

How does Trust lead to Better Governance? An Attempt to Separate Demand and Supply Mechanisms

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Abstract:

This paper explores questions related to the association between social and political trust, and governance. In particular, the paper explores whether the trust-governance association is mainly a reflection of political responsiveness to voters' demand or the supply of honest politicians and bureaucrats. The findings suggest that the association reflects a causal influence of both types of trust on different aspects of governance.

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1. Introduction

One of the most important insights gained in the study of economic development in the last few decades is that the quality of countries' 'governance' is an important source of economic growth. The importance of various aspects now considered part of governance has been known for centuries – Adam Smith, John Stuart Mill and Friedrich Hayek for example all emphasized the protection of property rights – but the academic attention only grew strong after proxies were developed in the mid-1980s. A long literature has since documented that various elements of governance have clear economic effects. For example, corruption has been found to affect investments and growth (Mauro, 1995; Mo, 2001; Lambsdorff, 2003), Hall and Jones (1999) showed how an alternative measure of governance termed 'social infrastructure' affects total factor productivity, and a string of studies have documented the substantial growth-effects of overall measures of governance (Kaufman et al., 2002; Dollar and Kraay, 2003; Rodrik et al., 2004).

What the concept of governance covers is, on the other hand, not very clear and neither is the question why some countries are better governed than other. The popular internet encyclopaedia Wikipedia defines governance as "the processes and systems by which an organization or a society operates",¹ which is, of course, an annoyingly broad and imprecise definition. Keefer (2004, p. 4) acknowledges that governance is not an easy concept to define, but stresses that most definitions encompass "the extent to which governments are responsive to citizens and provide them with certain core services, such as secure property rights and, more generally, the

¹ The English version of the encyclopaedia, at the time of writing covering about a million entries, can be found at http://en.wikipedia.org/wiki/Main_Page.

rule of law; and the extent to which the institutions and processes of government give government decision makers an incentive to be responsive to citizens” or at least one of the two concepts. Alternatively, Kaufmann et al. (2003, p. 2) emphasize three aspects of governance, “(1) the processes by which governments are selected, monitored and replaced, (2) the capacity of the government to effectively formulate and implement sound policies, and (3) the respect of the citizens and the state for the institutions that govern economic and social interactions among them”. Since the concept of governance is so broad, no single indicators is therefore likely to capture the entire concept. When dealing with the concept of governance, multiple indicators are therefore clearly needed although Keefer’s definitions stress only one underlying aspect, namely the responsiveness to voters’ demand for the rule of law, which falls under Kaufmann’s first heading.

Apart from the measurement issues, the important question of why some countries are better governed than others arises. Putnam (1993), in his seminal work on governance in the Italian regions, came to the conclusion that social capital, which he defined as trust, norms and networks, could explain a substantial part of the cross-regional variation. Later studies have in general confirmed that social trust – the degree to which people believe that strangers can be trusted – is associated with the quality of governance while other elements of Putnam’s social capital concept are not. For example, trust is significantly associated with corruption (Putnam, 2001; Uslaner, 2002, 2004; Bjørnskov and Paldam, 2004), legal quality and bureaucratic efficiency (la Porta et al., 1997; Knack, 2002; Bjørnskov, 2006) and participation in the political process as measured by voter turnout (Knack, 1992).

However, the mechanisms connecting trust to better governance are most often left unspecified. Putnam favours explanations of why these associations come about that are consistent with Keefer's definition of governance. Yet the social capital literature does not focus exclusively on such effects of trust on political responsiveness but also mentions the possibility of an effect of having a larger supply of trustworthy people in high-trust countries and thus substantially more trustworthy bureaucrats, as would be stressed by traditional liberal political theory. As such, the basic structure of underlying mechanisms connecting trust and governance are unknown.

The main purpose of this paper is therefore to provide a first answer to a central question gone largely untested in the social capital literature, namely that of whether the association comes about through the demands of voters or the non-political behaviour of politicians and bureaucrats, i.e. through the supply of honest economic and political agents. This is done by regressing six different governance indicators on social trust, political competition and a set of control variables. The findings suggest that most of the effect is due to politicians in high-trust democracies being more responsive to voters' demands of 'good governance', yet there is also evidence for a supply effect arising from bureaucrats and other economic agents behaving more honestly in high-trust countries on specific forms of governance.

The rest of the paper is structured as follows. Section 2 outlines the different transmission mechanisms and the empirical strategy for separating demand and supply mechanisms. Section 3 presents the data to be used in section 4, which explores the strength of the theoretical demand channel. Section 5 concludes.

2. Mechanisms connecting trust and good governance

As stressed in the introduction, a number of studies emerging since Putnam's (1993) groundbreaking book have replicated his main finding, that social trust leads to better governance. Most of these studies have nevertheless focussed on the empirical association while leaving the transmission mechanisms largely unspecified. The question of this paper is whether this association mainly reflects a demand or supply effect of trust. This section therefore deals specifically with the conditions under which social trust leads to better governance.

Putnam (2000, p. 346) originally argued that the overall driving force between the association is the positive relation between social trust and 'civicness', such that more civic citizens are better at holding politicians accountable and politicians therefore "are more inclined to temper their worst impulses rather than force public protests". Finding evidence of the trust-governance association in US data, Knack (2002) likewise stresses demand-side explanations by pointing out three different mechanisms through which trust could affect governance.

Firstly, social trust could lead to higher accountability, as decisions have to be responsive to the preferences of the populace and voters are willing to punish politicians when they are sufficiently 'civic', which Putnam argues that high-trust voters are. If, for example, voters are trustworthy they may have a normative expectation that politicians are so too and consequently punish politicians who misuse their trust. If not, voters may care less about politicians' behavior and have weaker incentives to vote. As such, Knack (1992) finds that trust and voter turnout is significantly and positively correlated, indicating that trusting voters may be more prone to holding politicians accountable through the one action that is accessible to them all. Since Keefer's (2004) definition outlines governance more or less as political responsiveness, this would in his view be

the only logically possible mechanism. Putnam's outline of a theory thus rests on the trust and trustworthiness of voters. However, most other definitions are broader, which gives rise to alternative mechanisms connecting trust and governance.

Secondly, Knack (2002) presents evidence suggesting that across the US states trust levels are associated with the likelihood of introducing policy innovations. A potential explanation is that trustworthy politicians are better at credibly signaling the objective necessity of innovations and thereby avoiding skepticism among the electorate. On the other hand, mistrusting voters may be more prone to see ulterior motives behind politicians' desire to introduce policy innovations. Contrary to Putnam's explanation above, this alternative thus rests mainly on the perceived trustworthiness of politicians for which social trust may be the best guess for voters with relatively little specific information of politicians.²

Thirdly, consensus or agreement is least likely when political positions are polarized, which could slow down institutional development; yet, even in such situations countries with high trust are likely to experience more situations in which consensus is reached. This effect comes about as both adversely affected voters and politicians will have confidence that they are compensated through decisions in other policy areas or future decisions for costs born by them due to current policy decisions. In other words, by making intertemporal logrolling more likely in situations where politicians are more trustworthy and voters are sufficiently civic to hold them

² It should be noted that this argument does not depend so much on voters' confidence in political institutions as their trust in individual politicians. Hence, the degree to which they believe that most people can be trusted comes to be the best guess for politicians' trustworthiness whenever voters are rationally ignorant, as first stressed by Downs (1957).

accountable, social trust may help to overcome a collective action problem in political negotiations.

However, in a contribution that predates the social capital literature by almost two decades, Kenneth Arrow (1972, p. 357) suggested the alternative supply-side explanation of the trust-governance association by noting that “the system [of judges and police] would itself disappear if on each occasion they were to sell their services and decisions [...] To the extent that it is incomplete, it must be supplemented by an implicit or explicit social contract“. Arrow thus stressed the importance of trust in the implementation of policies instead of the decision process generating those policies. Through a supply effect, politicians and economic agents of all sorts are therefore more likely to honor this contract the higher the general trust level is, with the consequence that trust leads to a higher supply of quality decisions in the bureaucracy and the political process and hence better governance regardless of the demands of voters. In addition, there is the possibility that honest and trustworthy bureaucrats may be more effective in implementing policies irrespective of the quality of those decisions.³ Arrow’s explanation thus rests on a liberal tradition in political theory dating back to Locke, which stresses the importance of trustworthy bureaucrats irrespective of the structure and quality of the political process making the best of what they get.

The a priori theoretical validity of both arguments therefore does not provide much direction as to which type of transmission mechanism is the more likely but

³ Readers fortunate enough to have seen the BBC show “Yes Minister”, which ran from 1980 to 1988, may even suspect that civil servants might sometimes implement policies in ways to avoid less desirable outcomes. The series gave countless entertaining examples of that kind of behaviour, prompting Lady Margaret Thatcher to say that “Its closely observed portrayal of what goes on in the corridors of power has given me hours of pure joy”.

broadly splits the mechanisms into a demand family and a supply family. As argued in the following, a way to provide an empirical answer to this question is to explore the effects of political competition, which makes it possible to distinguish between demand and supply effects of social trust. Political competition may have effects in itself.

Adserá et al. (2003) and Alt and Lassen (2003) for example find that increased political competition may be effective in combating corruption, and Bjørnskov (2006) likewise finds that the overall quality of governance is negatively associated with the share of seats in parliament held by the largest party.

However, it may also have an effect in conjunction with social trust that would appear statistically as parameter heterogeneity of the estimated effect of trust. By exploring potential parameter heterogeneity, the separation of demand and supply mechanisms can rest on a fairly simple argument: if social trust leads to better governance by making politicians more responsive to voters' demands and preferences or improving the cooperation of politicians with disjunct positions, it should be expected that this effect becomes more pronounced in countries with a more competitive political situation. In other words, if the trust-governance association purely reflects a demand effect, the effect should be virtually zero in countries with sufficiently limited political competition, since politicians in such countries have only very weak incentives to respond to voters' specific demands and little incentive to negotiate and cooperate with the political opposition. Likewise, the effect should be comparatively strong in countries with a high degree of political competition where the political returns to social trust could be substantial. If, on the other hand, the social trust effect does not depend on the degree of political competition it can be taken as evidence of a supply effect since voters' demands will be met (or not met) irrespective of how 'civic'

voters and politicians are. Hence, a possible way to separate demand and supply mechanisms could be to explore whether the coefficient estimate on social trust varies with political competition, i.e. if the parameter is systematically heterogeneous. The following section describes the data used to estimate these effects.

3. Data

As noted in the introduction, 'governance' is a very broad concept that probably cannot be captured in a single variable. I therefore use six different indicators of governance that can be divided into three categories: two measures of overall governance, two measures of specific types of governance, and two measures of governance failures.

Firstly, I use two indicators intended to measure the overall quality of governance. I employ a variable termed 'overall governance', which is the average of all six governance indices in Kaufmann et al. (2003) developed at the World Bank. This variable, consisting of 'rule of law', 'control of corruption', 'political stability', 'government effectiveness', 'voice and accountability' and 'regulatory quality', comes to measure aspects covering all relevant areas of the governance concept. All are results of factor analysis and are therefore distributed normally between -2.5 and 2.5. These indices are intended to capture different aspects of governance, yet the correlations between them within this sample are .81-.94, indicating the difficulty of separating them in a statistically meaningful way. As Bjørnskov (2006) identifies the same problem, taking a simple average therefore seems the most reasonable way of using the indices. The much-used alternative measure of overall governance included here, termed 'economic freedom', derives from the Fraser Institute. As the Kaufmann measure, this index is also a composite of different subindices meant to capture the size of

government, legal quality, regulatory quality, access to sound money, and freedom to trade internationally (Gwartney and Lawson, 2004). The index is distributed from 1 (no freedom) to 10 (perfect freedom); hence, I use a logistic transformation of the original index in order to avoid the potential problems of having a variable defined on a closed scale.

Insert Table 1 about here

Secondly, most conceptions of governance include the quality of e.g. the legal system, regulations, the public bureaucracy etc. The indicator ‘legal quality’ derives from the Fraser Institute and is often simply used as a measure of the security of property rights although it consists of indices capturing judicial independence, the impartiality of courts, protection of intellectual property, military interference in the rule of law and the political process, and integrity in the legal system. Hence, this dimension of governance is also much more narrowly and thus more precisely defined as the “protection of persons and their rightfully acquired property” (Gwartney and Lawson, 2004, p.6). As an alternative specific measure that is probably not to the same degree as the legal system within the reach of politicians, the Fraser Institute also publishes an index capturing the extent of regulations in business and the markets for financial services and labour, which I use as a measure of ‘regulatory quality’. Legal and regulatory quality thus capture outcomes of governance that in themselves might also be termed governance, as the institutions that the variables embody – courts, regulatory bodies and public bureaucracies - are used to govern society. As with the composite measure from the same source, I use logistic transformations of the original indices.

Finally, the lack of corruption and the lack of press freedom capture two aspects of governance failure. Corruption is one of the most discussed aspects of governance and is usually defined as the misuse of public office for private gains, a definition that is arguably much more precise than those of broader conceptions of governance (Treisman, 2000; see also Kurer, 2005). To measure corruption I use the average of the 2001-2004 scores of the Corruption Perception Index published by the German-based non-governmental organization Transparency International. This index has been published since 1995 and is by now the most frequently used indicator of corruption. The index is distributed between 1 (endemic corruption) and 10 (no corruption); hence the index is rated such that high values refer to little corruption and low values refer to much corruption and is therefore denoted 'lack of corruption' in the following. Using the average of the most recent years serves the purpose of smoothing out any effects of scandals and purely random measurement errors.

The alternative indicator of governance failure, press freedom, is measured by the Freedom House (2004) index, which is distributed from 1 (perfect freedom) to 100 (no freedom). Like corruption, this index thus measures the lack of press freedom, which can be conceptualized as a governance failure. Consistent with broad definitions of governance, both indicators are likely to capture aspects of the concept related to the decision-making process although in two different spheres of society, as bribes are most often given as attempts to bias administrative decisions in favour of the bribers and press freedom is often limited in order to protect politicians and civil servants from public disclosure of potentially illegal activities. As with the other indices, I use a logistic transformation of the original corruption and press freedom indices.

When measuring social trust I follow most of the literature in using the World Values Survey question “In general, do you think that most people can be trusted, or can’t you be too careful?”. The social trust scores used throughout the paper are the percentage of each population answering yes, which is often assessed to be a good indicator of what it is intended to measure.⁴ The variable is the average of all available observations from each country, which is valid as the trust scores appear to be stationary over time (Uslaner, 2002; Volken, 2002). It should be stressed that Iran and China are dropped as both countries are clear outliers in most analyses of the effects of trust.

To test the association between the two trust measures and the six governance indicators, I use a set of control variables listed in Table 1; all data sources are reported in the appendix. The choice of control variables is informed by what most previous studies have found to be important determinants of governance.⁵ The variables include the log to GDP per capita to control for the level for economic development, openness to trade to control for the assertion that openness mainly works through influencing governance (e.g. Rodrik et al., 2004), and a dummy for postcommunist countries as these countries have a somewhat special history. I also include a measure of political competition and its interaction with social trust to test for the strength of a demand channel. As political competition is here measured by the ten-year average Herfindahl

⁴ Knack (2001), Uslaner (2002) and Volken (2002) discuss the validity of the trust indicator. It should be stressed that a parallel literature deals with the issue of trust in political institutions (see Levi and Stoker, 2000).

⁵ On the determinants of various aspects of governance, see e.g. Ades and di Tella (1999), Brunetti and Weder (2003), Jain (2001), Paldam (2001), Treisman (2000), Uslaner (2002) for corruption; Adserá et al. (2003), Bjørnskov (2006), Keefer (2004), Keefer and Knack (2002), Knack (2002), la Porta et al. (1997), Rodrik et al. (2004) on other governance indicators.

index of the legislature, it must be kept in mind that lower values of the index imply more competition. All regressions in the following also include regional dummies for Asia, Latin America, North Africa and the Middle East, and Sub-Saharan Africa.

As noted above, separating demand and supply mechanisms may be equivalent to looking for parameter heterogeneity in the trust estimate and in particular whether the estimate varies with the degree of political competition. Testing this argument is simple as the baseline specification above only needs to be supplemented by a measure of political competition and its interaction term with social trust. If the interaction term proves to be significant it must necessarily be taken as evidence of a demand effect. Furthermore, if there is evidence that the effect of social trust at low levels of political competition proves to be negligible – i.e. there is no residual effect of trust – it can be surmised that the demand effect is exhaustive of the full effect of trust. An alternative simple test consists in splitting the sample in two halves, below and above the median political competition, and testing whether the coefficients on trust are equal.

Before proceeding to the regression analyses in the following section, Table 2 provides a first look at the association by reporting simple and partial correlations between the six governance indicators and their correlations with social trust (the bottom line). The table clearly shows that all six indicators are interrelated although to varying degrees. Moreover, parts of the correlations appear to be caused by all indicators being strongly correlated with economic development (log GDP per capita). Hence, while it seems safe to assume that the indicators approximately measure different aspects of the same overarching concept, the fairly moderate partial correlations also makes it reasonable to treat the measures as separate types of governance. The table also shows that all indicators have correlations with social trust

in the expected direction. The strongest associations seem to be with legal quality and the lack of corruption while the weakest are with regulatory quality and press freedom. As the simple picture conforms to previous literature – i.e. there is nothing ‘wrong’ with the data although the sample is somewhat larger than that employed by previous cross-country studies – the use of these data is a priori valid.

Insert Table 2 about here

However suggestive simple correlations can be, they are not evidence of any real effects; hence I proceed to formally estimating the main questions of this paper. For all governance indicators in the next section, I report estimates based on OLS using either the full sample or a sample consisting of democratic countries, defined as those having a score on the Gastil political rights index below four, as political competition only makes sense if politicians have real influence. In addition, I either report the results of an alternative estimation procedure, robust regression that iteratively downweights potential outlier observations or the results using a sample where outliers, defined as observations with a DFBeta associated with social trust of more than ± 1.5 standard deviations, are excluded. The former procedure deals with general outliers while the latter removes observations that may bias the estimate on social trust in either direction in order to ensure that single observations do not bias the results.

4. Empirical results

The results of regressing the two measures of overall governance on social trust, political competition and the set of control variables are shown in Table 3. The table

first of all shows the strong relation between good governance and economic development, as the logarithm to GDP per capita is associated with both economic freedom and overall governance. The estimates are of similar size, both indicating that a one standard deviation shock to GDP is associated with an improvement of governance of about half a standard deviation. In both cases is having a communist past a strong negative factor and openness to trade a strong positive factor although the latter result only holds for non-democratic countries.

Insert Table 3 about here

Turning to the variables of interest, social trust is significant in both baseline specifications although the effect is somewhat larger on economic freedom than the overall governance index from Kaufmann et al. (2003). When comparing the effects of trust to those of economic development, for example, a shock to social trust of ten percentage points is at the average equivalent to an increase in average income of roughly 2700 US\$ in the case of economic freedom and about 1500 US\$ in the case of overall governance. Political competition, on the other hand, is not individually significant in any specifications. When adding the interaction term between trust and competition, trust becomes insignificant when economic freedom is the dependent variable although its size is not affected. Hence, there seems to be no evidence to support a demand mechanism while the lack of significance when adding the interaction term should probably be attributed to multicollinearity that inflates the variance.⁶ As the

⁶ To avoid serious problems of multicollinearity, social trust and political competition have been centred. Even so, variance inflation factors are high when economic freedom is the dependent variable.

multicollinearity is reduced when only including democratic countries, social trust becomes significant at $p < .10$ while political competition and the interaction term remain individually and jointly insignificant. However, performing the alternative simple test by splitting the sample at the median political competition indicates the existence of a demand mechanism, as the trust coefficient in the sample of countries with much political competition is strongly significant at .012 while social trust is insignificant in the other half of the full sample. Splitting the sample to avoid multicollinearity thus suggests the existence of a demand mechanism for economic freedom.

Contrary to these results, trust is significant throughout when using overall governance, and adding an interaction term considerably increases the estimated effect. However, the demand mechanism appears to hold only for democratic countries where political competition and the interaction term jointly are strongly significant while they are not in the full sample. As the estimates indicate that the effect of social trust disappears when approaching a situation without political competition, they suggest that the association between trust and overall governance in democratic countries is entirely due to a demand mechanism since there is no residual effect attributable to a supply mechanism. The results pertaining to overall governance thus point unambiguously towards Putnamesque demand mechanisms.

Turning to the two more specific measures of governance, Table 4 replicates the effects of some of the control variables. Economic development is strongly associated with both legal and regulatory quality and postcommunist countries appear to suffer from lower legal quality, probably due to an as of yet incomplete transition from a socialist legal regime. Contrary to the popular findings in e.g. Rodrik et al. (2004), openness is not significantly associated with these measures. On the other hand, social

trust is significantly associated with both in the baseline specification, as is political competition for legal quality. The interaction effects are also strongly significant for this variable, indicating that at the average a 10 percentage point increase in social trust would lead to an improvement of .25, equivalent to an improvement of 22 percent of a standard deviation or an increase in average income of roughly 5800 US\$. It is worth noting that this finding is robust throughout and that the estimates again only support a demand mechanism. Consequently, for countries with very competitive political systems such as the Scandinavian states, the value of social trust could be quite substantial!

Insert Table 4 about here

Conversely, although the estimate translates into an average effect of similar size as that on legal quality, the association between social trust and regulatory quality does not appear to reflect a demand mechanism as political competition and the interaction term are neither individually nor jointly significant. Given that the estimate on social trust also fails to be significant in any specification including the interaction term, this association may be questionable although the lack of significance could once again be the effect of multicollinearity. Performing the alternative test yields a significant effect of trust in the half with politically competitive countries with a coefficient of .011 while the estimate is insignificant in the other half of the full sample. As such, there seems to be some evidence of a demand mechanism although it should be stressed that it could be entirely spurious due to the correlation between legal and regulatory quality.

Table 5 finally reports the results of using the two indicators of governance failure, corruption and press freedom. Once more, the estimates indicate that rich countries are far less likely to suffer from these types of governance failures. Postcommunist countries and countries open to trade also have less corruption problems although the latter association again does not hold for democracies. On the other hand, the effects of having a communist past are not robust in the case of press freedom and openness only appears to be a factor when applying the robust regression technique.

Insert Table 5 about here

Turning to the effects of social trust, trust and corruption are strongly correlated as found in previous studies (Bjørnskov and Paldam, 2004; Uslaner, 2004). The size of the estimate indicates that an improvement in trust of 10 percentage points would result in a reduction of corruption of about 14 percent of a standard deviation, equivalent to an increase in average income of approximately 3700 US\$. In addition, legal quality is also highly significant and also associated with trust. Adding the indirect effect through this channel brings the total effect of the trust improvement to 21 percent of a standard deviation (4800 US\$).

Unfortunately, it must be noted that the identification of effects pertaining to trust again breaks down in the case of the overall lack of corruption. The findings when using this index may seem inconclusive as neither social trust, political competition nor the interaction term are significant. However, this is a result of collinearity indicated by very high variance inflation factors associated with trust and the interaction term, making it necessary to perform the alternative test of the theoretical argument by

splitting the sample in two halves. When the sample is split at the median of the Herfindahl index and the association between trust and the lack of corruption is re-estimated using the two resulting even-sized subsamples, the difference between the trust coefficients is far from being significant. Hence, there is no indication that the effects of social trust on the overall lack of corruption are larger for countries with a higher degree of political competition. The only demand effect of trust on this variable must therefore logically be transmitted indirectly through the positive effects of the legal system. In other words, the evidence here does not confirm that the trust effect on the lack of corruption is entirely a supply effect, only that there is no direct demand effect that can be picked up by the present research design.

The picture, however, is different when looking at press freedom. When adding the interaction effects social trust becomes significant at $p < .05$ although not being significant when using the robust regression technique. However, when excluding outliers specific to the trust estimate as well as restricting the sample to including only democratic countries, trust is significant. Political competition and the interaction term also become jointly significant in both cases, which thus suggest a strong demand mechanism of social trust operating in democratic countries. At the extreme with no competition, trust has no effect on press freedom thereby rejecting a supply explanation while substantial at the other extreme. At the average political competition, a ten percentage point increase in social trust in fairly democratic countries translates into a 15 point improvement in press freedom, equivalent to 15 percent of a standard deviation, which is equivalent to an increase in average income of roughly 2500 US\$.

In total, the effects of social trust on governance seem mainly, but not exclusively, to be transmitted through the political process, depending on the degree of political

competition. There is no clear evidence of a supply effect of trust on other variables than the lack of corruption and regulatory quality while there are substantial indications of effects for legal quality and press freedom in democracies, and the evidence when using the overall governance indicator is inconclusive. What is more, even though one should be careful not to take the size of the estimates too seriously, the trust effects are in all cases equivalent to substantial increases in average income. The policy implications of these findings are discussed in the final section.

5. Conclusions and policy implications

A number of studies have since the mid-1990s shown that social trust is strongly associated with good governance, most of them interpreting this association as an effect of trust on governance. However, the literature has in general left the mechanisms generating this effect unspecified with the result that the policy implications drawn by authors have been almost purely speculative. It has been the starting point of this paper that when stating that trust and some indicator of governance are causally associated, it is necessary to specify both which governance dimension and which type of transmission mechanism is meant, as both supply and demand effects could potentially be in play. The paper has therefore attempted to clarify this point by exploring the potentially systematic parameter heterogeneity of social trust in governance regressions, operationalized by simply interacting trust with a measure of the degree of political competition.

Using six measures of either the quality of governance or governance failure, the paper first of all shows that the trust-governance association holds for all indices although not all appear ideally robust. In addition, in the case of legal quality political

competition exerts a significant effect, implying that countries with more competition will tend to have a fairer and efficient legal system, all other things equal. The findings in Alt and Lassen (2002) and Adserá et al. (2003) must therefore first of all be qualified, as political competition in itself only exerts a direct effect on specific aspects of corruption and governance. Noting that demand effects of social trust must logically depend on having a sufficient degree of political competition, adding an interaction term between trust and competition can be used to separate the two types of transmission mechanisms from trust to good governance.

The interaction terms quite clearly show that the associations between social trust and legal quality, overall governance, and press freedom are most likely to reflect demand side effects, as the effects of social trust on governance are stronger in countries characterized by high degrees of political competition while they approach zero when political competition is severely limited. As such, high-trust countries do not exhibit better governance if their political competition is sufficiently low to allow politicians to disregard voters' demands for such institutions. On the other hand, the associations between social trust and overall economic freedom, regulatory quality and corruption do not appear to depend on political competition, indicating that these associations are more likely to be driven by supply side mechanisms. In other words, for example, high-trust countries probably have less corruption as public officials in these countries are less inclined to accepting bribes.

From a purely scientific point of view, information on the mechanisms through which trust operate naturally is interesting, but making the distinction between demand and supply channels may also be of considerable importance for policy purposes. If trust mainly affects governance through the demand channel, it would imply that high-

trust countries invest more in improving governance as politicians respond more to voters' demands unless there is very limited political competition. If, on the other hand, trust mainly affects governance through a supply channel - i.e. that high-trust countries have more honest politicians and bureaucrats irrespective of their political incentive structures - it would not necessarily mean that such countries invest more in improving governance. Instead such investments might be cheaper compared to low-trust countries because social trust would have the effect of reducing transaction costs and bureaucratic waste.

Making this distinction consequently has implications for policy recommendations as to improving governance, not least in Africa where a majority of countries have been miserably governed for decades. The findings in this paper imply that democratization is not enough, as is sometimes the impression one gets from the media and international organizations. Instead, a sufficient degree of political competition can improve legal quality and thereby indirectly reduce corruption problems to the extent that voters perceive this as a salient problem. However, corruption outside the direct or indirect control of politicians may be an altogether different thing that must be combated in other ways. In other areas, increasing the political competition only has an effect to the extent that voters trust each other, i.e. any improvements in the structure of formal political institutions may depend crucially on the efficiency of informal institutions. As such, there is not one way to better governance although having a trusting population gives some countries a head start.

Appendix

Insert Table A1 about here

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Table 1. Descriptive statistics

	Mean	Std. Dev.	Minimum	Maximum	Obs.
Overall governance	.37	.94	-1.34	1.94	89
Economic freedom	6.69	1.02	4.13	8.80	80
<i>Log. transformed</i>	.75	.48	-.35	1.99	80
Legal quality	6.36	2.04	2.35	9.62	79
<i>Log. transformed</i>	.73	1.11	-1.18	3.23	79
Regulatory quality	6.13	.99	3.09	8.44	79
<i>Log. transformed</i>	.48	.44	-.80	1.69	79
Lack of corruption	4.74	2.47	.97	9.77	88
<i>Log. transformed</i>	-.03	1.28	-2.23	3.73	88
Press freedom	36.10	20.76	8	83	88
<i>Log. transformed</i>	-.69	1.02	-2.44	1.59	88
Log GDP per capita	8.96	.98	6.18	10.69	87
Openness	80.69	54.38	15.43	324.44	87
Political competition	.72	.23	.25	1.00	85
Political rights*	2.43	1.72	1.00	6.00	86
Postcommunist	.23	.42	0	1	87
Social trust	26.82	13.29	4.75	63.87	87

Note: the variable marked * is only used to separate democracies from autocratic countries.

Table 2. Correlations between governance indices

	1	2	3	4	5	6
1. Overall governance	1	.78 (.53)	.83 (.58)	.57 (.29)	.90 (.69)	-.84 (-.71)
2. Economic freedom		1	.63 (.27)	.68 (.52)	.77 (.51)	-.61 (-.31)
3. Legal quality			1	.66 (.49)	.83 (.60)	-.63 (-.31)
4. Regulatory quality				1	.59 (.36)	-.48 (-.24)
5. Lack of corruption					1	-.69 (-.36)
6. Lack of press freedom						1
Social trust	.54 (.26)	.46 (.19)	.63 (.42)	.39 (.16)	.62 (.42)	-.45 (-.18)

Note: Numbers in parentheses are partial correlations controlling for the log to GDP per capita.

Table 3. Effects of demand channel of social trust

	Economic freedom					Overall governance				
	All	RR	DFBeta	Democratic		All	RR	DFBeta	Democratic	
Log GDP per capita	.246*** (.050)	.245*** (.052)	.251*** (.069)	.262*** (.039)	.291*** (.049)	.567*** (.072)	.574*** (.079)	.627*** (.077)	.615*** (.054)	.607*** (.099)
Openness	.002** (.001)	.002** (.001)	.002** (.001)	.003*** (.001)	.000 (.001)	.003*** (.001)	.003*** (.001)	.002** (.001)	.003*** (.001)	.001 (.001)
Postcommunist	-.449*** (.120)	-.451*** (.123)	-.457*** (.142)	-.460*** (.101)	-.325*** (.119)	-.616*** (.192)	-.600*** (.197)	-.366** (.164)	-.565*** (.178)	-.245 (.149)
Social trust	.007** (.003)	.007 (.005)	.008 (.007)	.006 (.005)	.009* (.006)	.009** (.004)	.015** (.006)	.016** (.008)	.013* (.006)	.018** (.007)
Political competition	.164 (.146)	.164 (.147)	.180 (.173)	.182 (.123)	.146 (.153)	-.303 (.206)	-.304 (.206)	-.218 (.197)	-.338 (.206)	-.268 (.236)
Competition * trust		.001 (.011)	-.004 (.014)	-.002 (.010)	-.009 (.011)		-.011 (.017)	-.014 (.016)	-.004 (.013)	-.021 (.019)
Observations	79	79	79	68	63	85	85	85	75	64
Pseudo R square	.612	.607	-	.714	.624	.796	.794	-	.844	.836
F statistic	14.75	13.36	10.23	47.94	30.65	76.19	76.23	38.77	105.62	92.70
RMSE	.290	.292	-	.227	.251	.426	.428	-	.371	.346
Joint significance		.561	-	.851	.718		1.144	-	1.310	2.199***

Note: all regressions include a constant term and regional dummies. *** (**) [*] denotes significance at p<.01 (p<.05) [p<.10].

Table 4. Effects of demand channel of social trust

	Legal quality (logtrans)					Regulatory quality (logtrans)				
	All	RR	DFBeta	Democratic		All	RR	DFBeta	Democratic	
Log GDP per capita	.409*** (.117)	.444*** (.121)	.561*** (.114)	.464*** (.095)	.591*** (.097)	.166** (.074)	.172** (.074)	.192*** (.073)	.151** (.052)	.175** (.065)
Openness	.003 (.002)	.002 (.002)	.002 (.002)	.003** (.001)	-.001 (.001)	.001 (.001)	.001 (.001)	.001 (.001)	.001* (.001)	-.000 (.001)
Postcommunist	-.508** (.234)	-.449* (.246)	-.539** (.228)	-.342 (.228)	-.335* (.184)	-.116 (.149)	-.105 (.155)	-.209 (.145)	-.237* (.132)	-.177 (.129)
Social trust	.025*** (.006)	.042*** (.012)	.037*** (.011)	.055*** (.011)	.044*** (.012)	.009** (.004)	.012* (.007)	.009 (.007)	.012* (.007)	.009 (.006)
Political competition	-.879** (.334)	-.863** (.335)	-.664** (.276)	-1.109*** (.289)	-.713** (.335)	-.129 (.183)	-.127 (.185)	-.083 (.176)	-.213 (.145)	-.156 (.188)
Competition * trust		-.040 (.027)	-.039* (.022)	-.072*** (.022)	-.052* (.027)		-.007 (.015)	-.009 (.014)	-.012 (.016)	-.008 (.015)
Observations	78	78	78	67	64	78	78	78	69	63
Pseudo R square	.719	.725	-	.828	.810	.281	.273	-	.371	.272
F statistic	25.86	36.67	28.54	46.76	54.10	7.22	6.93	4.34	10.49	7.92
RMSE	.591	.584	-	.434	.489	.360	.362	-	.269	.316
Joint significance		4.646***	-	8.296***	5.247***		.345	-	1.083	.578

Note: all regressions include a constant term and regional dummies. *** (**) [*] denotes significance at p<.01 (p<.05) [p<.10].

Table 5. Effects of demand channel of social trust

	Lack of corruption (logtrans)					Lack of press freedom (logtrans)				
	All	RR	DFBeta	Democratic		All	RR	DFBeta	Democratic	
Log GDP per capita	.534*** (.119)	.540*** (.124)	.398*** (.103)	.569*** (.115)	.401** (.167)	-.438*** (.129)	-.457*** (.137)	-.646*** (.116)	-.492*** (.129)	-.477*** (.123)
Openness	.004*** (.002)	.004*** (.002)	.004*** (.001)	.005*** (.001)	.001 (.002)	.001 (.002)	.001 (.002)	-.003** (.002)	.001 (.002)	-.002 (.002)
Postcommunist	-.791*** (.231)	-.786*** (.233)	-.441*** (.194)	-.741*** (.219)	-.598*** (.224)	.638* (.326)	.596* (.333)	.284 (.248)	.598* (.324)	.121 (.201)
Legal quality	.379** (.155)	.375** (.158)	.583*** (.091)	.329** (.145)	.453** (.221)					
Social trust	.018*** (.006)	.020 (.017)	-.002 (.010)	.012 (.011)	.025 (.018)	-.010 (.007)	-.023** (.011)	-.018 (.012)	-.021** (.010)	-.021** (.009)
Political competition	-.295 (.304)	-.297 (.313)	-.086 (.243)	-.290 (.261)	-.352 (.303)	.463 (.326)	.467 (.316)	.389 (.299)	.651*** (.272)	.277 (.276)
Competition * trust		-.005 (.031)	.021 (.019)	.006 (.019)	-.005 (.032)		.029 (.027)	.031 (.024)	.026 (.021)	.028 (.023)
Observations	78	78	78	75	63	85	85	85	80	64
Pseudo R square	.829	.826	-	.841	.838	.535	.535	-	.573	.619
F statistic	33.74	32.21	43.95	35.94	36.78	29.67	27.81	15.49	29.70	13.15
RMSE	.536	.539	-	.47	.524	.705	.705	-	.647	.470
Joint significance		.497	-	.611	.610		1.326	-	1.834*	1.669**

Note: all regressions include a constant term and regional dummies. *** (**) [*] denotes significance at p<.01 (p<.05) [p<.10].

Table A.1. Data sources

Variable	Source and description
Lack of corruption	Transparency International, average of ratings between 2001-04. The indices are distributed from 0 (pervasive corruption) to 10 (no corruption) and can be downloaded from www.transparency.org .
Legal quality	Gwartney and Lawson (2002). "Legal structure" index distributed from 1 (no security of property rights) to 10 (full security).
Overall governance	Kaufmann et al. (2003). Average of six indices distributed between -2.5 and 2.5, capturing 'voice and accountability', 'government effectiveness', 'the rule of law', 'political stability', 'regulatory quality', and 'control of corruption'.
Log GDP per capita	Heston et al. (2002). Logarithm to GDP per capita in purchasing-power adjusted US dollars in 2000.
Openness	Heston et al. (2002). Trade volume as percent of GDP, average 1991-2000.
Press Freedom	Freedom House (2004). Gastil index of freedom of the press distributed from 1 (full rights) to 100 (no rights).
Postcommunist Social trust	Dummy of country has communist past. Inglehart et al. (2004). Share of population saying yes to the question "In general, do you think that most people can be trusted?" The data are supplemented by trust scores from the Latinobarometro, accessible at http://www.latinobarometro.com , and data from the Danish Social Capital Project (available from the author).
Political competition	Beck et al. (2001). Herfindahl index of legislature measured as the sum of squares of parties' share of seats in parliament, distributed between 0 and 1 (one-party system).
Political rights	Freedom House (2004). Gastil index of political rights distributed from 1 (full rights) to 7 (no rights). Below three is considered full rights.