



UNIVERSITY OF
GOTHENBURG

SOCIAL TRUST, QUALITY OF GOVERNMENT AND ETHNIC DIVERSITY

An Empirical Analysis of 206 Regions in Europe

NICHOLAS CHARRON

BO ROTHSTEIN

WORKING PAPER SERIES 2014:20

QOG THE QUALITY OF GOVERNMENT INSTITUTE

Department of Political Science

University of Gothenburg

Box 711, SE 405 30 GÖTEBORG

December 2014

ISSN 1653-8919

© 2014 by Nicholas Charron & Bo Rothstein. All rights reserved.

Social Trust, Quality of Government and Ethnic Diversity. An Empirical Analysis of 206 Regions in Europe

Nicholas Charron

Bo Rothstein

QoG Working Paper Series 2014:20

December 2014

ISSN 1653-8919

ABSTRACT

What factors lead to greater levels of generalized trust in society? The research field has established four channels through which it is commonly argued trust is affected at the macro level—economic inequality, civic participation, ethnic heterogeneity, and institutional quality. However, the quantitative field has focused overwhelmingly at the national level of analysis, mostly ignoring sub-national variation in trust, or focusing on single countries. We fill that gap in this study, which offers the largest and most comprehensive sub-national assessment of this salient question to date, including 206 regions in 24 European countries using data from an original survey of over 85,000 respondents conducted in 2013. Upon mapping national and regional levels of social trust based on our novel data, we find strong variation in levels of generalized trust within many countries, a phenomenon that has been often overlooked by national-level studies. We use a number of statistical estimations to assess the strength of the four channels through which trust can be enhanced or eroded. We find strong and robust evidence that institutional quality—measured as a public sector that allocates services impartially and without corruption—is the strongest determinant of regional variations in trust within countries, while economic inequality, civic participation and ethnic heterogeneity are not significant factors in explaining variations in trust patterns.

Nicholas Charron

The Quality of Government Institute

Department of Political Science

University of Gothenburg

Nicholas.charron@pol.gu.se

Bo Rothstein

The Quality of Government Institute

Department of Political Science

University of Gothenburg

Bo.rothstein@pol.gu.se

Introduction

How do quality public institutions impact generalized trust? Since the publication of Robert Putnam's "modern classic" *Making Democracy Work* in 1993 which analysed the politics of regions within Italy, the issue of social capital has become a huge research industry. Defined as a combination of interpersonal generalized (a.k.a. social) trust and networks based on reciprocity, social capital is now generally recognized as major asset for groups and societies (Castiglione et al. 2008; Svendsen and Svendsen 2009). The reason for the strong interest is that, as measured in surveys, social trust correlates with a number of other variables that for most people are normatively highly desirable. At the individual level, people who believe that most other people in their society in general can be trusted, are also more inclined to have a positive view of their democratic institutions, participate more in politics and be more active in civic organizations, and are more tolerant towards minorities and to people who are not like themselves. Trusting people also have a more optimistic view of their possibilities to have an influence over their own life-chances and, not least important, to be more happy with how their life is going (Leung et al. 2011; Helliwell 2006; Dinesen 2013; Delhey and Newton 2005; Uslaner 2002).

The same positive pattern exists at the societal level. Cities, regions and countries with more trusting people are likely to have better working democratic institutions, more open economies, greater economic growth and less crime and corruption (Bjørnskov 2009; Keefer and Knack 2005; Richey 2010; Uslaner 2008). Both at the individual and societal level, many things that are normatively desirable seem connected to social trust and social capital. What has also made the issue of social trust is that it varies widely both - as Putnam (1993) showed - within as well as across states. At the country level, scholars have consistently found striking gap in aggregate trust levels. For example, in Norway, Denmark and the Netherlands, a clear majority state that they believe most other people can be trusted, while in Brazil, the Philippines and Turkey, only around 10 percent think so (Rothstein and Uslaner 2005).

As for the interpretation of what the standard survey question about social trust actually measures, we support the idea launched by Uslaner (2002) who argues that when people answer if they think that "most other people can be trusted", this can be understood as their evaluation of the moral standard of the society in which they live. This implies that

trust can be seen as an informal institution as argued by North (1998) and therefore as source of social cohesion and collaboration creating a system of beliefs that the various groups in society have a shared responsibility and ability to provide public and merit goods (Uslaner, 2002, chap. 7).

That generalized trust is beneficial for a society is thus clear – yet what factors lead to higher levels of trust? A recent surge of scholarship on the determinants of trust has established a ‘horserace’ of sorts at two levels of analysis. Among societal explanations that have gained theoretical and empirical traction are civic participation (Putnam 1993; Paxton 2007), ethnic diversity (Hooghe et al 2009; Putnam 2007; Schaeffer 2013), inequality (Uslaner 2002; Rothstein and Uslaner 2005) and quality and impartial political institutions (known as ‘QoG’ in this paper, Rothstein 2008; Rothstein and Eek 2009; Freitag and Buhlmann 2009). At the individual level, factors such as age, socio-economic status, gender, and ethno-linguistic background, and civic activity have been found to play a role in trust levels to varying degrees.

Building on such previous analyses, this study makes several noteworthy contributions to our understanding of generalized trust. First, while comparative empirical research on trust has blossomed in recent years at the country and/or individual levels, little is known about how much trust varies within countries, at the sub-national level. While several analyses investigate trust patterns at the regional or municipal level in a single country (Putnam 1993; Putnam 2007; Alesina and La Ferrara 1999; Letki 2008), a multi-country context has gone un-investigated. We address this gap by using original data collected by the authors for both generalized trust and institutional quality based on a survey of more than 85,000 respondents in 189 regions in 25 European countries.¹ Combining this survey data with regional register data give us unique possibilities for analyzing the effects of institutions versus several other competing explanations of social trust. Moreover, Europe offers an excellent test case due to remarkable variation in trust at the national level (Hooghe et al 2009), yet with our new combination of survey and register data, we show significant variations in trust at the sub-national level in several countries including Italy, Germany, Belgium, Spain and France, demonstrating that inferences at the regional level are more precise relative to national-level comparisons. Moreover, sub-national, between-country com-

¹ Funding for this research comes in part from the European Commission's Seventh Annual Framework.

parisons provide many advantages, as they increase the number of observations, provide inherent ‘natural controls’, and strengthen causal inferences (Snyder 2001). The results show that compared with several competing factors, the effect of institutional setting (quality of government, henceforth ‘QoG’) is the strongest and most robust predictor of regional trust levels throughout Europe.

Second, the extent to which individual-level patterns of trust are conditioned by macro-level factors is relatively under-researched. For example, is a gender, education or age gap in trust present in all countries? While some cross-level interactions have been explored (Freitag and Buhlmann 2009), we know very little about how individual levels of trust are conditioned by macro contexts, such as institutional setting. We investigate these two relatively unexplored areas in the field of trust research here.

Before proceeding with our analyses, we present a relevant literature on factors that lead to trust and outline our contribution. Next, we present novel data, which constitutes to our knowledge the most comprehensive to date on social trust and QoG at the regional level in Europe; testing the relationship between several leading factors and trust at the sub-national level. In sum, we find that QoG is far and away the strongest predictor of regional variations in generalized trust and that the negative effects of social inequality and ethnic diversity on social trust become negligible when we control for the level QoG. Third, using multi-level modeling, we test cross-level interactions between the regional-level QoG and individual level factors, such as demographic characteristics and attitudes and experience with corruption. Among several noteworthy findings, we demonstrate that while in low QoG settings a significant gender and age gap in trust exists, this gap disappears in high QoG areas. Trust gaps are also found in high QoG regions between high and low income earners, people of different education levels as well as the employed versus unemployed, yet none of these gaps are found in low QoG settings (most all respondents display relatively low levels of trust). We also find that experiences with corruption erode trust much more in high QoG settings than in low QoG ones. We conclude with a discussion and suggestions for future research.

What creates and what destroys social trust?

While the positive effects of high levels of social trust has become generally accepted, several factors relating to how it is in fact generated have recently been much debated and controversial. The first is the question about the importance of civil society and voluntary associations for generating social trust. Putnam's studies emphasized that by being active in voluntary associations, citizens would learn to develop social trust and understand the importance of positive reciprocity (Putnam 1993). In this society-centered "Tocquevillian" approach, the capacity of a society to produce social capital and social trust is seen as being determined by citizens' activity in voluntary associations (Stolle 2003). However, a large number of studies carried out over the last decades have called into question the effect of participation in voluntary associations for social trust. While it is true that people who are "joiners" also generally trust others more, this seems to be an effect of self-selection. People who—for some other reason—score high on the social ability to trust and cooperate with others join voluntary associations disproportionately. However, activity in such organizations does not increase the individuals' social trust. Members become purely more trusting of their fellow members and they cooperate more for group purposes only (Stolle 2003; Uslaner 2002). Thus the evidence that associational membership of adults creates social capital has not survived empirical testing (Armony 2004; Delhey and Newton 2003; Dinesen 2013; Claiborn and Martin 2000; Herreros 2004; Robbins 2011; Wollebæk and Selle 2003). To take one example, one large-scale empirical study aiming at explaining variations in social trust based on the World Values Study surveys and covering no less than sixty countries concludes that "perhaps most important and most surprising, none of the four measures of voluntary activity stood up to statistical tests, in spite of the importance attached to them in a large body of writing, from de Tocqueville onwards" (Delhey and Newton 2004, 27).

A second major issue in the social trust and social capital literature has to do with ethnic diversity. The initial positive view of the many good effects of social trust has been tampered by findings showing that societies with a high ethnic diversity tend to have lower social trust (Schaeffer 2013). The logic behind this argument is fairly straightforward. People trust other people "in general" that they perceive as ethnically their equals but they distrust people whom they perceive as ethnically different. Some economic studies claim that ethnic diversity, through its negative effects on social trust and social cohesion, ex-

plains why many poor countries fail to produce the amount of public goods necessary for social and economic development (Easterly and Levine 1997; Habyarimana et al. 2007). Putnam (2007) and Alesina and La Ferrara (1999) have also reported evidence of this relationship at the sub-national level for the U.S. Others have claimed that the increasing ethnic diversity in Western Europe will make redistribution to various welfare state programs more difficult (Alesina et al. 2001; Eger 2010). This argument has not gone without criticism and several studies have pointed out that ethnic diversity does not necessarily or only under certain specific conditions destroy social trust (Uslaner 2012; Kumlin and Rothstein 2010; Gesthuizen et al. 2009). In a recent overview of this research, including no less than 480 empirical findings from 172 studies, Schaeffer (2013) convincingly shows that many studies about this controversial issue come to different conclusions. This inconclusiveness is according to him due to variation in research design such as which region of the world that is analyzed, which type of ethnic diversity that is scrutinized and also what type of measure is used for the dependent variable. Schaeffer points out that while there is a slight overweight for the confirmatory studies, discipline matters a lot. Many more studies in economics journals confirm the negative effect of ethnic diversity on social trust than studies published in political science or sociology journals. However, he also shows that for the 58 studies that have generalized trust as the dependent analysis, there is close to a draw: 30 empirical results refute and 28 corroborate the hypothesis (Schaeffer 2013:12). Moreover, in a European context, recent empirical work has called into question this relationship (Hooghe et al 2009).

A third major issue in this research has to do with the effect of structural and institutional contra individual variables (Uslaner 2002). What is the effect on individuals' propensity for social trust for variables such as gender, age, political attitudes and being unemployed compared to institutional or societal variables such as the quality of government institutions, ethnic diversity and the overall prosperity and economic inequality of the society in which he or she lives. Economic inequality has been put forward by Uslaner (2002) as particularly detrimental to social trust.

Finally, the approach highlighted in this study is institution-centered. In response to the failure of the society-centered approach to produce good empirical indicators for its claims about how the causal mechanisms generating social trust operates, the institution-centered accounts of social capital theory claim that for social trust to flourish it needs to be em-

bedded in and linked to the political context as well as formal political and legal institutions (Berman 1997; Encarnación 2003; Robbins 2011; Rothstein and Uslaner 2005; Rothstein and Eek 2009; Kumlin and Rothstein 2010; You 2012; Villoria et al. 2013; Richey 2010). According to this group of scholars, who base their research largely on historical case studies, experiments or large-n survey data (or all three), it is trustworthy, uncorrupt, honest, impartial government institutions that exercise public power and implement public policies in a fair manner that create social trust and social capital. For example, Delhey and Newton concluded from their above mentioned study that “government, especially corruption free and democratic government, seems to set a structure in which individuals are able to act in a trustworthy manner and not suffer, and in which they can reasonably expect that most others will generally do the same” (2004, 28). Using survey data from 29 European countries, Bjørnskov (2004) concluded that a high level of social trust is strongly correlated with a low level of corruption. Another study, also based on comparative survey data, concludes that “the central contention ... is that political institutions that support norms of fairness, universality, and the division of power contribute to the formation of inter-personal trust” (Freitag and Buhlmann 2005).

Using scenario experiments in low trust/high corruption Romania and in high trust/low corruption Sweden, Rothstein and Eek (2009) found that persons in both these countries who experience corruption among public health care workers or the local police when travelling in an “unknown city in and unfamiliar country” do not only lose trust in these authorities but also in other people in general that “unknown” society. Their theory for how the causal mechanism between corruption and social trust operates is that since people cannot really know if “most people” in their society can be trusted, they have to use some kind of short-cuts or heuristics. The theory is that people make inferences from the behavior of their public officials when forming beliefs about to what extent people in general in their society can be trusted. Moreover, if local public officials are known to be dishonest, corrupt, discriminatory or unfair, many will make a second inference. Namely that in order to get by in life in a such with dishonest public officials, ordinary people themselves have to become engaged in various forms of dishonest behavior (corruption, nepotism, favoritism) and because of this, they cannot be trusted. In sum, this first issue that we want to shed light on is precisely this one: If social trust is generated from “below” by

activity in voluntary associations or from “above” by citizens perception of the quality of their government institutions.

Brief description of survey data and design

To explore these central issues in the research about what may create and destroy social trust and social capital, we take advantage of two original data sets based on two recent large surveys, organized by the authors (in 2010 and in 2013). The 2010 sample consisted of about 34.000 citizen interviews and the more recent survey sampled over 85,000 individuals. The respondents have been sampled by regions in European countries, in total 212 so called NUTS 1 and NUTS 2 regions for 25 European countries². These surveys have focused on citizen perceptions and experiences of the quality of their regional government institutions (including and experiences as well as perceptions of corruption) and have also included questions about social trust (see Charron, Lapuente and Rothstein, 2010, 2013 and Charron, Dijkstra and Lapuente 2014). With over 400 observations per region, the latest round of these surveys constitutes the largest and most comprehensive regional mapping of the quality of government (henceforth QoG) and social trust to date. The data thus constitutes a unique empirical resource for this type of research and represents a noteworthy improvement over past empirical studies that investigate sub-national trust levels which employed data from the World Value Survey or European Values Surveys, and had significantly fewer observations per region (Akcomak and Ter Weel 2009; Tabellini 2010; Van Schaik 2002).

Using this data, we analyze variations in patterns of trust at two levels in this paper. First, we show that social trust varies significantly not only between countries, but also within them, and that this variation in many cases is geographically in line with political/administrative sub-national boundaries. Country-level analyses overlook this variation and thus underestimate (or overestimate) social trust in higher (or lower) trust regions. As we show below, this “regional lens” gives important analytical leverage since many of the standard country variables can be controlled for ‘naturally’. To account for this spatial variation in trust at the sub-national level, following the three main issues related above, we test a number of theoretical propositions about what explains variation in levels of

² NUTS refer to ‘Nomenclature of territorial units for statistics’, and are EU statistical regions, for more information, see: http://epp.eurostat.ec.europa.eu/portal/page/portal/nuts_nomenclature/introduction

social trust. These range from the quality of government (QoG), economic inequality, civic participation, ethnic heterogeneity, and the extent to which the political environment is fractionalized.

Second, using multi-level modeling, we explore cross-level interactions - how the regional context conditions individual levels of trust. As mentioned above, several studies have shown that individual level factors, such as gender, income, ethnic-linguistic origin, age, etc. drive levels of social trust among citizens within countries. In addition, we also expect that the impact of individual-level perceptions and experiences with corruption on social trust is conditioned by the regional QoG context. Our argument is that – given that perceptions of QoG is strongly associated with impartiality in the implementation of laws and public policies, low corruption and general sense of fairness in the civil service, the individual differences in trust among citizens (such as gender or age) should not matter in regions with a high level of QoG. We expect, however, that in low QoG regions, differences in social trust will be driven by factors of ‘achievement’, broadly speaking, (such as income or education).

Measuring the Variation of Social Trust by Country and Region

To capture social trust, we take advantage of the latest round of a regional governance survey (2013) (for the 2010 round see Charron, Dijkstra and Lapuente 2014; Charron, Lapuente and Rothstein 2013)³. Each region in our study has between 400-450 respondents (more on regions in subsequent sections). The trust question is asked in the standard format from previous studies, such as the European Values Survey, and World Values Survey⁴.

At the individual level, a respondent is coded as ‘1’ if they answer “Most people can be trusted” and ‘0’ if “Can’t be too careful”. At the regional level, we take the proportion of respondents who answered “Most people can be trusted” over those who answered “Can’t be too careful”, such that aggregate responses over 0.5 imply that the majority in that re-

³ A more thorough description of the latest round of the survey can be found in Appendix B.

⁴ “Generally speaking, would you say that most people can be trusted or that you can’t be too careful in dealing with people in your area?”: 1 “Most people can be trusted”, or 2 “Can’t be too careful”.

gion believe that most people can be trusted; while less than 0.5 constitutes that a majority believes that one ‘can’t be too careful’. The measure is thus continuous, and bound between 0-1.

Figure 1 highlights the distribution of social trust by country level⁵ and regional variation around each country estimate. We observe that social trust varies remarkably across as well as within European states. Moreover, while national level contexts do matter to a great deal, as shown by the consistent clustering of regions around countries, the differences between regions in many countries are noteworthy and demonstrate clear limits of national level analyses.

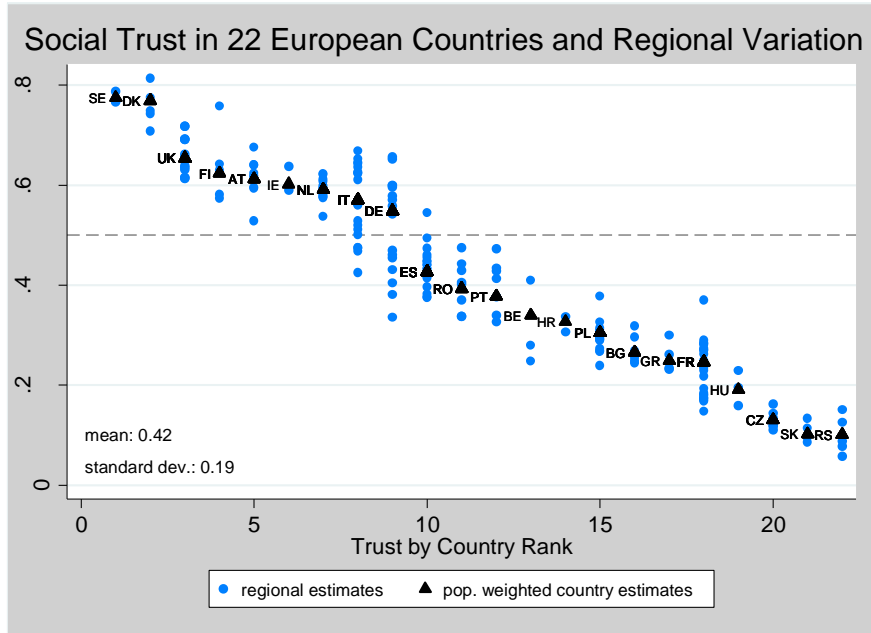
First, while the mean for the whole sample is 0.42, we find noteworthy national level variation. While Scandinavian states display high trust, several EU member state countries like France and Poland display surprisingly low levels⁶. At first glance, social trust might appear to be determined by geography or history (e.g. West vs. East Europe for example), yet we observe that countries like France, Greece, Portugal and Belgium have a majority of respondents under 0.5 (e.g. the dashed-line in Figure 1). At the country level, the vast majority of respondents in Sweden and Denmark, and also UK, Finland, Austria, Ireland and Netherlands say that they ‘trust others’, yet social trust is extremely low in many other European states. For example, in Hungary, Greece, Bulgaria and most regions in France, less than 30% of the citizens there say they can ‘trust others’, while in Czech Republic, Slovakia and Serbia, the number drops below 20%. These findings are consistent with recent empirical analyses⁷

⁵ Country levels calculated as a population weighted average of the regional level scores for each country.

⁶ In the case of these two countries, it is very unlikely that that we find such low levels of trust due to a small sample size of respondents. The number of individual observations for France and Poland is 10,409 and 6,400 respectively.

⁷ For example, two recent studies employ a European, or largely European sample (Hooghe et al 2009 and Freitag and Buhlmann 2009). The Spearman rank coefficient between our common countries and theirs is 0.85 and 0.86 respectively

FIGURE 1, SOCIAL TRUST IN 22 EUROPEAN COUNTRIES AND REGIONAL VARIATION



Note: Y-axis is the aggregate proportion of respondents who ‘trust others’. Country abbreviations: SE (Sweden), DK (Denmark), UK (United Kingdom), FI (Finland), AT (Austria), IE (Ireland), NL (Netherlands), IT (Italy), DE (Germany), ES (Spain), RO (Romania), PT (Portugal), BE (Belgium), HR (Croatia), PL (Poland), BG (Bulgaria), GR (Greece), FR (France), HU (Hungary), CZ (Czech Rep.), SK (Slovakia), RS (Serbia).

Second, and more of interest to this study, the regional-level variation across Europe is striking, ranging from 0.08 (Východné Slovensko region in Slovakia) to 0.80 (Copenhagen region, Denmark). Moreover, several countries, such as Italy, Spain, Germany, Austria, France and Belgium, have noteworthy sub-national variation in social trust. In the case of Germany, the region with the highest level of social trust, Schleswig-Holstein, is among the top 10% in our full sample of regions, with a vast majority of respondents claiming that they can ‘trust others’. Saarland, a region close to France, is far below the sample average with less than 34% of respondents claiming that they can trust others. We find a similar gap in Italy, with Friuli V.G. and Bolzano in the very north showing quite high levels of social trust, while Campania in the very south stands out as relatively low. In both cases, Germany and Italy have regions that have the same levels of social trust or higher as Finland, Austria or the UK, while several regions in these same countries have lower social trust than several regions in Portugal, Romania, Spain, Belgium or Poland –

all countries with noticeably lower levels of trust at the aggregate national level. Spain and Belgium also have noteworthy variation, with social trust in Flanders almost twice as high as that in Wallonia. For Spain, the majority in the Pais Vasco region ‘trusts others’ (54%), while less than 38% do so in the Canarias or Murcia regions. These findings are generally consistent with previous studies that have explored social trust at the regional level in Europe (Tabellini 2010; Van Schaik 2002) and correlate rather strongly with the most recent round of the European Value Survey at the NUTS 2 level⁸. However, we would argue that the data here is more reliable relative to regional data used in previous studies, as the sample size per region is more than twice what it would be if European Value Survey or World Value Survey data were employed⁹. It also has the advantage of all countries having data points from the same year, as opposed to survey data scattered in rounds of two to three year periods.

Regional Level Differences in Trust: Explanatory Variables and Methods

In this section, we model statistically several leading explanations of social trust as discussed in section 2. While register and survey data at the sub-national level is growing in relevance among scholars, it still cannot compare in terms of scope and availability to national level register and survey data, thus we are somewhat limited in our selection of indicators.

Primary Independent variables

a. Public Sector Institutions. For this variable (QoG), we use the 2010 regional score for the European Quality of Government Index (EQI, Charron, Dijkstra and Lapuente 2014), which is an advantage because it precedes the dependent variable temporally. The measure captures the extent to which regional public services are impartial, of high quality and a clean from corruption, based on both experiences as well as perceptions from our re-

⁸ For purposes of external validity, we gathered trust data in the latest round of the EVS (2008), which uses the exact same question, and compared all available regions in common with our sample. We find that among the 182 regions we have in common, the Spearman rank coefficient is 0.58. Yet many regions in the EVS data have insufficient observations (less than 100), and thus when comparing only regions in the EVS that have at least 100 observations (117 total), the Spearman rank coefficient increases to 0.70. When comparing regions in common with at least 200 observations in the EVS, the Spearman rank increases to 0.79 (68 total regions), showing that the estimates begin to converge as the sample size increases, which demonstrates evidence of external validity of our measure.

⁹ Using EVS data instead of ours for the 189 regions in common with our study would result in about 40000 less individual observations (31368 compared with 72800) or an average regional N of 175 compared with 410.

spondents. To maximize regional variation, the data focuses on services primarily administered or financed by sub-national actors, such as education, health services and law enforcement. The survey also included questions about the extent to which regional elections are perceived as being free from corruption and the level of perceived political impartiality in the regional mass media. From this we have created an index on whole as well as several of the sub-components, such as impartiality and corruption.

b. Inequality. With no ‘perfect’ regional measure available, and much less to choose from than compared to the national level of analysis, we elect capture inequality in two ways. First, we take a measure of economic inequality. We take the Gini index of wage inequality from Galbraith and Garcilazo (2005), which captures the pay inequalities of manufacturing wages by region, averaged from 1995-2000. The score ranges from ‘0’ to ‘1’ (perfect equality to perfect inequality) Second; we capture gender inequality in the labor market. Taken from Eurostat (2011), we take the male to female ratio of unemployment for each region. A ‘0’ implies there are no differences, while higher scores imply that a greater proportion of females are unemployed relative to men.

c. Voluntary civic participation and social networks. We capture this with two measures. First, is the voter turnout in regional parliamentary elections, averaged for all available electoral data from 1990-2010. Since these are not national elections, they give an even better sense of how much ‘civic engagement’ can vary from region to region as well as how engaged citizens are in their local politics.

Second, we take survey data from the latest round of the European Value Survey (EVS, 2008). We combine six relevant questions of voluntary civic participation into one index¹⁰.

We take the aggregate proportion of ‘yes’ respondents for each of the 6 activities and, after obtaining weights from a principle component factor analysis (PCF), we combine the 6 into a single index (‘civic index’) for each region¹¹. The index ranges from 0 (no participation) to ‘1’ (full participation in all activities). A full description of how the index was built, the weights, etc. can be found in the appendix.

¹⁰ Which, if any, do you belong to? A) Political parties or groups B). Religious or church organizations C). Education, arts, music or cultural activities D) Sports or recreation E) Local community action on issues like poverty, employment, housing, racial equality F). Other groups

¹¹ The PCF showed all 6 components clustered strongly onto one factor (according to the Kaiser criteria), as there was only one factor with an Eigenvalue over ‘1’ and it explained over 60% of the total variation.

d. Ethno-Linguistic Diversity. While most data on heterogeneity of the population is available only at the national level, the extent to which regions are ethnically homogenous/heterogeneous is captured with two measures. First, we take the measure of regional ethnic diversity from Alesina and Zhuravskaya (2011), whereby we take the percentage which consists of the main ethnic group for each region. Because this is not available for all regions, we employ an alternative measure from Eurostat, which is the percentage of each region's population born outside of the E.U.

We also include several other structural factors elucidated by the literature. We measure this by the extent to which politics in a region is polarized and/or competitive. From regional elections data¹², we calculate several measure of elite, political competition. First, we capture the extent to which regional parliamentary elections are competitive, based on a common measure from the literature on party competition – the vote percent difference between the two largest parties in a given election (Jackman 1987)¹³. Second, we create a regional measure of party fractionalization. This is calculated using a Herfindal index, which essentially elucidates the likelihood of randomly drawing out two members of parliament (MP) of the same political party, with scores ranging from '0' to '1'. Scores of '0' imply that all MP's are of their own party, while a score of '1' implies that all MP's belong to the same party, thus we take 1-Herfindal to render higher numbers equaling more fractionalization.

Finally, we control for the level of economic development is captured by taking the average logged GDP per capita income (averaged) from 2007-2009 (Eurostat). We also control for whether or not a region is a capital region as well as regional size, both in terms of population and area, with a measure of population density (Eurostat) from 2010, logged. Further, since several of the countries are federal, or semi federal with some regions having asymmetrical powers relative to others (e.g. Pais Vasco in Spain, Sicily or Bolzano in Italy for example) we control for whether the region is autonomous (0/1).

With respect to our sample and methods, as stated, our sample is derived from a recent survey of over 85,000 individuals in 212 so called NUTS 1 and NUTS 2 regions for 25

¹² Data taken from: <http://www.parties-and-elections.eu/>

¹³ In the case of some regions, primarily in Italy where parties announce prior to Election Day other parties with whom they will form a coalition, we take the difference between the two largest pre-election coalition blocs.

European countries¹⁴. Due to data limitations at the regional level, countries like Ukraine, Turkey and Serbia are dropped from most models. For models testing QoG, inequality (gender), and diversity, we have up to 189 regions from 21 countries. Data on wage inequality, and civic engagement is more limited, and thus several countries drop out reducing the number of regions in these models.

Moreover, when testing the variables of political fractionalization and competitiveness along with civic engagement, we have data for only ‘politically relevant regions’, (with popularly elected legislatures and/or executives at the sub-national level for which we have a measure of social trust) which drops the number to 116 regions at the politically significant NUTS 1 and NUTS 2 level. ‘Politically relevant regions’ are coded as all regions in Italy, Germany, Spain, Denmark, Belgium, Poland, France, Austria and three regions from the UK – Scotland, Wales and Northern Ireland.

Regional Level Analysis: Results

The data is spatial and the dependent variable is continuous and OLS estimation is employed. To attempt to address issues of endogeneity/ reverse causality, we take all independent variables temporally prior to our measurement of TRUST¹⁵. Diagnostic checks show that in many cases, the data is heterogeneous – in particular with several of the key variables, such as QoG or inequality – with much more variation in the dependent variable at low levels of the key explanatory factors than at high levels. This can of course be driven by sub-population differences (e.g. countries) and thus we control for country fixed effects. Yet in several models, a Breusch-Pagan / Cook-Weisberg test for heteroskedasticity¹⁶ shows that problems associated with heteroskedasticity remain. For reasons of efficiency, we run models using Huber White robust standard errors, which relaxes the assumption that the errors are independent and/or identically distributed. Table 1 below shows the regional level estimations.

¹⁴ A full list of regions in the sample is in Appendix A. NUTS refer to ‘Nomenclature of territorial units for statistics’, and are EU statistical regions, for more information, see:

http://epp.eurostat.ec.europa.eu/portal/page/portal/nuts_nomenclature/introduction

¹⁵ See the appendix for the dates of measurement for each variable.

¹⁶ STATA post-estimation command ‘estat hettest’

TABLE 1, THE IMPACT OF REGIONAL LEVEL QOG ON LEVELS OF SOCIAL TRUST

| Dep Var = TRUST, 2013 | Baseline | Baseline | Civ. Eng. | Civ. Eng. | Inequality | Inequality | Political | Political | Diversity | Diversity |
|----------------------------------|----------|----------|-----------|-----------|------------|------------|-----------|-----------|-----------|-----------|
| I. Regional QoG | 0.05*** | 0.04*** | 0.04*** | 0.04*** | 0.04*** | 0.04*** | 0.04*** | 0.04*** | 0.03*** | 0.04*** |
| EQI (2010) | (0.016) | (0.008) | (0.01) | (0.01) | (0.01) | (0.008) | (0.01) | (0.01) | (0.008) | (0.01) |
| II. Civic Engagement | | | | | | | | | | |
| Reg. voter turnout | | | 0.001 | | | | | | | |
| | | | (0.0008) | | | | | | | |
| Civic participation index | | | | 0.27 | | | | | | |
| | | | | (0.29) | | | | | | |
| III. Inequality | | | | | | | | | | |
| Wage Inequality | | | | | -0.13 | | | | | |
| | | | | | (0.19) | | | | | |
| Gender Inequality | | | | | | -0.001 | | | | |
| | | | | | | (0.01) | | | | |
| IV. Political Environment | | | | | | | | | | |
| Party Fractionalization | | | | | | | 0.11 | | | |
| | | | | | | | (0.07) | | | |
| Competition | | | | | | | | -0.002** | | |
| | | | | | | | | (0.001) | | |
| V. Ethnic Diversity | | | | | | | | | | |
| Non-EU born | | | | | | | | | -0.005 | |
| | | | | | | | | | (0.01) | |
| % non-native | | | | | | | | | | 0.001 |
| | | | | | | | | | | (0.003) |
| Control variables | | | | | | | | | | |
| GDP p.c. (logged) | 0.11*** | 0.09*** | 0.10*** | 0.12*** | 0.08*** | 0.09*** | 0.11*** | 0.12*** | 0.09*** | 0.12*** |
| | (0.02) | (0.02) | (0.03) | (0.03) | (0.02) | (0.03) | (0.03) | (0.03) | (0.02) | (0.03) |
| Capital | -0.02 | -0.03** | -0.02 | -0.002 | -0.03* | -0.03 | 0.004 | 0.01 | -0.03* | 0.01 |
| | (0.04) | (0.015) | (0.02) | (0.02) | (0.018) | (0.02) | (0.02) | (0.03) | (0.017) | (0.03) |
| Pop. Density (logged) | 0.0004 | -0.0007 | -0.01* | -0.02** | -0.0004 | -0.0006 | -0.01** | -0.02** | -0.0005 | -0.02** |
| | (0.002) | (0.005) | (0.006) | (0.006) | (0.005) | (0.0005) | (0.005) | (0.007) | (0.0005) | (0.01) |
| Autonomous | 0.09*** | 0.018 | 0.01 | 0.004 | 0.01 | 0.02 | 0.005 | 0.02 | 0.02 | 0.01 |
| | (0.03) | (0.013) | (0.01) | (0.01) | (0.01) | (0.015) | (0.01) | (0.02) | (0.02) | (0.01) |
| Constant | -0.65*** | -0.32 | -0.75*** | -0.77** | -0.09 | -0.33 | -0.67** | -0.62** | -0.35 | -0.83** |
| | (0.23) | (0.24) | (0.30) | (0.37) | (0.33) | (0.25) | (0.27) | (0.32) | (0.25) | (0.37) |
| Obs | 189 | 189 | 127 | 95 | 146 | 182 | 116 | 95 | 183 | 91 |
| Countries | 21 | 21 | 10 | 7 | 14 | 20 | 9 | 7 | 20 | 7 |
| R2 | 0.35 | 0.94 | 0.93 | 0.90 | 0.92 | 0.93 | 0.92 | 0.92 | 0.94 | 0.89 |
| Country fixed effects | no | Yes | yes | yes | yes | yes | yes | yes | yes | yes |

Note: Robust, Huber White standard errors in parentheses. Dependent variable is TRUST, and is bound between 0-1, measured as the proportion of respondents in each region who answered that "Most people can be trusted". All models were re-run using hierarchical specification allowing for random country-level effects (xtmixed) with no distinguishable differences to report. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$

We begin with two baseline models – one with QoG and control variables without country fixed effects to examine the impact of QoG on trust across all regions throughout our European sample, and the second to account for variations of TRUST within countries¹⁷. The impact of regional level institutions on variations in TRUST both EU wide and within countries is evident – even when taking into account regional wealth, size (density), capital region and autonomous status.

In the models that follow, the QoG hypothesis is tested against measures of civic engagement, inequality, the region's political environment and diversity. We find that when accounting for QoG, as well as our controls from models 1 and 2, that although measures of civic participation and inequality are in the expected direction, their effects are negligible. When testing the effects of the party environment in political relevant regions, we find that less competitive regions have lower values of TRUST on average. For example, the marginal decrease in TRUST from a min to max change in Competitiveness, is -0.05 (predicted level from 0.46 to 0.41) or about an 11% marginal decrease, *ceteris paribus*. Average parliamentary fractionalization is just slightly under the 90% threshold of significance. In the final two models, we do not find that ethno-linguistic and/or foreign born heterogeneity explains trust patterns within countries. Given the many studies that have shown the opposite (using smaller sets of data and usually less precise measures of ethnic diversity, cf. Schaeffer 2013) this result is noteworthy. In all models however, we find a strikingly strong and robust effect of regional QoG. Consistent with the literature at the national level, wealth (GDP p.c.) is a robust, positive indicator of the dependent variable, while in several models we find that more densely populated, as well as capital regions exhibit less trust, *ceteris paribus*.

The impact of QoG on TRUST at the regional level is sizable – a predicted min (0.34) to max (0.49) change between two otherwise equal regions constitutes an increase of over 44%, *ceteris paribus*. Finally, post regression checks show no significant outliers when comparing actual levels of trust to the model residuals¹⁸.

¹⁷ The bivariate relationship between regional QoG and Trust can be seen in Figure 2A in Appendix A.

¹⁸ For model fitness and check for outliers in the model, see figure 1 in the appendix

Cross-Level Analysis: Does the Regional Context Affect Individual Trust Patterns?

Aside from explaining aggregate regional variation in trust, QoG at the aggregate level might also condition individual level trust patterns. We test such cross-level interactions here. There is some empirical evidence that individual attitudes of life satisfaction and membership in associations are conditioned by structural factors, such as inequality and electoral institutions (Freitag and Buhlmann 2009), yet we have little understanding of how institutions might impact the composition of individual level trust patterns vis-à-vis demographic characteristics, such as gender or age. One of the primary tenets of the QoG literature is that in high QoG regions/countries, citizens are treated impartially by the government authorities (Rothstein 2011). If trust is seen as an evaluation of the ‘moral standard of a respondent’s society’, then this should alter gaps in trust from superficial differences (gender, age, etc.) to more ‘achievement gaps’, such as education, employment and income. In addition, we anticipate that the impact of corruption perceptions and experiences on trust will be conditioned by the institutional context.

Due to the nature of the data in this section of the analysis, we elect hierarchical modeling, which has several advantages, namely being able to test explicitly whether individual level trust is conditioned by regional level effects even when controlling for country level variation; and being able to account for cross-level interactions. Another clear advantage in the multilevel design is that we are able to avoid problems of endogeneity between institutions and trust – the models elucidate the probability of two otherwise equal individuals will exhibit trust in different institutional environments.

The hierarchical tests account for several individual level factors that we suspect will relate with social trust based on previous empirical literature. First, we include standard demographic characteristics, such as gender, age, education level and whether the respondent has the mother tongue of the majority in her region. Second, we take into account the political ideology of the respondent on the standard left-right scale (self-placement). Third, whether the respondent is unemployed or not is expected to impact trust negatively. Finally, we take into account whether direct experience and/or general perceptions with corruption drive individual level variation in social trust. Regarding corruption experience, we code 0/1 whether or not the respondent paid a bribe involving any public ser-

vice in the past 12 months. With respect to general perceptions, we take the question ‘In your opinion, how often do you believe other people in your area use bribery?’ (0-10, never to very frequently). All data is taken from the latest round of regional governance survey data in 2013 (Charron, Lapuente and Rothstein 2013).

Methods – Explaining Individual Determinants of Trust in a Regional Context

As individuals are embedded in regions, and regions are embedded in countries, we have three distinct levels in our model. Simply accounting for regional and/or country dummy variables for individual level variation in an OLS model can lead to problems, due to the fact that the error terms of the lowest level unit (individuals) within the same group will still be correlated. This violates the assumption of independent observations and leads to an overestimation of significance of estimates at times (Hox 1995). OLS models with regional or country dummies also assume that the 2nd or 3rd level variables have an equal effect on the dependent variable across all individuals, which is not always the case.

Thus we elect to explain individual levels of trust in a hierarchical Logit model, with three levels, ‘i’, ‘j’ and ‘k’ to represent individual, regional and country levels respectively. The basic model used here is:

$$\text{Trust}_{ijk} = \beta_0 + \beta_1 x_{ijk} + u_{1jk} x_{ijk} + Z_{0k} + u_{0jk} + e_{0ijk}$$

Where Trust_{ijk} is the log of the odds as a function of a set of individual level parameters (x_{ijk}) plus regional level random effects of the individual parameters ($u_{1jk} x_{ijk}$). Z_{0k} and u_{0jk} are the random level intercepts for the country and regional level respectively, while e_{0ijk} is the error term. In some cases, we test the levels of individual trust in politically relevant regions only (with data explained in section 3), thus reducing the number of observations in the sample. To maximize the number of observations and for the broadest possible generalizability, we then run only QoG and regional controls on individuals in the 21 countries from section 3. The sample thus somewhat violates the so-called ‘30/30 rule’ (which advocates at least 30 cases at each level, (Maas and Hox 2005)), thus we check for the effects of outliers in each model.

Using this specification, we test directly our hypothesis that differences in TRUST levels based on demographic factors will be conditioned on levels of QoG¹⁹. Due to the significance of regional variation in many cases for both trust (as we found in section 3) and QoG (see for example Charron, Dijkstra and Lapuente 2013), we elect to interact individual level traits with regional level QoG instead of the national level for more precise inferences.

Cross-Level Analysis: Results

Are individual level patterns of trust vis-à-vis certain categories (gender, age, income, etc.) different in high versus low QoG settings? To begin with, the multi-level results (with no interaction) demonstrates that the institutional context matters for individual level trust – comparing two individuals with otherwise similar demographic characteristics shows the probability of TRUST in a high QoG region is 0.45 while in a low QoG regions is 0.40. Yet a central question is what happens when individual factors are interacted with the regional QoG environment? As noted, we would expect that certain differences in social trust would be offset in high QoG settings, that is, where no one group feels systematically like they are being treated worse than any other. Therefore, individual demographic differences in the dependent variable should be highly conditioned by the regional level of QoG in which an individual is embedded. Below we test this notion explicitly²⁰.

In cases where the individual effects were negative on social trust, such as the coefficient for females or foreign-language speaking individuals, for example, we would expect to see a positive interaction term with QoG, meaning that differences between men and women, or native and second language speakers would be reduced the higher the level of regional QoG. This is because we should expect that trust between stereotypically ‘insiders’ (men, older citizen, native speakers, etc.) and ‘outsiders’ (women, young people, non-native speakers. etc.) would diminish. With respect to age or education, where the individual coefficients are positive (compared with young respondents or the least educated) we

¹⁹ It should be noted, that we ran several models without interaction effects to gain a general understanding of how individual traits are related with trust in general. In sum, we found that on average, females, the unemployed and those that spoke a different mother-tongue from the majority had lower trust on average. Income, age, education had positive relationships with trust, while urban respondents have lower trust than rural ones. In terms of ideology, center and center-left displayed more trust than center-right or far left, with far right showing the lowest trust levels.

²⁰ Before proceeding with hierarchical analysis, we ran an ‘empty’ model to test whether multi-level modeling was an appropriate design. We find that individual level variations in trust are significantly explained by differences in countries: by roughly 20%, which renders it clear that the individual level alone is not suitable for this analysis.

would expect that while all categories would increase as a function of QoG, the highest ‘achievers’ (highly educated, income, employed, etc.) would display even higher trust. We also test whether QoG conditions political difference in social trust (e.g. self-ID ideology), and the extent to which trust is impacted by perceptions and experience with corruption is conditioned by QoG.

According to our hypothesis, individuals in relatively well performing regions within certain countries will display higher levels of trust, and that variations driven by demographic differences among individuals who ‘trust others’ will be minimal, while in poorer performing regions, the levels of trust should be lower and more polarized along the lines of various demographic groups.

TABLE 2, PREDICTED PROBABILITIES (TRUST=1), WHOLE SAMPLE: INTERACTION EFFECTS WITH REGIONAL QOG

| Variable | | Low QoG | High QoG |
|----------------------------------|--------------------|---------|----------|
| Baseline (no interaction) | | 0.40 | 0.45 |
| Gender | Female | 0.35 | 0.45 |
| | Male | 0.41 | 0.44 |
| Age | 18-29 | 0.34 | 0.47 |
| | 30-44 | 0.41 | 0.44 |
| | 45-64 | 0.42 | 0.45 |
| | 65+ | 0.44 | 0.45 |
| Education | below secondary | 0.31 | 0.37 |
| | Secondary | 0.37 | 0.41 |
| | university/college | 0.45 | 0.47 |
| | post-grad | 0.42 | 0.60 |
| Income | Low Income | 0.38 | 0.40 |
| | Middle Income | 0.41 | 0.44 |
| | High Income | 0.43 | 0.51 |
| Population | Rural | 0.39 | 0.47 |
| | 10k-100k | 0.41 | 0.45 |
| | 100k-1m | 0.42 | 0.45 |

| | | | |
|-------------------------------|--------------|------|------|
| | 1m | 0.40 | 0.39 |
| Mother tongue | | 0.41 | 0.45 |
| Other language | | 0.47 | 0.39 |
| Political ID | Don't know | 0.35 | 0.40 |
| | Far Left | 0.39 | 0.44 |
| | Center Left | 0.41 | 0.51 |
| | Center | 0.41 | 0.45 |
| | Center Right | 0.41 | 0.44 |
| | Far Right | 0.40 | 0.34 |
| Corruption Perceptions | Never | 0.44 | 0.57 |
| | Frequent | 0.27 | 0.25 |
| Corruption Experience | No | 0.40 | 0.47 |
| | Yes | 0.41 | 0.32 |
| Unemployed | | 0.40 | 0.40 |
| Employed* | | 0.41 | 0.46 |

*Note: predicted probabilities of Trust=1 reported from logit regression with country fixed effects and clustering for regions. In all models sample size is 71,001 for 189 regions. Control variables include gdp p.c. (log), population density (log), and capital and autonomous regions. *Employed includes students and pensioners. All models re-run with hierarchical logit (xtmelogit) and three levels, with differences being insignificant from those reported.*

For the sake of space, we report only the predicted probabilities of the individual interactions setting regional QoG to low and high sample values²¹. We find several noteworthy effects, consistent with our predictions. First, when considering the differences in social trust for ‘personal’ demographic differences (age and gender) we find that the disparities among groups in their level of social trust widen as the level of QoG decreases. For example, the difference in probability between females and males in ‘trusting others’ in low QoG settings is about 13%, while that gap all but disappears in high QoG contexts. We find a similar dynamic with age, as the probability of a 65+ aged person is about a third more likely to ‘trust others’ than a respondent 18-29, while age differences are negligible in

²¹ Predicted probabilities obtained by using the post regression command, ‘margins’. Control variables include regional level GDP per capita (log), population density (log), capital region, autonomous region and controlling for random country effects, along with all individual level variables from Table 3. Full results can be obtained by request to the authors.

high QoG regions (with young people actually trusting slightly more, yet the difference is negligible).

In other cases we see gaps in TRUST widen as a function of QoG. For example, with both education and income; while there is a trust-gap between high and low educated/wage earning individuals in low QoG settings, the gap widens significantly in high QoG ones. With regard to unemployment, there is a 7% gap between unemployed and employed respondents in high QoG regions, while no gap in low QoG regions. In low QoG settings, there are essentially no differences in social trust between people living in rural area, towns, or large cities, while in high QoG regions, we find a clear ‘trust gap’ between urban and rural citizens – with less populous regions more likely to ‘trust others’. Finally, non-native speakers become less trusting in high QoG areas, a result that warrants further research.

As regards to political attitudes, we find two noteworthy results. One, political ideology does not determine differences in social trust in low QoG settings, yet we do find that all self-placed respondents are significantly higher than those that ‘did not know’ where they stood on the left-right scale. Yet, all groups are more trusting (including ‘don’t know’) as a function of QoG except for extreme right respondents, which actually trust less in high QoG settings compared with low QoG. One explanation could be that high trust countries in this sample tend to be the most social democratic (e.g. Scandinavia and Netherlands) that have been dominated by center-left politics for several generations.

Finally, we look at interactions between regional QoG and individual corruption perceptions and experiences and whether the respondent is unemployed or not for levels of social trust. First, the results show that corruption perceptions and experiences play a highly significant role in predicting whether someone exhibits general social trust or not – and that both aspects (perceptions or experience) erode trust levels in high QoG context in particular. In comparing two otherwise similar individual as regards to perceptions, we find that those who believe ‘others in their area never engage in corruption to obtain public services’ to be more trusting of those who believe corruption occurs frequently irrespective of QoG. Yet the gap widens significantly as a function of regional QoG (from 0.17 to 0.32) – that is to say the individual level perception that corruption is rampant is ‘stronger’ than the regional context.

With respect to corruption experiences (e.g. self-reported bribery), we find a very powerful interaction effect. All things being equal, the probability of having social trust for an individual with no direct corruption experience increases as a function of regional level QoG (from 0.40 to 0.47). However, citizens that have paid a bribe in high QoG region are much less likely to exhibit social trust than even citizens who have first-hand experience with corruption in low QoG regions (from 0.47 to 0.32). In low QoG regions moreover, we find a somewhat depressing result – there is no difference in the propensity for social trust between those that have direct experience with corruption and those that do not – both are only about 40% likely to ‘trust others’. This shows how quickly corruption can diminish an individual’s trust even for those who live in a high QoG region. Figures 2 and 3 summarize several of our cross-level interaction results visually.

Summary and concluding remarks

In this study, we make two significant empirical contributions to the literature. First, we test several of the main theoretical propositions on what explains variations in social trust using novel data collected by the authors, which sampled on the sub-national level in European countries. With the aid of a newly collected regional dataset; the largest survey to date capturing levels of QoG and social trust, and with register and other data capturing the structural variables for the regions, we have tested our propositions empirically at both the regional and individual levels. We tested the theory of the relation between the quality of government (QoG) institutions and social trust against several other theoretical propositions (such as the effect of economic inequality, civic participation, ethnic diversity and political environment). Our central finding is that QoG is a highly robust predictor of aggregate levels of social trust at the regional (sub-national) level, both within and across countries. That previous research has found support at the national level that low-corrupt, high QoG institutions are associated with higher levels of social trust across countries is therefore strengthened by these findings from the sub-national level. We would argue that the regional lens we have been able to use is an even better test of the theory since cultural and institutional differences that are difficult to capture in cross-country tests are ‘naturally’ controlled for when comparing regions within countries. We also confirm results from several other studies showing that activity and membership in voluntary associations has negligible effects on the propensity for individuals to trust other people. More surprising is that the effects of social inequality and ethnic diversity on social trust are negligible when

controlling for the level QoG. Since these factors have been given much attention in previous research on social trust, our results thus call for further investigations.

Secondly, we investigated cross-level interactions; namely whether differences in trust based on individual-level characteristics, experiences and attitudes are conditioned by the level of regional QoG. Here the most general finding is that differences in social trust that can be attributed to ‘personal’ demographic differences (such as age and gender) become more pronounced among individuals as the level of QoG in the region decreases. The implication is that with high levels of QoG, social cleavages that are based on such “personal” demographic factors should be easier to handle by various public policies, and vice versa in societies with high levels of QoG. A high level of QoG can therefore be seen as a requirement for handling suspicion about low trustworthiness between different social groups. Simply put, while the level of social trust between men and women and between young and old vary considerably in low QoG regions, the differences become insignificant.

Our results give strong support to the individual-level theory launched by Rothstein & Eek (2008) that people that believe that there is a high level of corruption in society are likely to mistrusting “other people in general”. They also confirm the parallel causal mechanism, namely that people who perceive public officials to be fair and honest also have a higher propensity for interpersonal trust (cf. Rothstein 2005). These results are quite strong: People that believe that “others in their area never engage in corruption to obtain public services” are twice as likely to trust others compared to those that believe that others engage in corruption frequently. Moreover, for high QoG regions, citizens who believe that corruption is a rare thing are almost three times as likely to trust others as those believing corruption is rampant in their region. In addition, our results show that social trust levels are equally low among people who think that corruption is a common practice, irrespective of regional QoG. As for experiences of corruption, our results show the existence of a very powerful interaction effect. The likelihood that an individual that has not experienced corruption ‘thinks other people can be trusted’ increases significantly, given that he or she lives in a high QoG region. A parallel finding is that citizens that have been engaged in corruption but who live in high QoG regions are much less likely to trust other people compared to citizens who have been paying bribes but who live in a low

QoG region. For us, this is maybe the most convincing result for the corruption-social trust theory.

For future research, we would like to underline that we are convinced of the many positive and socially valuable results that the social capital research agenda has produced. However, if our (and several others) results are correct, investing in a vibrant civic society is not the surest way of increasing social capital. This is an important lesson, not least for many international aid organizations that have put support to voluntary associations high on their agenda, but also in a developed area of the world, Europe, where social trust varies immensely and is surprisingly low on average. Instead, if we are correct, we need to increase our efforts in both defining what “quality of government” is, how to measure this and, most importantly, how it can be

REFERENCES

- Alesina, Alberto, Edward L. Glaeser, and B. Sacerdote. 2001. "Why doesn't the United States have a European-style welfare state?" *Brookings Papers on Economic Activity* (2):187-277.
- Armony, Ariel C. 2004. *The dubious link : civic engagement and democratization*. Stanford, Calif.: Stanford University Press.
- Berman, Sheri. 1997. "Civil Society and the Collapse of the Weimar Republic." *World Politics* 49 (3):401-429.
- Bjørnskov, Christian. 2009. "Economic Growth." In *Handbook of Social Capital*, ed. G. T. Svendsen and G. L. H. Svendsen. Cheltenham: Edward Elgar.
- Castiglione, Dario, Jan van Deth, and Guglielmo Wolleb, eds. 2008. *Handbook of Social Capital*. Oxford: Oxford University Press.
- Claiborn, Michele P, and Paul S Martin. 2000. "Trusting and joining? An empirical test of the reciprocal nature of social capital." *Political Behavior* 22 (4):267-91.
- Delhey, Jan, and Kenneth Newton. 2003. "Who trusts? The origins of social trust in seven societies." *European Societies* 5 (2):93-137.
- . 2004. "Social Trust: Global Pattern or Nordic Exceptionalism." Berlin: Wissenschaftszentrum Berlin für Socialforschung.
- . 2005. "Predicting cross-national levels of social trust: Global pattern or nordic exceptionalism?" *European Sociological Review* 21 (4):311-27.
- Dinesen, Peter Thisted. 2013. "Where You Come From or Where You Live? Examining the Cultural and Institutional Explanation of Generalized Trust Using Migration as a Natural Experiment." *European Sociological Review* 29 (1):114-28.
- Easterly, William, and Ross Levine. 1997. "Africa's Growth Tragedy: Policies and Ethnic Divisions." *The Quarterly Journal of Economics* 112 (4):1203-50.

- Eger, Maureen A. 2010. "Even in Sweden: The Effect of Immigration on Support for Welfare State Spending." *European Sociological Review* 26 (2):203-17.
- Encarnación, Omar G. 2003. *The Myth of Civil Society. Social Capital and Democratic Consolidation in Spain and Brazil*. New York: Palgrave/Macmillan.
- Freitag, Markus, and M. Buhlmann. 2005. "Political institutions and the formation of social trust. An international comparison." *Politische Vierteljahresschrift* 46 (4):575-86.
- Gesthuizen, Maurice, Tom van der Meer, and Peer Scheepers. 2009. "Ethnic Diversity and Social Capital in Europe: Tests of Putnam's Thesis in European Countries." *Scandinavian Political Studies* 32 (2):121-42.
- Habyarimana, James, Macartan. Humphreys, David N. Posner, and Jeremy. M. Weinstein. 2007. "Why does ethnic diversity undermine public goods provision?" *American Political Science Review* 101 (4):709-25.
- Helliwell, John F. 2006. "Well-being, social capital and public policy: What's new?" *Economic Journal* 116 (510):C34-C45.
- Herreros, Francisco. 2004. *The Problem of Forming Social Capital: Why Trust?* New York: Palgrave/Macmillan.
- Keefer, Philip, and Stephen Knack. 2005. "Social Capital, Social Norms and the New Institutional Economics." In *Handbook of New Institutional Economics*, ed. C. Menard and M. M. Shirley. Amsterdam: Springer 701-725.
- Kumlin, Staffan, and Bo Rothstein. 2010. "Questioning the New Liberal Dilemma: Immigrants, Social Networks and Institutional Fairness." *Comparative Politics* 41 (1):63-87.
- Leung, Ambrose, Cheryl Kier, Tak Fung, Linda Fung, and Robert Sproule. 2011. "Searching for Happiness: The Importance of Social Capital." *Journal of Happiness Studies* 12 (3):443-62.
- North, Douglass C. 1998. "Economic Performance Through Time." In *The New Institutionalism in Sociology*, ed. M. C. Brinton and V. Nee. New York: Russell Sage Foundation.

- Putnam, Robert. 1993. *Making Democracy Work: Civic Traditions in Modern Italy*. Princeton: Princeton University Press.
- Richey, Sean. 2010. "The Impact of Corruption on Social Trust." *American Politics Research* 38 (4):676-90.
- Robbins, Blaine G. 2011. "Neither government nor community alone: A test of state-centered models of generalized trust." *Rationality and Society* 23 (3):304-46.
- Rothstein, Bo, and Daniel Eek. 2009. "Political Corruption and Social Trust - An Experimental Approach." *Rationality and Society* 21 (1):81-112.
- Rothstein, Bo, and Eric M. Uslaner. 2005. "All for All. Equality, Corruption and Social Trust." *World Politics* 58 (3):41-73.
- Schaeffer, Merlin. 2013. "Ethnic diversity, public goods provision and social cohesion. Lessons from an inconclusive literature." Berlin: WZB Social Research Center, Discussion paper SP VI! 2013.103.
- Stolle, Dietlind. 2003. "The Sources of Social Capital." In *Generating Social Capital: Civil Society and Institutions in a Comparative Perspective*, ed. M. Hooghe and D. Stolle. New York: Palgrave/Macmillan.
- Svendsen, Gert T., and Gunnar L. H. Svendsen. 2009. *Handbook of social capital : the troika of sociology, political science and economics*. Cheltenham: Edward Elgar.
- Uslaner, Eric M. 2002. *The Moral Foundation of Trust*. New York: Cambridge University Press.
- . 2008. *Corruption, inequality, and the rule of law : the bulging pocket makes the easy life*. Cambridge: Cambridge University Press.
- . 2012. *Segregation and mistrust : diversity, isolation, and social cohesion*. Cambridge: Cambridge University Press.
- Villoria, Manuel, Gregg G. Van Ryan, and Cecilia F. Lavena. 2013. "Social and Political Consequences of Administrative Corruption: A Study of Public Perceptions in Spain." *Public Administration Review* 73 (1):85-94.

Wollebæk, Dag, and Per Selle. 2003. "Participation and social capital formation: Norway in a comparative perspective." *Scandinavian Political Studies* 26 (1):67-91.

You, Jong-sun. 2012. "Social Trust: Fairness Matters More Than Homogeneity." *Political Psychology* 33 (5):701-21.