

Quality of Local Government and Social Trust in European Cities

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Abstract

Communities are responsible for a bevy of public services and represent critical experiential contexts for social interactions among residents. However, the role of local governance and public service provision for creating social trust has received limited attention so far. This study examines how quality, efficiency, and fairness of local public service provision relates to social trust. Using multilevel models on repeated cross-sectional survey data from the Quality of Life in European Cities project, we test the relationship between time-varying city-level indicators of quality of local government and social trust. The empirical results show that an increase in the dimension of local public service quality is substantially associated with an increase in social trust. We find improvements in sport and leisure facilities as well as the state of public spaces, streets, and buildings to be particularly relevant.

Keywords: Local government; public administration; infrastructure; social trust; immigration.

Introduction

The share of the world's population living in cities rather than rural areas is growing. This development confronts cities with substantial challenges related to the integration of newcomers (Ray and Borer 2018; Saunders 2011). Additional houses must be built as well as required public services and infrastructure must be provided (Andrews et al. 2013). While the increase in heterogeneity that follows demographic change potentially puts a strain on the social cohesion of communities (Van der Meer and Tolsma 2014; Ziller 2015), local governments as major providers of public services represent a critical—yet understudied—actor in maintaining functioning communities and social relations.

This study examines how the quality of local government—here defined as operating principle of local administrations that involves quality, efficiency, and fairness in providing public services to citizens—relates to social trust. Social trust refers to the general expectation that (unknown) fellow citizens will act in a reliable and just manner, rather than behaving against one's interests (Delhey and Newton 2005). Individual resources (e.g., income) and informal social interactions represent influential factors facilitating social trust (Brandt et al. 2015; Glanville et al., 2013). The reason for this is that individuals' resourcefulness mitigates negative externalities of non-reciprocal or trust-breaching behaviors, and social interactions with others facilitate inclusive social identities and make the social world more “predictable” (Braithwaite 1998; Hardin 2002).

Building on research on the link between institutional performance and social trust (Andrews 2012; Rothstein and Stolle 2008), we argue that public service provision of local governments shapes opportunities of social contact among residents and determines how reliable local institutions are being perceived as. This in turn is expected to yield an impact on social trust. Previous research on contextual determinants of social trust, and social cohesion or social capital as more broadly defined concepts (cf. Forrest and Kearns 2001), have focused on economic and demographic factors (Abascal and Baldassari 2015; Portes 1998; Putnam 2007; Sampson 2012). This study's focus on the quality of local government adds a new perspective to this line of research by shifting its attention to the role local institutions and public service provision—factors that have largely been overlooked so far. Moreover, we distinguish different dimensions of quality of local government which enables us to study their relative importance for the creation of social trust.

To assess the relationship between quality of local government and social trust empirically, we use repeated cross-sectional data from the Quality of Life in European Cities project. This dataset entails indicators of perceived public service quality, efficiency of local administrations, as well as trust in local administrations. A large number of observations per city and wave enables us to aggregate city-level indicators that—in a multilevel regression framework—represent contextual differences across cities beyond the individual-level relationship. Moreover, the panel structure at the level of cities allows for examining how changes in aggregated perceptions of quality of local government over time relate to social trust. Our results show that an increase in public service quality is positively related to an increase in social trust. We particularly find improvements in sport and leisure facilities as well as the state of public spaces, streets, and buildings to be relevant, which points to the role of physical (dis)order and informal social contacts as underlying mechanisms.

Theoretical Framework

Contextual Foundations of Social Trust

Previous research on social trust using comparative survey data has much focused on economic and institutional factors (Alesina and Ferrara 2002; Delhey and Newton 2005). For economic factors, the underlying rationale is that in contexts of economic wealth, people are, on average, equipped with sufficient economic resources which make them less vulnerable to non-reciprocal or trust-breaching behaviors. Another reason for assuming a positive link between wealth and social trust is that economic development alters long-term value priorities where people increasingly prioritize values related to individualism and self-direction over security and conformity (Inglehart 1997). Individualists are more likely than collectivists to pursue collective group interests out of intrinsic motivation (Yamagishi 1988) and to trust others beyond ingroup boundaries (Berigan and Irwin 2011). Besides wealth, negative consequences of income inequality have been discussed with reference to social trust (Blake et al 2015; Uslaner and Brown 2005). In unequal societies, people increasingly engage in self-interested behavior, compete for social status, develop anxieties about moving down the social ladder, and interact less with people from other social classes (Buttrick and Oishi 2017; Newman et al. 2015).

In a similar vein, studies on neighborhood effects have found that economic deprivation of neighborhoods or communities is a critical factor hampering social trust, and that group-based inequalities and residential segregation represent further trust-inhibiting factors (Abascal and Baldassari 2015; Letki 2008; Sampson 2012; Ziller and Spörlein 2020). Moreover, residential instability is substantially related to lower levels of local social ties and friendship, and social trust (Sampson 1988; 2012).

With reference to institutional foundations, explanatory approaches have emphasized fairness or impartiality as main feature of an institutional setup that facilitates social trust (Rothstein and Stolle 2008; Rothstein and Teorell 2008). The idea is that if public officials apply regulations equally to all citizens alike, which means that they operate in an unbiased and non-corrupt fashion, this signals about the reliability of the institutional and moral fabric of a society. In turn, the reputation of institutions operating impartially reassures people not only when dealing with public authorities, but also in social interactions with other citizens. If citizens share the expectation that

dishonest and exploitative behavior will be sanctioned, then they have a higher incentive to comply and will be less inclined in committing trust-breaching behaviors. Iteratively, this should lead to less social conflict, more cooperation, and higher rates of social trust in the long run (Sønderskov and Dinesen 2016).

Theorizing about institutional quality making the social world more predictable and thus facilitating social trust rests on the assumption that people recognize the institutional framework they live in. Citizens often have limited political sophistication and it is demanding to argue that they directly observe national institutional regulations and policy implementation (Campbell 2012; Soss and Schram 2007). Instead, several authors have argued that people learn about the institutional conditions they live in by having contact with intermediary agents such as policemen, teachers, public officials, as well as by experiencing (and assessing) specific welfare services such as child care and health services (Kumlin 2004; Sønderskov and Dinesen 2016). By focusing on the local context of municipalities' public service provision, our study provides a more direct test (compared to cross-national designs) of how variations in the performance of local institutions affect people's perceptions of co-residents being trustworthy.

The Role of Quality of Local Government

Local governments are responsible for a bevy of services including water and energy supply, waste collection, child and elderly care, education, public transport, maintenance of roads and public buildings and places, security service, youth service, and cultural offers (Narbón Perpiñá and De Witte 2018). Local government differ in the way they provide such services both with regard to their quality and in terms of efficiency which refers to the administrative performance through which a municipality creates relevant output given available resources (Borge et al. 2008). Providing high-quality services represents a desirable goal by citizens and public officials as the quality of public services is positively linked to residents' intention to stay in the city or neighborhood instead of moving out (Shinohara 2018), levels of civic participation (Chatzoglou et al. 2013), and collective efforts to reach common goals (Mugion et al. 2018; Sampson 2012).

In terms of efficiency, administrations typically lack incentives to be cost-effective in providing services. However, political competition, financial constraints, and the implementation of new management tools can improve the cost-efficient allocation of service provision (Boyne and Walker 2004). In addition, social, demographic, economic, spatial, and historical factors have been found to shape variation in local government efficiency (see Narbón Perpiñá and De Witte 2018 for a review). From the perspective of “institutional reflexivity” (Lampe 2017), efficiency in providing public services reflects administrative skills and capabilities that are relevant for addressing challenges such as changes in administrative tasks, territorial reform, demographic change including immigration, budget cuts, the provision of additional housing, pollution control, and renewals or upgrades of infrastructure.

Apart from the public service quality and local government effectiveness or efficiency, impartiality or fairness of bureaucracies is typically considered as a central dimension of quality of government (Charron et al 2014; Rothstein and Teorell 2008). At the national level, impartiality becomes apparent in an absence of corruption, which is substantially related to mass education and economic development (Uslaner 2017). Local variations in institutional fairness can be attributed to historical development, economic characteristics (e.g., inequality), political factors (e.g., anti-corruption regulations, incentives for public officials) (Charron et al 2014; Olsen et al. 2019). Although public service quality, local government efficiency, and institutional fairness represent different dimensions of the overall quality of local government, we expect substantial interrelations due to common origins. Ultimately, all three aspects are expected to positively relate to social trust, assuming the following underlying mechanisms.

In order to link the public service quality and efficiency in public service provision and social trust, we draw on the literature on (contextual) determinants of social trust and employ two arguments. First, public service quality, efficiency, and fairness of local governments should shape how reliable they are perceived to be by citizens, which in turn reduces uncertainty in social interactions and facilitates residents’ social trust. This argument draws from the literature on institutional foundations of social trust according to which shared perceptions of reliable local institutions strengthen people’s beliefs that exploitative behavior will be sanctioned, which, in turn, facilitates social trust and readiness for collective action (Brehm and Rahn 1997; Rothstein and Stolle 2008). People learn about the quality and efficiency of service provision by “consuming” or using these

services and infrastructures in everyday life. Community residents may also notice the problem-solving capacity of their local government particularly while having contact with public officials, and by relying on second-hand experiences of co-residents. This noticing can be related to the administrative output as well as perceived procedural justice which may result in a rather symbolic satisfaction with the administrative process (Yang and Holzer 2006). The expectation that the perceived reliability of local governments strengthens social trust refers to a rational notion of social trust (Hardin 2002) according to which information and regulations make the social world more predictable and thus facilitates social trust.

Second, an intact local infrastructure provides better opportunities for people to meet and interact with each other (and thus improves social trust) compared to places characterized by a poor public service provision. For example, people are more likely to stop and talk to neighbors where cues of physical and social disorder are absent (Ross et al. 2001), and people are more likely to use playgrounds (and get there in contact with others) if they are intact (Miles 2008). In contrast, there are many examples for how lack of infrastructure may inhibit social contact and connectedness. People will avoid public places and parks that are not well maintained, a lack of public transport will lead to higher rates of people commuting by cars, and a poor educational infrastructure will cause more resourceful parents to transfer their kids to better schools which increases segregation (and thus lack of contact) along socioeconomic lines (Cass et al. 2005; Douglas et al. 2017). In a related vein, Sampson (2012, 158) notes that “the civic infrastructure of local organizations and voluntary associations helps sustain a capacity for social action in a way that transcends traditional personal ties.” The expectation that public service provision may enhance social contacts and thus social trust among residents refers to both, a rational and a communitarian notion of trust formation that heightens the role of repeated social interactions and common social identity (Braithwaite 1998; Glanville et al. 2013).

Institutional Performance and Social Trust: Issues Related to Causality and Measurement

The theoretical arguments presented presume that institutional performance causally determines social trust, which is in line with several prior studies (Freitag and Buhlmann 2009; Kumlin and Rothstein 2005; Rothstein and Stolle 2008; Sønderskov and Dinesen 2016). Nevertheless, others have argued that high levels of aggregated social capital and social trust (e.g., within sub-national regions) determine well-functioning political institutions. In a seminal study, Putnam (1993) argues (and finds empirical evidence) that the civic culture of Italian communities positively relates to the performance of regional governments. Similarly, studies find that high levels of aggregated social capital indicators, which include trust, predict lower levels of government corruption and higher institutional quality (Bjørnskov 2010; Coffé and Geys 2005; La Porta et al. 2002).

While a reciprocal causal relationship—where institutional performance and social trust determine each other—is plausible in terms of theory, such endogenous loops hamper inference from statistical models that typically assume exogenous predictor variables. Studies addressing endogeneity employing models on longitudinal data or instrumental variables are scarce (but see Coffé and Geys 2005; Sønderskov and Dinesen 2016). The present study makes use of three-wave panel data at the level of European cities. This enables us to tackle issues related to endogeneity by modeling reciprocal empirical relationships using cross-lagged panel models (Allison et al. 2017).

With reference to the measurement of public service provision, we argue that aggregated survey responses represent the quality of public service provision and local government efficiency in a more reliable way than accounts that use structural indicators on municipality characteristics. The assessment of service quality using structural indicators remains problematic as the definition of quality criteria is necessarily a subjective decision. Attempts in this regard include approximations using technical efficiency measures (Zafra-Gómez et al. 2010; Ziller and Goodman 2020) or indicators of collective behavior such as electoral turnout (Balaguer-Coll and Prior 2009). While structural indicators of local governments are typically comparable within the same country, indicators from different countries are often hardly comparable or too unspecific to map local public service provision (Borge et al. 2008).

A more direct measure of quality refers to perceptual indicators looking at citizens' satisfaction with local services (Balaguer-Coll and Prior 2009), expert ratings (Kaufmann et al. 2009), crowd ratings of service users (Hendrikx et al. 2018), or a combination of expert ratings and aggregated public opinion data (Charron et al. 2014). Given inconsistencies in structural local government indicators, perception-based indicators appear to be better comparable when taking data from more than one country context into account. From a conceptual point of view, taking people's perceptions into account addresses an often cited issue in community research, and research on contextual effects more generally, namely that context characteristics will for the most part influence behaviors and attitudes to the extent they are perceived (e.g., Koopmans and Schaeffer 2016; Sampson et al. 2002). In technical terms, it is reasonable to assume that a municipality's actual quality of local government shapes residents' perceptions thereof, which in turn possibly impacts social trust. It is important to note that such a perception-based indicator (as we intend to use) necessarily refers to (aggregated) municipality-level differences and not individual differences.¹ In addition, a large number of observations for building aggregated perception indicators increases their reliability and validity (Schunck 2016).

Data and Methods

Data and Variables

To test the stated hypotheses, we use repeated cross-sectional survey data from the project Quality of Life in European Cities (European Commission 2016) that collects survey data on European cities with an urban center of at least 50,000 inhabitants, containing probability samples of about 500 residents per city and wave. For the main analyses, we use the two most recent waves from 2012 and 2015 as the included indicators are comparable. For additional tests focused on causal identification of the key variables, we additionally use the 2009 wave. To maintain comparability

¹ Preacher et al. (2010, 210) note in this regard: "Any mediation of the effect of a Level-2 X must also occur at a between-group level, regardless of the level at which M and Y are assessed, because the only kind of effect that X can exert (whether direct or indirect) must be at the between-group level."

in terms of institutional and historical trajectories, we exclude cities of post-communist countries.² Although the survey represents no panel at the level of individual respondents, repeated observations at the city level enable us to test longitudinal relationships of city-level indicators (Fairbrother 2014).

The outcome variable *social trust* refers to the perceived trustworthiness of fellow city residents (“Generally speaking, most people in [city name] can be trusted”) and is measured with a 4-point answer scale which was recoded to range between 1 (strongly disagree) and 4 (strongly agree).

We operationalize quality of local government in three ways. First, we measure the *general perceived efficiency of local governments* using the item “The administrative services of [CITY NAME] help people efficiently” (recoded 4-point scale, ranging from 1 “strongly disagree” to 4 “strongly agree”). Second, we gauge institutional fairness using an item on *perceived trustworthiness of local administrations* (“Generally speaking, the public administration of [CITY NAME] can be trusted,” recoded 4-point scale, ranging from 1 “strongly disagree” to 4 “strongly agree”). Third, we measure public service output quality as *satisfaction with public services* using indicators on how satisfied respondents are in general with public transport, sport facilities, health care provision, cultural offers (e.g., concert halls, theaters, museums, libraries), the state of streets and buildings in the neighborhood, and public spaces (e.g., markets, squares, pedestrian areas). Answer scales (4-point) range from 1 “not at all satisfied” to 4 “very satisfied” (recoded), and factor scores from a confirmatory factor analysis (z-standardized coefficients are all > 0.45 , CFI = 0.984, RMSEA = 0.044, SRMR = 0.021) serve as an index.³

In addition to individual perceptions, we built city-year-level variables of the three perceptual indices by aggregating the individual-level variables which in the empirical analysis reflect the contextual effect – that is, a city-level characteristic for the given survey year net of compositional differences across cities. Given a sufficiently high number of respondents (in this case about 500

² Leaving these cities in the analytical sample leads to similar results as reported below.

³ A sum index of these six items is sufficiently consistent (Cronbach’s Alpha = 0.75) and using this index instead of factor scores leads to results that are substantially similar to those reported below. We also test the predictive role of single items in supplementary analyses (see Results section).

per city and wave), these aggregated indicators are assumed to represent a valid measure of the actual quality of local government of a given municipality in a given year. We assess the convergent validity of the perception-based indicators by assessing correspondence to expert ratings (see Results section).

As control variables, we include indicators of respondents' socio-demographic status: *age*, *gender*, and *education in years*. *Economic status* is measured with a dichotomous measure indicating whether or not respondents encounter problems in paying bills at the end of the month during the past 12 months (0 = never, 1 = from time to time, or most of the time). *Time living in the city* of residence is measured with five dummy variables (Living in city entire life, more than 10 years, between 5 and 10 years, between 1 and 5 years, less than 1 year). As time-varying city-level variables, we use *unemployment rates* and *proportions of immigrants* obtained from the Eurostat database (Eurostat 2019), as well as *GDP per capita* and *population density* (2012 and 2015) obtained from the OECD city database.⁴

A list of included cities, descriptives of the used variables, and zero-order correlations between individual-level as well as macro-level variables are presented in the online appendix (Tables A1-A3).

Method

To test the stated hypotheses, we employ multilevel models using survey data of the 2012 and 2015 waves. The central predictor variables are city-year aggregates of quality of local government indicators. We include in all models individual-level control variables and a wave dummy variable to account for general shifts in the outcome over time. The models include a random intercept at

⁴ It is important to note that other relevant explanatory approaches exist for which time-varying city-level data is unavailable (e.g., economic inequality). Nonetheless, time-constant differences across cities are entirely captured by the included city fixed effects (see Methods section). Remaining time-varying differences (e.g., economic inequality) are expected to be captured by compositional differences from the included individual-level covariates (e.g., economic deprivation variable).

the city-year level as well as city fixed effects which control for potential confounding from unobserved time-constant heterogeneity at the city level. This longitudinal analysis provides a test on how a change in city-level institutional quality relates to a change in social trust and is more credible than results obtained from models without unit fixed effects. In additional models, we include city-year variables as control variables that are available only for a subset of cities. The functional form of the employed multilevel model is given as:

$$Y_{itjk} = \alpha_0 + \beta X_{itjk} + \gamma Z_{tjk} + \delta Cit_{jk} + \theta T_t + u_{tjk} + e_{itjk}$$

Index i indicates individuals, index j relates to cities, and index k indicates countries. Index t refers to the survey year. X_{itjk} is a vector of individual-level variables, and β is the corresponding vector of coefficients. Z_{tjk} refers to time-varying city-level variables including indicators of quality of local government. Models include city dummies Cit_{jk} (or city fixed effects). They absorb at the same time the entire variance belonging to countries, and leave time-variant information only for estimation of the coefficients (Allison 2009; Fairbrother 2014). The time variables denote as T_t . u_{tjk} is the random intercept of the city level, and e_{itjk} is the idiosyncratic error term. We use an identity link function for estimating the main models. Since the outcome variable has only four categories, we also present models using an ordered logit link function as a robustness test. To facilitate the interpretation of the results in terms of standard deviations, we z-standardized all continuous variables.

To assess causal ordering of the hypotheses-relevant variables, we employ cross-lagged panel models with unit fixed effects. Previous methods using cross-lagged models have been criticized for not sufficiently taking unit-specific unobserved heterogeneity into account, which has been solved by recent methodological developments (Allison et al. 2017; Hamaker et al. 2015). With regard to our model specification, we employ maximum likelihood structural equation models using aggregate survey responses of the key variables from three available waves. We include as predictors a lag-1 variable of the predictor and outcome and a contemporary variable of the predictor as recommended by recent approaches (Leszczensky and Wolbring 2020).

Empirical Results

In order to test for the convergent validity of the aggregated quality of local government indicators, we correlate the obtained scores from the 2015 wave with figures from the Global Liveability Ranking 2015 (The Economist 2015). This ranking is largely based on expert ratings and the country-specific scores refer to domains of stability, healthcare, culture and environment, education, and infrastructure. Figure 1 depicts the relationship between city-specific indicators of quality of local government and overall expert rating scores. We find substantial and statistically significant correlations for rated local government efficiency (Pearson's $r = 0.53$, $p = 0.011$), trust in administration (Pearson's $r = 0.65$, $p = 0.001$), as well as public service satisfaction (Pearson's $r = 0.74$, $p < 0.001$), although Athens represents an outlier in terms of its expert rating score. These results show that the aggregated survey response indicators correspond to a performance indicator from another source, which strengthens our confidence in the validity of the measurement we use.

In a next step, we estimate multilevel models with social trust as outcome variable. Table 1 presents the results. Models 1 and 2 test the role of city-level rated efficiency of the local government. In Model 1, the coefficient estimate of city-level rated efficiency is positive and statistically significant, which suggests that an increase in aggregated perceptions of local government efficiency positively relates to an increase in social trust over time. This association is beyond compositional differences in residents' perceived efficiency, socio-demographic characteristics, or socio-economic factors. Variations due to city or country-level differences is accounted for by the included unit fixed effects. The size of the standardized effect is with about 0.09 rather small. Model 2 introduces unemployment, GDP per capita, population density, and immigration as time-varying covariates using a subset of city-years. The relationship between city-level efficiency and social trust becomes statistically non-significant under this specification. An increase in unemployment rates or immigration is negatively associated with social trust, while an increase in GDP per capita or population density is positively related to social trust. However, the precision of the estimated associations in terms of statistical significance differs (in Model 2 only the relationship between GDP per capita and social trust is statistically significant), and varies across model specifications.

Models 3 and 4 examine the role of trust in public administration as an indicator of institutional fairness and unbiasedness. In Model 3, the coefficient for the city-level variable is positive and statistically significant. The effect size is rather small, and using a subset of cities and the inclusion

of additional control variables (Model 4) leads to a non-significant coefficient estimate for institutional fairness.

Models 5 and 6 test how public service satisfaction as a city-level indicator of quality of local government relates to social trust. In Model 3, an increase in city-level service satisfaction is positively and statistically significantly related to social trust. A change by one standard deviation is associated with an increase in social trust by 0.15 standard deviations. Moreover, an inclusion of unemployment and immigration rates as additional covariates leaves the systematic association between city-level service satisfaction and social trust intact (Model 4).

Model 7 includes all three indicators of quality of local government at the same time and finds that only an increase in city-level service satisfaction is substantially and statistically significantly related to an increase in social trust. However, other dimensions of quality of local government are only unsystematically related to social trust.

[Figure 1 about here]

[Table 1 about here]

[Table 2 about here]

In order to assess causal ordering of the key variables under study, we estimate cross-lagged panel models with fixed effects and present the results in Table 2. Note that only indicators of efficiency and service satisfaction (but not trust in administration) are available for three time points, which is a necessary condition for estimating these models. In general, we see mostly statistically non-significant effects which is a typical feature of this restrictive type of models (Hamaker et al. 2015).⁵ In Model 7, we find a positive and statistically significant coefficient estimate for

⁵ Cross-lagged panel models without fixed effects find positive and significant autoregressive path coefficients, positive and significant reciprocal effects between rated efficiency and social trust, and a positive and significant contemporary effect for service satisfaction on social trust (see Table

contemporary service satisfaction. This supports the contention that an increase in service satisfaction is causally related to an increase in social trust, while we find no indication for reciprocal causal paths running from trust to indicators of quality of local government.

In additional analyses, we test the role of satisfaction with services distinguishing between the various services that constitute the used indicator. The findings are presented in Table B2 in the online appendix. We find that an increase in city-level variables of satisfaction with the quality of public spaces, the quality of sport facilities and leisure activities, and the state of streets and buildings predict higher levels of social trust. Moreover, we re-estimated the main models using a multilevel ordered logit link function and present the results in the online appendix in Table B3. The results are substantially similar to those obtained from linear multilevel regression shown in Table 1.

Conclusion

Local contexts of neighborhoods and cities represent critical experiential settings in which people socially interact with each other, and—depending on the nature of these contacts—may build trust in one another and work together for the common good. Local governments are immediate institutions which implement public policies, administer and distribute resources, provide public services, and build and maintain the infrastructural setup of communities. This study sets out to assess the empirical relations between the quality of local government and social trust in European cities. Emphasizing the overall functioning of local administrations and public service provision as core dimensions of quality of local government, we find empirical evidence that especially the quality of public service provision positively relates to social trust in fellow residents.

The findings of this study are relevant for several strands of literature. Works on institutional foundations of social trust have placed much emphasis on cross-national differences and general institutional setups such as universal or means-tested welfare measures (e.g., Delhey and Newton 2005; Rothstein and Stolle 2008). Our study applies a municipality-centered focus which enables

B1 in the online appendix). Note that all variables are unstandardized in the cross-lagged models as this circumvents estimation problems related to non-convergence.

us investigating how proximate political and administrative measures shape social trust. Moreover, prior studies presume perceptions of institutional reliability and fairness to operate as critical mechanism connecting institutions and trust (Sønderskov and Dinesen 2016). Instead of citizens' rating of the overall functioning of local administration, we find that the output quality of specific local public services and infrastructure is particularly relevant in shaping social trust. While we are not able to trace the specific underlying mechanism, additional tests of service domains reveal that sport and leisure facilitates as well as the state of public spaces, streets, and buildings are relevant for social trust in European cities. In a related vein, the central role of physical environments has been highlighted in research on collective efficacy (Sampson 2012). Physical disorder provides cues that deviant behavior will not be sanctioned (Keizer et al. 2008) which in turn may have severe consequences for perceptions of safety and social trust, and the social cohesion of communities more generally. Our results also underline the relevance of sport and leisure facilities, suggesting that informal social interactions in everyday settings foster the development of social trust (Glanville et al. 2013; Toepoel 2013).

Our results also inform scholarly debates on the link between governmental performance and trust which have produced ambiguous empirical results (Kumlin and Haugsgjerd 2017; van der Meer and Hakhverdian 2017; Yang and Holzer 2006). Apart from the fact that attitudes such as political and social trust have heterogeneous foundations (and thus require various explanatory approaches), scrutinizing performance as an explanation requires that people attribute performance to responsible political authorities. This is difficult given limited political sophistication on the part of citizens and low policy proximity and visibility that potentially hamper accurate perceptions of political performance. Our focus on proximate and visible local services and infrastructure thus serves as a most likely test case on implications of local government performance on (social) trust for which we found empirical evidence.

With reference to the limitations of our study, we need to acknowledge that the indicators we use are based on observational data. The survey information we use at the individual level has been drawn from a different pool of respondents in each wave. This inhibits strong causal claims at the level of individuals. Moreover, we lack control variables for actual service uptake by citizens, which means that—apart from objective assessments of public services—personal expectations or halo effects (i.e., specific services inform perceptions of the public sector as a whole) may also

shape public service satisfaction (Van de Walle 2018). Future studies should thus extend our approach by collecting and analyzing comparative (and time-varying) data that more specifically reflect public service provision such as average distances to relevant infrastructure (e.g., schools, hospitals, or public transport), as well as measures of direct experiences with specific public services. Such indicators would allow for computing comparative and valid structural measures of local government performance which would represent a valuable addition to perception-based measures (Zafra-Gómez et al. 2010). Register-based studies would also allow for studying individual environments and their characteristics such as egohoods in a fine-grained manner (Noah 2015). Although it might be costly and challenging to implement, field experiments would enable to further causally determine the effects of local service provision. Moreover, while our study is based on a sample of large European cities, further studies should also focus on the quality of local government in rural areas, as well as other world regions including developing countries.

In summary, our study provides insights into the linkage between local governance and social trust by showing that—in addition to the broader (national) institutional setup—local institutions and the quality of public service provision substantially matter for social trust. Municipalities that want to improve social trust and cohesion should focus on residents' satisfaction with services and infrastructure, especially the physical appearance of streets and buildings as well as sport and leisure facilities.

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Table 1. Results from Multilevel Regression Models

	(M1)	(M2)	(M3)	(M4)	(M5)	(M6)	(M7)
DV: Social trust							
Rated efficiency	0.219** (0.005)	0.228** (0.007)					0.108** (0.008)
Rated efficiency (city)	0.087** (0.028)	-0.008 (0.048)					-0.065 (0.057)
Trust in administration			0.264** (0.005)	0.267** (0.007)			0.181** (0.008)
Trust in administration (city)			0.066** (0.025)	0.064 (0.052)			0.047 (0.063)
Service satisfaction					0.220** (0.006)	0.222** (0.008)	0.121** (0.008)
Service satisfaction (city)					0.148** (0.051)	0.209** (0.078)	0.220** (0.081)
Age	0.055** (0.005)	0.052** (0.007)	0.061** (0.005)	0.059** (0.007)	0.062** (0.005)	0.059** (0.007)	0.048** (0.006)
Female	-0.047** (0.009)	-0.060** (0.012)	-0.054** (0.009)	-0.067** (0.012)	-0.057** (0.010)	-0.070** (0.012)	-0.065** (0.012)
Education in years	0.067**	0.085**	0.064**	0.082**	0.069**	0.086**	0.083**

	(0.005)	(0.007)	(0.005)	(0.006)	(0.005)	(0.007)	(0.006)
Economic deprivation	-0.097**	-0.091**	-0.088**	-0.083**	-0.096**	-0.092**	-0.063**
	(0.005)	(0.006)	(0.005)	(0.006)	(0.005)	(0.006)	(0.006)
Living in city (ref. less than 1 year)							
Between 1 and 5 years	0.005	0.047	-0.009	0.033	-0.007	0.032	0.056
	(0.060)	(0.078)	(0.060)	(0.077)	(0.061)	(0.078)	(0.076)
Between 5 and 10 years	0.034	0.092	0.021	0.077	0.020	0.068	0.104
	(0.059)	(0.076)	(0.058)	(0.075)	(0.059)	(0.076)	(0.074)
More than 10 years	-0.029	0.013	-0.044	-0.005	-0.039	-0.005	0.042
	(0.057)	(0.073)	(0.056)	(0.073)	(0.057)	(0.074)	(0.072)
Living in city entire life	-0.030	0.013	-0.038	0.003	-0.047	-0.011	0.055
	(0.057)	(0.073)	(0.056)	(0.072)	(0.057)	(0.074)	(0.072)
Unemployment rate (city)		-0.051		-0.057		-0.078*	-0.080*
		(0.032)		(0.031)		(0.032)	(0.032)
GDP per capita (city)		0.272*		0.246		0.280*	0.267*
		(0.130)		(0.127)		(0.130)	(0.128)
Population density		0.654		0.595		0.404	0.375

(city)							
		(0.488)		(0.486)		(0.496)	(0.483)
Proportion immigrants		-0.222		-0.038		-0.156	-0.036
(city)							
		(0.152)		(0.165)		(0.151)	(0.163)
Constant	0.041	0.689	0.045	0.419	-0.176*	0.121	-0.079
	(0.068)	(0.459)	(0.067)	(0.471)	(0.088)	(0.485)	(0.481)
<hr/>							
Random Effects							
City-year intercept	0.008*	0.000**	0.000**	0.000**	0.000**	0.000**	0.000**
	(0.019)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Residual	0.886**	0.905**	0.876**	0.897**	0.891**	0.911**	0.886**
	(0.003)	(0.004)	(0.003)	(0.004)	(0.003)	(0.004)	(0.004)
<hr/>							
N _{city-years}	116	70	116	70	116	70	70
N _{respondents}	35571	22111	35571	22111	35571	22111	22111

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$

Table 2. Results from Cross-Lagged Panel Models with Fixed Effects

	(M6)	(M7)	(M8)	(M9)
DV:	Social trust	Social	Rated	Service
	T ₀	trust _{T₀}	efficiency	satisfaction
			T ₀	T ₀
Social trust _{T₀}			-0.569 (0.953)	0.431 (0.368)
Social trust _{T₋₁}	1.065 (0.611)	0.379 (0.344)	-0.248 (0.281)	-0.085 (0.068)
Rated efficiency _{T₀}	-0.468 (0.274)			
Rated efficiency _{T₋₁}	-0.166 (0.124)		0.159 (0.202)	
Service satisfaction _{T₀}		1.650* (0.806)		
Service satisfaction _{T₋₁}		-0.208 (0.197)		0.166 (0.239)
N _{units}	46	46	46	46
N _{time}	3	3	3	3

Standard errors in parentheses

* $p < 0.05$.

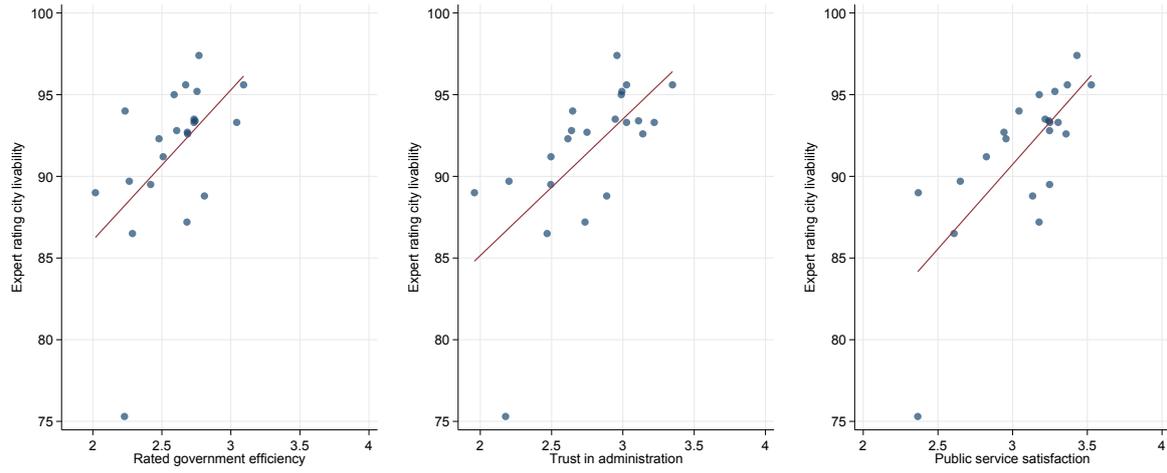


Figure 1. Correspondence Between City-Level Indicators and Expert Ratings (2015)