a decrease by about six anti-immigrant incidents. Given a mean of 7.9 and a standard deviation of 24.6 of the outcome variable, this effect is substantively meaningful. With regard to the control variables, we find a strong negative association between (changes in) number of residents and (changes in) violence. Model 7 includes average income, unemployment rates, and proportions of non-Western immigrants as additional covariates. Average income is strongly negatively related, and unemployment is positively related to anti-immigrant violence, which is in accordance with theories of group conflict. The link between LGE

10. Because of their different scope and public relevance, it is problematic to compare results from the two elections across municipalities. However, we apply a longitudinal approach and look at over-time changes within municipalities. This is a feasible strategy as long as the elections’ differences in scope and relevance are equal for all municipalities, which is a reasonable assumption.

11. Bias due to incidental parameters is not relevant in our case, as models employing conditional maximum likelihood produce results congruent to those reported below.

12. Using a lagged dependent variable in fixed or random effects models may induce bias, as the endogenous lagged dependent variable is necessarily correlated with the error. For nonlinear (count) models, Skrondal and Rabe-Hesketh (2014) and Wooldridge (2005) show that models that control for the initial condition (outcome in the first wave) produce consistent estimates. Following Skrondal and Rabe-Hesketh, we estimate a conditional random effects model that entails time-varying predictor variables, a lagged dependent variable, a control for the initial condition (outcome in the first wave), means of time-varying predictors, and initial values of time-varying predictors. We also present estimates from a linear dynamic panel model using a generalized method of moments specification as a robustness check.
Table 2. Negative Binomial Models on Number of Anti-immigrant Incidents, 2012–15

<table>
<thead>
<tr>
<th></th>
<th>Model 6</th>
<th>Model 7</th>
<th>Model 8</th>
<th>Model 9</th>
<th>Model 10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of residents</td>
<td>-59.030**</td>
<td>-29.502</td>
<td>9.844</td>
<td>17.285</td>
<td>67.073</td>
</tr>
<tr>
<td>Average income</td>
<td>-42.134*</td>
<td>-37.780*</td>
<td>-44.394</td>
<td>(18.857)</td>
<td>(41.674)</td>
</tr>
<tr>
<td>Unemployment rate</td>
<td>6.384*</td>
<td>6.009*</td>
<td>.414</td>
<td>(2.830)</td>
<td>(4.775)</td>
</tr>
<tr>
<td>Crime rate</td>
<td>-35.716 (20.003)</td>
<td>-6.046 (5.787)</td>
<td>16.279 (30.759)</td>
<td>34.687 (17.973)</td>
<td></td>
</tr>
<tr>
<td>Associations per capita</td>
<td>-18.584*</td>
<td>(7.535)</td>
<td>11.772</td>
<td>(3.261)</td>
<td></td>
</tr>
<tr>
<td>Radical right party support</td>
<td>4.418 (5.747)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Left-wing party support</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>11.772 (7.261)</td>
</tr>
<tr>
<td>Violent incidents t - 1 (lagged DV)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-8.206* (3.481)</td>
</tr>
<tr>
<td>Municipality fixed effects</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Time fixed effects</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Pseudo R²</td>
<td>.385</td>
<td>.388</td>
<td>.389</td>
<td>.425</td>
<td>.409</td>
</tr>
<tr>
<td>Time points</td>
<td>4</td>
<td>4</td>
<td>2</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>N</td>
<td>1,008</td>
<td>1,008</td>
<td>1,008</td>
<td>484</td>
<td>741</td>
</tr>
</tbody>
</table>

Note. Average marginal effects are reported. Cluster-robust standard errors (clustered at 12 regions) in parentheses. LGE = local government efficiency; DV = dependent variable.

* p < .05.
** p < .01.
and violence remains substantial and statistically significant, while the coefficient estimate for number of residents becomes statistically nonsignificant. Model 8 includes crime rates and associations per capita. Both variables are negatively related to anti-immigrant violence, yet only associations per capita are systematically related to anti-immigrant violence. Again, the LGE-violence link remains intact under this specification. Model 9 employs data for the two waves with available information on political context. Electoral support for radical right or left-wing parties has little relationship with anti-immigrant violence, while the coefficient for LGE remains substantial in terms of effect size and statistical significance. Finally, model 10 includes anti-immigrant violence as a lagged dependent variable. The coefficient estimate of LGE remains negative and statistically significant, as is the coefficient of the lagged dependent variable. This provides some evidence against contagion as a relevant mechanism, while at the same time it possibly indicates volatility over time or social and political response subsequent to anti-immigrant violence, such as increased social control or policing.

In sum, the results with regard to the link between LGE and anti-immigrant violence are in the Dutch case similarly robust to an inclusion of possible confounders as in the German case. Over and above LGE, anti-immigrant climate variables were relevant predictors in the German case that are likely to be eliminated by the municipality fixed effects in the Dutch study. Here especially, changes in economic context appear to be relevant covariates (apart from LGE), which refers to the critical role of community disadvantage for neighborhood violence.

To account for the distinctiveness of the built efficiency scores, we test how expenditures per capita relate to anti-immigrant violence in a robustness test. Reestimating model 8 using this indicator leads to statistically nonsignificant results (see table B3). Analogously to the German study treatment, we estimate zero-inflated negative binomial models (see table B4), which leads to similar results as reported for the main models. Controlling for municipality-specific constants and slopes using interactions between them and a linear time trend reveals results similar to those reported (see table B5). These results give us greater confidence that parallel trends assumption is defensible in our case. Finally, findings from a linear dynamic panel model using a generalized method of moments approach (see table B6) show a negative and statistically significant coefficient estimate for LGE.

13. Regressing anti-immigrant violence on control variables only (presented in table B2) shows that violence is systematically negatively related to average income and number of associations, which is in part absorbed by including LGE as a predictor.

CONCLUSION

This article has investigated how local government performance influences anti-immigrant violence. In doing so, we introduce a new and explicitly political focus on the local context of anti-immigrant violence. In two different empirical contexts, our central finding is that LGE is associated with improved native-immigrant relations, as captured by lower rates of anti-refugee and anti-immigrant violence. Of note, this reduction is produced through efficient spending. Cities that are better at spending resources given extant constraints and demands are better positioned to reduce anti-immigrant violence.

The novelty of our finding is in highlighting the unique—and often overlooked—role of local government in immigrant integration. News headlines often dwell on the problems of integration and reluctant receiving communities, but our research suggests efficient local governance plays an important role as a context for producing social cohesion. Notably, this role does not involve immigrants per se. In an age in which immigrants are repeatedly told—if not outright required (Goodman 2014)—to integrate, we focus the lens on the role receiving societies play in producing meaningful civic engagement.

The central implication for policy making then is to focus on improving neighborhood quality through efficiency to reduce anti-immigrant behavior. This includes policies that address denizen political deprivation and improve neighborhoods overall, where efficient governments reduce physical disorder (e.g., litter, disturbances) and attenuate socially unwanted behavior (Sampson 2012), but also policies that are directed at immigrants specifically. There is extensive evidence for the effect of collective efficacy on reducing crime and violence in general, yet its role in mitigating intergroup violence has received only limited scholarly attention (cf. Berning and Ziller’s [2017] focus on intergroup attitudes). Therefore, instead of—or perhaps alongside—investment in niche (oftentimes symbolic) immigrant integration programs such as language or civic orientation, evidence here suggests a more holistic approach that focuses on bureaucratic incorporation, overall community improvement, and positive intergroup relations as a by-product of good governance more generally.

Further, while our purpose here was to establish a meaningful and robust linkage between local government performance and anti-immigrant behavior, we recognize there are several potential mechanisms that could drive this relationship. In addition to political and social efficacy through improved municipality and neighborhood quality, further research could investigate other ways in which efficiency operates. For example, efficient spending may improve the reputation of communities or foster opportunities for intergroup
contact (Schaeffer 2013). These findings imply that scholars should rethink how immigrant incorporation is studied and how policy makers—at the national and local level—create and implement policies to improve intergroup relations. It matters how municipalities decide to spend, as that makes a difference in terms of meaningfully addressing intergroup conflict.

As immigrants continue to come and inevitably shape the fabric of their new community, cities that prove efficient—and adaptable—in providing services and that establish collective efficacy will build steps toward not only good democratic governance but also managing contentious politics. In the end, despite the national scale of political extremism, violence, and xenophobia, social cohesion and solidarity is built and defended at the local level.

ACKNOWLEDGMENTS

We thank Hans-Jürgen Andrä, Oleg Badunenko, Romana Careja, and Tom Pepinsky for valuable feedback on this article. We thank Ros Tierolf for providing data on anti-immigrant crimes in the Netherlands. We also thank the editors and three anonymous reviewers for their feedback. A previous version was presented at the 2017 Annual Meeting of the American Political Science Association and a Research Seminar at the University of Cologne in 2017.

REFERENCES


Benček, David, and Julia Strashem. 2016. “Refugees Welcome? A Dataset on Anti-refugee Violence in Germany.” 


Christ, Oliver, Katharina Schmid, Simon Lolliot, Hermann Swart, Dietlind Stolle, Nicole Tausch, Ananthi Al Ramiah, Ulrich Wagner, Steven Vervoorden, and Miles Hewstone. 2014. “Contextual Effect of Positive Intergroup Contact on Outgroup Prejudice.” 


American Political Science Review 104 (1): 40–60.


