Transparency Against Corruption.

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Abstract

We test the commonly stated but rarely investigated assertion that making political institutions more transparent is an effective method for combating corruption. This assertion is confirmed with cross-national data, but also specified and qualified in several respects. Most importantly we find that looking only at average effects gives a misleading picture of the significance of transparency for corruption. Just making information available will not prevent corruption if such conditions for publicity and accountability as education, media circulation and free and fair elections are weak. Furthermore, we find that transparency requirements which are implemented by the agent itself are less effective compared to non-agent controlled transparency institutions, such as a free press. One important implication of these findings is that reforms focusing on increasing transparency should be accompanied by measures for strengthening citizens' capacity to act upon the available information if we are to see positive effects on corruption.

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Introduction

Transparency—the release of information about institutions which is relevant for evaluating those institutions—is an issue of major concern for the contemporary social sciences. In the international relations field transparency has been acknowledged for its potential to contribute to regime effectiveness (Mitchell 1998), to reduce the risks of conflicts and war (Schultz 1998, Fearon 1995) and for constituting a potential substitute or compensation for the poor prospects of democratic accountability of international organizations (Keohane & Nye 2003). Economists have increasingly emphasised the crucial role played by information for avoiding market failures and for achieving efficient allocation of resources (Stiglitz 2000). The principal-agent framework, commonly used by both economists and political scientists, is defined by the asymmetry of information between principal and agent (Miller 2005). In political philosophy a major development in democratic theory in the last two decades has been the revival of deliberative democracy, where publicity is a core concept and where openness of debate is considered to have a civilizing effect on political behavior (Elster 1998).

Transparency is also promoted as one of the most important medicines against corruption—the improper use of public office in exchange for private gain. In the recent decade there has been a massive wave of research and debate about the causes of corruption—driven partly by the growing awareness that corruption is not just a moral problem but also a major impediment to development and growth in large parts of the world (see, for example, Mauro 1995, Ades & Di Tella 1999, Sandholtz & Koetzle 2000, Treisman 2000, Montinola & Jackman 2002, Persson, Tabellini & Trebbi 2003, Gerring & Thacker 2004, Bäck & Hadenius 2008). Bentham's classic affirmation of the power of the public eye is echoed in this literature: "The greater the number of temptations to which the exercise of political power is exposed, the more necessary is it to give to those who possess it, the most powerful reasons for resisting them. But there is no reason more constant and more universal than the superintendence of the public" (Bentham

1999:29).[1] In spite of the high salience of transparency at the rhetorical level in the corruption research, however, few studies have tried to demonstrate its effects empirically.

This article demonstrates that transparency may indeed be an important remedy against corruption. Its main contribution, however, is to show and explain why this link is not as straightforward as is usually assumed. First, a distinction is made between two types of transparency—transparency which is controlled by the agent itself (the institution/actor under supervision) and transparency which is not under the agent's immediate control. These two types of transparency, we argue, affect corruption for different reasons and with different strength.

Secondly, we show that the link between transparency and corruption is subject to two important and overlooked conditions which limits its reach: In order for transparency to alleviate corruption the information made available through transparency reforms must also stand a reasonable chance of actually reaching and be taken in by the public. We call this the publicity condition. Furthermore, if the release and spread of information to the public is to affect the behavior of potentially corrupt government officials the public must have some sanctioning mechanism in its hands. This is the accountability condition. Transparency on its own—just making information available—will do little to prevent corruption (and other forms of agency shirking). Although certainly not making an argument against transparency this article adds to a growing number of studies which attempt to give a more nuanced picture of the potential of transparency as an instrument for improving political and social institutions.[2]

Previous research on corruption has not been able to take these conditions into account, mainly because of the common practice of mashing together the three concepts of transparency, publicity and accountability. We aim to show how not distinguishing between these concepts have lead scholars to draw misleading conclusions about the significance of transparency for corruption. For example, the authors of the most important comparative study so far on the

effect on corruption of press freedom (which is an example of what we call non-agent controlled transparency) calculate, on the basis of their statistical analysis, what an increase in the level of press freedom would mean for some countries. They conclude that if Nigeria, one of the most corrupt countries in the world, would manage to increase their press freedom to the level of Norway (in the top of the press freedom ranking), they would reduce their corruption to West European levels (Brunetti & Weder 2003:1821). However, when taking into account such conditions for publicity and accountability as the level of education and free and fair elections it is not clear that a free press, or any other type of transparency, would be able to help Nigeria to reduce corruption at all. In other countries, on the other hand, such as Romania, Russia or Mexico, where the prospects for publicity and accountability are better, increasing transparency is more likely to be an effective medicine against corruption.

One important conclusion with respect to development policy is that reforms focusing on increasing transparency should be accompanied by measures for strengthening peoples' capacity to act upon the available information if we are to see any effects on corruption. Transparency is no quick fix. In order to do its job with respect to corruption it is dependent on other factors, which may take a long time to improve. Our empirical analysis is based on a cross-country study of 111 countries, including several different operationalisations of the key variables.

The publicity and accountability conditions

In the terminology of principal-agent theory transparency is one of the instruments available to a 'principal' for controlling that its 'agent' does not engage in 'shirking', i.e. pursues policies which promote its own interests rather than the interests of the principal. Principal-agent models usually assume that the information asymmetry about its actions to the agent's advantage is prohibitively costly to eliminate completely, but that the more it is reduced the less

room there will be for shirking and the more efficient will be the delegation (Holmström 1979, Miller 2005).[3] The strong hopes tied to transparency in the corruption literature usually stems, explicitly or implicitly, from such a principal-agent perspective.

However, the transfer of principal-agent theory from its original domains of application in economic markets and organizations (in particular insurance problems and delegation within firms) to politics involves some difficulties. With respect to transparency, one of the seminal articles on principal agent-models concludes that "any informative signal [on the agent's action], regardless of how noisy it is, will have positive value (if costlessly obtained and administered into the contract)" (Holmström 1979:87).[4] But precisely the two conditions indicated in the parenthesis are less self-evidently satisfied in the relationship between citizens and political leaders, than for example between managers and employees. "Costlessly obtained" implies that transparent information about the agent reaches the principal without much problem, something which can not be taken for granted when the principal is the citizens and the agent the political leaders. Furthermore, the relationship between citizens and political leaders is not regulated by legally enforceable contracts. This raises questions about whether the principal, the citizens in this case, if it acquires information about a shirking agent actually has the necessary means to put sanctions on the agent.

What happens to the link between transparency and (lack of) agency shirking if the two assumptions of costlessly obtained information and legally enforceable contracts are lifted? Let us assume that rational politicians will shirk if the perceived benefit of shirking is large enough to exceed the uneasiness created by the combination of the potential costs of accountability and the perceived risk of actually having to face these costs. In that case, agency shirking, such as corruption, can be prevented by increasing the risk for, or the costs of, accountability or by decreasing the benefits of shirking. Here we leave aside factors potentially affecting the perceived benefits of corruption (including both economic factors—such as the level of wages

of public officials—and norms concerning the (im)morality of corruption potentially affecting self-esteem) and the possible costs of accountability (including for instance criminal law or loss of status and privileges connected to political power). Transparency enters the equation as a possible determinant of the probability of accountability. But accountability is primarily a function of publicity rather than transparency. These concepts may be distinguished as follows. The concept of transparency captures the accessibility of information. Transparency literally means that it is possible to look into something, to see what is going on. A transparent institution is one where people outside or inside the institution can acquire the information they need to form opinions about actions and processes within the institution. Information about agency behaviour is there for those principals who are willing and able to seek it.

Publicity on the other hand means that the existing information is actually spread to and taken in by the principal. With respect to citizens and political leaders, transparency implies that documentation of the actions of the political leaders is released, while publicity means that the content of this information has also become known among the citizens. Clearly transparency will most often increase the chances of publicity. In most cases information that is relatively easily accessible would stand a greater chance of also reaching a broader public. But the link is not an automatic one. There will be no publicity, i.e. no actual exposure of actions to a public audience no matter how transparent the process or the institution if the available information about these actions is left unattended.

There may be different reasons why transparent information not always reaches the principal. Lack of demand is one factor. A lot of information which is accessible in public records will never be spread to a broader audience of citizens simply because they concern issues which are immediately interesting only to a small set of special interest groups. Even when people generally are affected by a public policy act they are not always prepared to take the costs involved with informing themselves about the content and consequences of their political

leader's decisions. A transparency reform may reduce these costs, but seldom to such a degree that this problem of rational ignorance would disappear.

Mediators, such as mass media and non-governmental organisations, may reduce even further the costs of collecting information. Rather than having to check the public records themselves citizens may only have to go to the newspaper stand or turn on the radio. Lack of mediators, therefore, is another factor which may hinder transparent information from becoming subject to publicity. The degree to which the media reaches out to people varies a lot between countries and regions of the world. Furthermore, the media may itself be corrupt or may not be free to report what is uncomfortable facts for the political elite. Non-governmental organisations, on

ive action problems which may limit their effectiveness.

Another reason why transparent information may not reach a principal concerns the capacity of the principal to access and process the information. Even though the costs for collecting information are low a basic capacity to analyse its content is necessary in order to be able to act upon it. Again considering the relationship between citizens and political leaders the level of education may be a mediating factor between transparency and publicity of political information. The higher the level of education, it can be assumed, the stronger the capacity of people both to access and process information from the media and public records, and subsequently the greater the chances for publicity.[5]

Obviously these factors linking transparency and publicity—demand, mediators, cognitive capacity—are closely interconnected. They all concern the key problem of physically available information not always being "costlessly obtained".

Publicity thus is an intervening variable linking transparency and accountability, but it is not always a sufficient one. Accountability is a concept which has flooded the political science and public administration literature for the last decade or so (Cf. Behn 2001). We have no reason

here to debate the meaning of the concept of accountability, but we do believe it should be separated from transparency and publicity. Accountability involves something more than just having one's actions publicly exposed. In case of misconduct accountability implies that some kind of sanction is imposed on the actor. Being held accountable involves 'paying the price' for one's actions (Manin, Przeworski & Stokes 1999). Sometimes the embarrassment and social stigma of having one's bad behaviour exposed to the public may in itself constitute a costly sanction. But in other cases an actor may not care too much about its reputation as long as its power is not threatened.

The accountability condition assumes that increasing (the risk of) transparency and publicity will not induce any change in behaviour on the part of the agent unless it believes that the principal will go from awareness to action and actually impose the costs of accountability. In order to take that step the principal must have some instrument at hand for holding the agent accountable. The probability of accountability is therefore a function of the probability of publicity and the existing sanctioning mechanisms. In contract relationships the ultimate sanction—getting sued in court—is clear. In politics it is more complicated. The most important sanctioning mechanism for citizens in a political system (besides perhaps revolution) is the ability of people to choose their government in general elections. Political accountability through elections is also complemented by legal accountability through the courts. Democracy and rule of law are thus crucial for accountability.

Conceptual clarity is always a virtue, but the point here is rather that distinguishing between transparency, publicity and accountability gives a more nuanced and accurate picture of the causal relationships involved. In our case it leads to the following proposition: *Transparency will be a less effective medicine against corruption when it is not accompanied by institutional and other circumstances favourable to achieving also publicity and accountability.* In the empirical analysis, as will be discussed in more detail in a later section, we will use measures of

the level of education and media circulation for capturing the publicity variable and electoral democracy and rule of law for political and legal accountability respectively.

Types of transparency

One further important qualification, which has not been taken in to consideration in previous research on transparency and corruption, is that transparency may come about in different ways. Particularly important, we believe, is to take note of who is controlling the release of information. Is it the supervised agent itself that makes the information available to the principal or is it some other independent third actor?

Following our definitions of transparency and publicity the media, although in distinctly different capacities, has a role in achieving both. In its fact-digging function a free media may create transparency by making previously secret information available to the public. In its publishing function, on the other hand, it creates publicity to this information by spreading it to people. A free and independent media willing and able to investigate and report on corrupt behaviour on the part of government officials belongs to a type of transparency institutions which we will call non-agent controlled transparency. Other forms of whistle-blower institutions, such as freedom for public officials to impart information (about the behaviour of other officials), also fall in this category. The distinguishing feature of this type of transparency is that information about agency behaviour is released by a third party, rather than by the agent itself.

Agent controlled transparency, on the other hand, refers to information released by the agent in response to freedom of information laws and other requirements on the agent to make information about its activities available. Such requirements may have been externally imposed on the agent by the principal in order to increase control, or they may have been self-imposed by the agent with the purpose of increasing its legitimacy in the eyes of the principal.

Agent controlled and non-agent controlled transparency may affect corruption for different reasons and possibly with different strength. Agent controlled transparency reduces corruption because it makes it more complicated to engage in corrupt behavior. Extensive sunshine laws and requirements to demonstrate detailed figures on budgets and spending implies that an agent who wants to proceed with corrupt activities must put more effort into concealing those activities. The corrupt actors will have to find ways to hide illegal money transfers and come up with credible explanations in the public records about where the money went, and perhaps why a certain public policy program did not achieve more in terms of output compared to the spending that went in to the program, etc. Possibly, some corruption will be prevented as a result of the agent's anticipation that it would not be possible to hide it given the existing accounting requirements. However, the specific content of the information released will always be determined by the agent itself. Obviously, therefore, this information will seldom include any direct indicators of corruption.

Non-agent controlled transparency, on the other hand, rather than making life more complicated for corrupt actors makes it more dangerous. Fact-digging reporters and other whistle-blowers are not restricted to public records but may also, if they are successful, release secret files and witnesses documenting the agency behavior. This information may include actual instances of corruption. If the whistle-blowers are able to give publicity to such information, and if there are accountability mechanisms available to the principal, the agent may have to face the costs of accountability (which could be jail, loss of privileges, etc…). Which type of transparency is more effective in reducing corruption and under which circumstances is an open question which we will analyze empirically.

Previous empirical research

The empirical research on transparency and corruption so far has focused on non-agent controlled transparency, in particular press freedom. The main picture given by the empirical studies on press freedom and corruption is that there is a negative correlation between these two variables. One study failed to find a robust correlation (Lederman, Loayza & Reis Soares 2001), while four other studies did find significant negative relationships (Brunetti & Weder 2003, Besley & Prat 2004, Chowdhury 2004, Svensson 2005). The most ambitious and rigorous effort hitherto is that of Brunetti and Weder. They test two different press freedom indexes and four different measures of corruption both across countries and over time. The results demonstrate sizeable negative effects of press freedom on three of the four corruption indexes. Importantly, Brunetti and Weder also address and refute by means of instruments the suspicion that there could be a potential endogeniety problem involved with respect to the causality between press freedom and corruption, stemming from the incentives for corrupt governments to restrict press freedom.

One problem with the research done on press freedom and corruption so far is that it has failed to control for electoral democracy in an adequate way. It is not clear from these studies whether the demonstrated effects of transparency are not in practice produced by the correlated existence of free and fair elections.[6]

Furthermore, if the effect of transparency on corruption is dependent on the accompanying prospects for publicity and accountability, studying only average effects may be misleading. We suspect that substantial variations in the effect of transparency depending on publicity and accountability may be hidden behind the average effects. Some support for this proposition is given by Adserà, Boix and Payne (2003). They show—both with cross-country data and with panel data—that the interaction effect of newspaper circulation and electoral democracy, which in our terminology are proxies for publicity and accountability, is much more important for reducing corruption than their individual effects. Although there is no measure of transparency

in their data the basic argument is supported; interaction effects between the variables linking agency behaviour and the degree of information available to the principal are crucial.

Hypotheses

Previous research has found significant effects of (non-agent controlled) transparency on corruption. We will test whether this correlation holds also when controlling for electoral democracy. Furthermore, we propose that the potential of transparency to prevent corruption is dependent on the conditions for information to be spread to and taken in by the principal - the citizens - and their ability to put sanctions on corrupt officials. In the empirical analyses we therefore expect *interaction effects* between transparency and the conditions for publicity (measured by the level of education and media circulation) and between transparency and political (electoral democracy) and legal (rule of law) accountability institutions. We also propose that agent controlled and non-agent controlled transparency may affect corruption in different ways and possibly with different strengths. However, we refrain from formulating hypotheses at this stage but rather consider this an open question to be explored in the empirical analyses.

The data

One reason why few scholars have studied effects of transparency on corruption empirically is because of measurement difficulties. While there are several cross-country indices measuring democracy and corruption there have been few useful indicators of transparency. A major step forward in this respect has been the recent construction by the World Bank of two cross-country transparency indexes, which are used in this study. The World Bank distinguishes between an Economic and Institutional Transparency index and a Political Transparency index. Both are aggregate indexes composed of several sub-indicators collected from different

sources.[7] The Economic and Institutional Transparency index has 13 sub-components, including indicators of access to information laws, the publication of economic data, e-government, transparency in the budget process, transparency of policy and of the public sector. Political Transparency is composed mainly of indicators of press freedom and regulations concerning disclosure of political funding, but it also contains one indicator of political competition and one of freedom of speech. The most important qualitative difference between the two indexes is that Political Transparency, due to the heavy weight of press freedom in this index, includes a large element of non-agent controlled transparency. The Economic and Institutional Transparency index, on the other hand, is a measure of agent controlled transparency.

Given our definition of transparency—the release of information about institutions which is relevant to evaluating those institutions—we would have preferred that the Political Transparency index did not include political competition and free speech, which do not directly measure transparency but rather democracy in general. Therefore, with respect to non-agent controlled transparency we will also use the press freedom indexes of Freedom House and Reporters Without Borders. This is especially important since one of our hypotheses concerns the interaction effect between transparency and electoral democracy. It also gives us an opportunity to make comparisons with previous studies of press freedom and corruption.

As already noted the mass media has a crucial role in promoting both transparency and publicity. While Political Transparency and the press freedom indexes are indicators of transparency, measures of media circulation captures one of the conditions for publicity. It is important to note that a media with broad reach does not in itself guarantee a well-informed public, since the media may not be free to criticise the government. If the media is both free and widely circulated, on the other hand, the public should be better able to inform itself on the government's actions. Our hypothesis is that transparency and media circulation will reinforce

each others' capacity to mitigate corruption. We use data from the World Bank on newspaper circulation and the number of radio receivers per capita.

For the level of education, which captures the second publicity condition—capacity to access information—we employ the World Bank index on the expected number of years of formal schooling. This is an indicator of an educational system's overall level of development. For robustness we also test a measure of education taken from the UNDP (see appendix for detailed references to the datasets).

Political accountability is measured by electoral democracy, i.e. the degree to which the government is selected in free and fair elections. The existing comparative corruption research has usually used measures of free and fair elections to capture 'democracy'. This is somewhat problematic since such a conception of democracy does not consider civil liberties, such as transparency, freedom of speech, freedom of organisation etc, which usually are considered core features of democracy. In our case, however, it is precisely the electoral mechanism as a form of accountability institution that we want to analyse. Our main measure of electoral democracy will be Polity's index, which includes free and fair elections, while excluding civil liberties. Electoral democracy will be used as an interaction variable to analyse the accountability condition, but also as a control variable to transparency in an additive model. For robustness we also use Freedom House's political rights index and a variable on democracy over time. The democracy over time variable contains the mean value of the electoral democracy indexes of Freedom House and Polity for the years 1972-2004. Higher values thus implies a longer experience of electoral democracy.

Electoral democracy is our main measure of accountability, focusing on the basic principal-agent relationship between citizens and political representatives. However, we also include a measure of legal accountability as a complement to political accountability. Preferably such a measure should indicate the likelihood that cases of corruption which have been revealed will

be lawfully prosecuted by the courts. The available indicators are not perfect in this respect as they also tend to include other aspects of the broad concept of rule of law, such as separation of powers (Bertelsman), police violence, torture and civil war (Freedom House), perceptions of the incidence of crime (World Bank Governance indicators) etc. The measure that we use here is labelled rule of law and has been developed by the United Nations Development Program. It includes indicators of both 'law' (the strength and impartiality of the legal system) and 'order' (popular observance of the law).

Although the distinctions between transparency, publicity and accountability should be clear in theory they concern empirically correlated phenomena, which may give rise to problems of multicollinearity in the statistical analyses. Especially highly correlated are the indicators of non-agent controlled transparency (Political Transparency and the press freedom indexes) and electoral democracy (see table of correlations in the appendix). The question of how much multicollinearity is too much has been given different answers in the literature (Cf. Cortina 1993). The main problem with multicollinearity, if it exists, is that the results tend to underestimate the strength and significance of the correlated factors. Our findings will therefore be more strongly grounded in those cases where there actually are statistically significant interaction effects compared to instances where the correlations fail the significance tests.

For the dependent variable we use indexes of perceived corruption constructed from surveys with inhabitants, domestic and foreign business people and country experts. Our main data set is the corruption index of the World Bank Governance Indicators, which has been frequently used in previous research. We also use the corruption indexes of Transparency International and the International Country Risk Guide to corroborate our results.

We include two important control variables—following the existing research on the causes of corruption—namely economic development (measured by GDP per capita) and British colonial

heritage (see, for example, Treisman 2000, Montinola & Jackman 2002, Gerring & Thacker 2004).[8]

Analysis and results

Additive models

We first test the unconditional average effect of transparency on corruption. Previous studies on press freedom have indicated a sizeable negative correlation—does this apply also to agent controlled transparency, and when controlling for electoral democracy? The base model includes transparency (agent controlled and non-agent controlled transparency respectively) and the three control variables; economic development, rule of law and British colonial heritage.

The results of the OLS regressions for the base model are given in the first two columns of table 1. Both agent controlled (Economic and Institutional Transparency, model 1A) and non-agent controlled transparency (Political Transparency, model 1B) have significant negative effects on corruption. The effects are also relatively large, larger than that of rule of law in both models. So far the pattern from previous studies of press freedom is reproduced. Furthermore, the results are almost identical for agent controlled transparency and for non-agent controlled transparency.

Models 2A and 2B introduce electoral democracy as a control variable. The results indicate something important about the differences between the two types of transparency. While the effect of non-agent controlled transparency (Political Transparency, model 2B) remains strong and highly significant the effect of agent controlled transparency (Economic and Institutional Transparency, model 2A) is now substantially weaker and more uncertain. To illustrate, simulating a change in agent controlled transparency from its mean (3.89) to its maximum (10) value in the data set decreases corruption by 1.0 points (with a standard error of 0.57) on the

scale from 0 to 10. For non-agent controlled transparency the same type of shift (from its mean 6.08 to max 10) reduces the level of corruption by 1.68 scale points (standard error 0.38), thus a 68 percent larger effect.[9]

It seems that the strong effect of agent controlled transparency indicated in model 1A is partly spurious and can be explained to some extent by the fact that democratic governments are more willing to release data on their activities and performance. Non-agent controlled transparency, on the other hand, has a strong independent effect also when controlling for electoral democracy. The robustness checks—varying the indices of corruption, transparency and democracy—broadly confirm these findings, although with some uncertainty.[10]

Interaction models

The findings so far confirm the main results of earlier studies of press freedom and corruption, indicating a negative correlation between non-agent controlled transparency and corruption (also when controlling for electoral democracy). However, we have hypothesised that the average effects may be concealing important conditional factors intervening in the relationship between transparency and corruption. Looking at the interaction effects between transparency and education, media circulation, electoral democracy and rule of law will tell us whether transparency is dependent on conditions for publicity and accountability to affect levels of corruption. Negative interaction effects would indicate that the power of transparency to reduce corruption is stronger in countries with higher levels of education, media circulation, electoral democracy and rule of law.

Table 2 shows the results for the publicity conditions, education and media circulation. The first two columns show the base regression with the interaction variables for education and agent controlled transparency (Economic and Institutional Transparency, model 3A) and non-agent controlled transparency (Political Transparency, model 3B) respectively. Does a high level of

education increase the negative effect of transparency on corruption? The answer is yes. There are significant negative interaction effects for both types of transparency. Increasing the level of education with one unit, on the scale from 0 to 10, adds 0.12 to the negative effect of Economic and Institutional Transparency and 0.11 to the effect of Political Transparency.[11]

What does this mean in practice? Figure 1 illustrates the marginal effects of agent controlled transparency (Economic and Institutional Transparency, Plot A) and non-agent controlled transparency (Political Transparency, Plot B) on corruption for different levels of education.[12] The slope of the line in the plots indicates the extent to which the transparency effect is dependent on the level of education. The steeper the slope, the more increasing levels of education adds to the negative transparency effect on corruption. The dotted lines illustrate the confidence interval (95%), i.e. the degree of uncertainty of the estimated marginal effect. Important to note in the figures is whether the zero-line is encompassed within this interval or not. If it is, we cannot say with reasonable certainty that there is an effect of transparency on corruption at all at that particular level of education. As can be seen in plot A this is the case for agent controlled transparency in countries with education levels lower than ca five on the scale (which is the level of, for example, South Africa and Russia). For non-agent controlled transparency the zero-line is crossed between three and four on the scale (which is equivalent to, for instance, Albania and Botswana). As in the additive model (2A) including electoral democracy as an additional control variable weakens the effect of agent controlled transparency. In such a model (not shown here) the agent controlled transparency effect is statistically significant only at West European education levels. Non-agent controlled transparency is not weakened by this control.

The results with respect to the second publicity condition—media circulation—are mixed. Models 4A and 4B in table 3 show negative and significant coefficients for the interaction variables including newspaper circulation and the two types of transparency. Higher levels of

newspaper circulation increase the power of transparency to reduce corruption although the effects are small.[13] However, our hypothesis that a wide-reaching media amplifies the transparency effect is not supported when we look at the per capita number of radio receivers instead of newspapers (Models 5A and 5B). The interaction coefficient for non-agent controlled transparency is negative, but the level of uncertainty is too high to draw any affirmative conclusions.

In sum, although the results are mixed with respect to media circulation, the conditioning effects of education and newspaper circulation seem to give support to the general argument: If the prospects for publicity are slim, the transparency effect on corruption will be slim. This applies both to agent controlled and non-agent controlled transparency (although the later is more effective). On the other hand, if the conditions are such that information that has been publicly released also stands a substantial chance of being spread to and taken in by the public, especially non-agent controlled transparency (and to a lesser extent also agent controlled transparency) may effectively reduce corruption.

However, we argued that publicity is not the only condition for transparency to be an important check against corruption. Increasing the chances/risks of publicity will enhance the uneasiness of corrupt policy-makers only if there is some mechanism of accountability—including costly sanctions—in place, which may be activated by public exposure. Our hypothesis is that the effect of transparency is larger in countries which have a higher degree of political (electoral democracy) and legal (rule of law) accountability—in countries, that is, where public exposure of corruption may imply getting kicked out of office and prosecuted in court.

Model 6A and 6B in table 3 give the results of the interactions between transparency and electoral democracy. The potential risk for multicollinearity should make us especially careful when drawing conclusions based on non-significant effects. The VIF-factor for the interaction term in model 6A is 19, which is well beyond an often mentioned rule of thumb which says that

VIF-factors above 10 indicate high collinearity. In model 6A, however, including agent controlled transparency, the interaction term is not only non-significant but also close to zero (in fact it is marginally positive: 0.003). We can therefore conclude that a substantial and significant interaction effect with electoral democracy exists only for non-agent controlled transparency (Political Transparency, model 6B). Increasing the opportunity for people of holding their government accountable does not seem to affect the influence of agent controlled transparency on corruption (Economic and Institutional Transparency, model 6A).

Figure 2 shows the marginal effect of transparency for different levels of electoral democracy. Plot A demonstrates the insignificant effect of non-agent controlled transparency in this model and the lack of interaction with electoral democracy. Plot B on the other hand shows that non-agent controlled transparency reduces corruption more the better the conditions for accountability. In countries with no or very low levels of electoral democracy (less than 2) there is no significant negative effect of non-agent controlled transparency at all.

Since the Political Transparency index includes political competition as on of its composite components it is important to note that the robustness tests indicate a somewhat stronger and more certain interaction effect in most specifications, in particular those including press freedom as an indicia of non-agent controlled transparency. Non-agent controlled transparency is clearly more effective in systems where people can hold the leaders accountable in free elections.[14]

Looking instead at the conditional effect of legal accountability as measured by rule of law (models 7A and 7B) we see slightly different results. The interaction with non-agent controlled transparency is still negative, but smaller and more uncertain.[15] The effect of agent controlled transparency on the other hand is significantly strengthened by higher levels of rule of law. It seems therefore that while non-agent controlled transparency is enhanced by better opportunities for political accountability through elections (model 6B), agent controlled

transparency is more dependent on law and order (6A). The findings still broadly confirm the main argument that transparency is dependent on publicity and accountability to be an effective check on corruption, but they also indicate that the different types of transparency affect corruption differently.

Figure 3 illustrates the combined effect of the publicity and the accountability conditions as measured by education and electoral democracy. Based on model 8 in the last column of table 3 it shows the marginal effect of non-agent controlled transparency (Political Transparency) at different levels of electoral democracy for fixed levels of education – low, medium and high respectively. At a low level of education (2 on the scale from 0 to 10, which is the level of Bangladesh and Kenya for example) transparency has no significant effect on corruption regardless of the level of electoral democracy (there are no stars on the line). At an intermediate level of education, on the other hand (4), non-agent controlled transparency will start to reduce corruption at electoral democracy levels higher than ca 4 on the scale (where the stars on the line start). At West European levels of education (8 on the scale), the effect of transparency becomes statistically significant at a slightly earlier point on the democracy scale compared to the intermediate level, and is much stronger. For example, at level 5 on the democracy scale the marginal effect of transparency is about three times stronger in countries with high levels of education (ca -0.75) than at intermediate levels (ca -0.25). The interaction effect is also stronger for higher levels of education as indicated by the steeper slope. The tendency with respect to the hypotheses tested is clear: Increasing the chances of publicity and accountability strengthens the power of transparency to reduce corruption.

Returning to the example of Nigeria discussed in the introduction we can now conclude that the large effects on corruption of strengthening press freedom, as calculated by Brunetti and Weder, are cast into doubt. The level of electoral democracy in Nigeria (in 2003) was four on the scale, which means that they would need an educational level of four in order to start seeing

significant negative effects of non-agent controlled transparency on corruption as seen in figure 3. We lack data on the level of education in Nigeria, but only two other sub-Saharan countries (South Africa and Namibia) reaches that level in our data set. Furthermore, the degree of newspaper circulation is very low in Nigeria (0.4). Thus, increasing transparency in Nigeria—agent controlled or non-agent controlled—without simultaneously introducing reforms focusing on education, media reach and electoral democracy, would probably do little to reduce corruption.

In a country like Romania, on the other hand, which is also plagued by a relatively high degree of corruption, but where the preconditions for publicity are better (education = 4.6, newspaper circulation = 5.3) and accountability (electoral democracy = 8), increasing transparency (in particular non-agent controlled transparency) may have substantial effects. The same goes for several other European, Latin American and Asian countries (Bulgaria, Croatia, Russia, Turkey, Mexico, Panama, Philippines, Thailand to name a few), while many African and Middle Eastern countries are lacking with respect to the conditions for publicity and accountability.

Conclusions

This article has confirmed the common assertion that transparency may reduce corruption. It has shown that this is so also when controlling for electoral democracy, which previous studies of press freedom and corruption have failed to do. However, it has also specified and qualified this assertion in several respects. One such specification is that there is an important distinction to be drawn between agent controlled and non-agent controlled transparency. Freedom of information laws and other transparency requirements which are implemented by the agent itself are a different – and less effective - medicine against corruption compared to a free press. Furthermore, looking only at the average effects gives a misleading picture of the significance

of transparency for corruption. Transparency in itself is not enough. Just making information available will not prevent corruption if the conditions for publicity and accountability are weak. One important implication of these findings with respect to current debates and research on transparency is that it may not be sufficient to concentrate on measures directed towards the agent in order to obtain effects on agency behaviour. Reforms focusing on the principal itself, or on mediators between the agent and the principal, may be equally important. This is also a lesson for anti-corruption reformers. In countries with low levels of education and media reach and in semi-democratic political systems improvements with respect to transparency must be accompanied by additional reforms, strengthening the capacity of people to access and process information and execute sanctions, if we are to see substantial effects on corruption.

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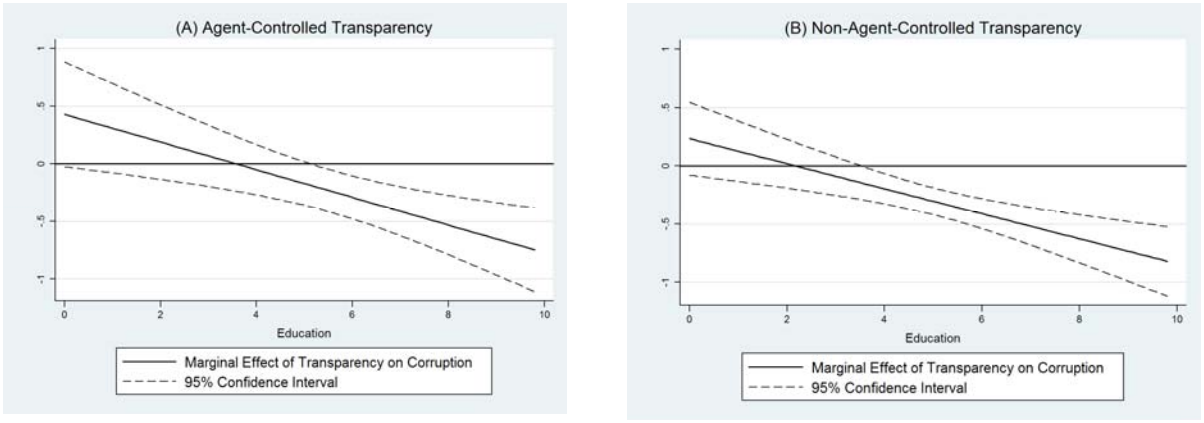
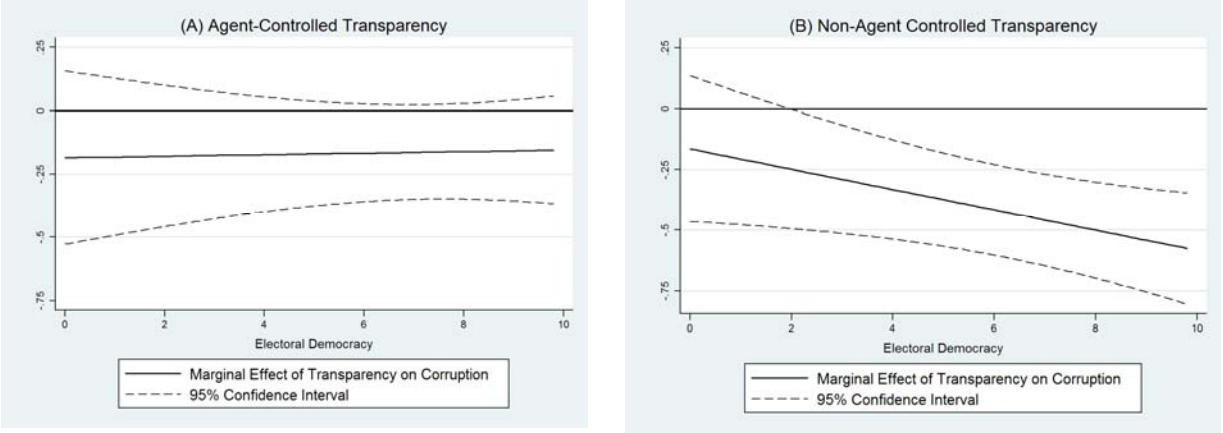
Figure 1. The Publicity Condition



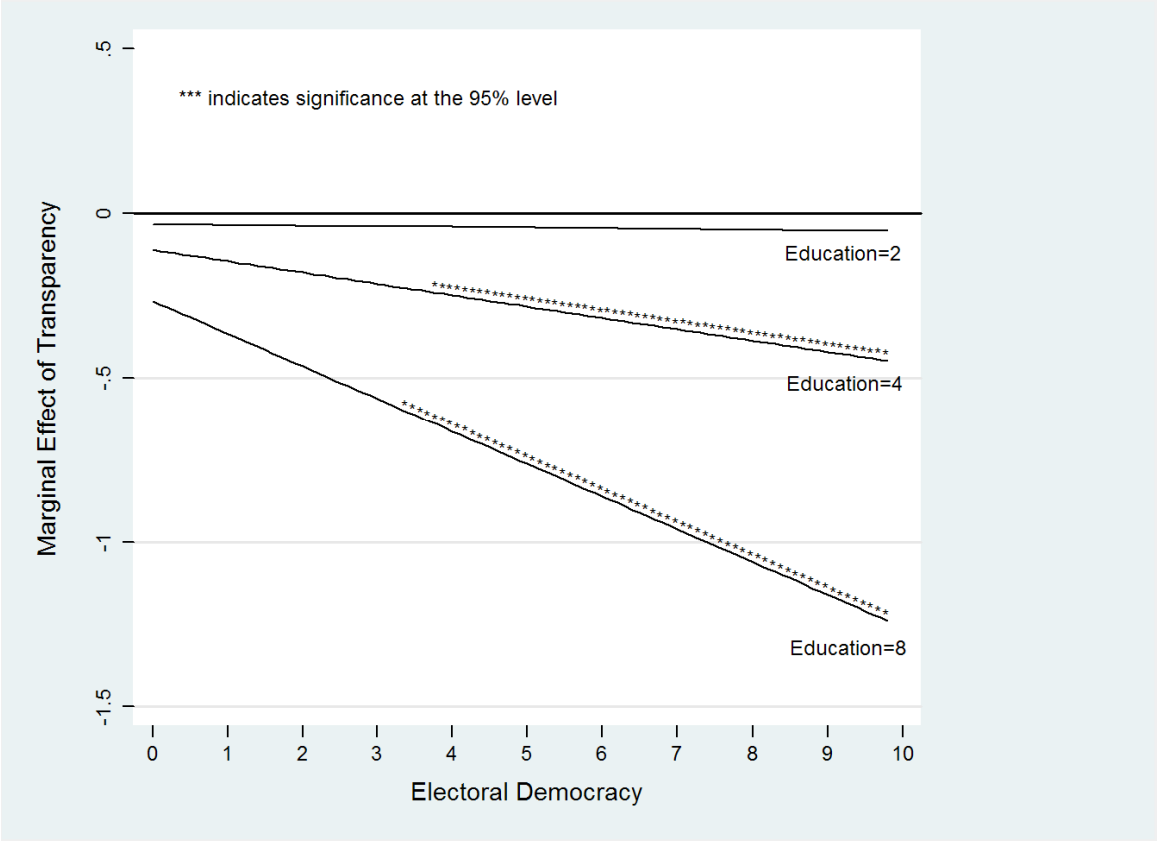
Note: The figure shows the marginal effects of agent controlled and non-agent controlled transparency on corruption for different levels of education (models 3A and 3B in table 2).

Figure 2. The Accountability Condition



Note: The figure shows the marginal effects of agent controlled and non-agent controlled transparency on corruption for different levels of electoral democracy (models 6A and 6B in table 3).

Figure 3. The Publicity and Accountability Conditions combined



Note: The figure shows the marginal effects of non-agent controlled transparency on corruption for different levels of electoral democracy and education (model 8 in table 3).

Table 1. Transparency, democracy and corruption. Additive models.

	Dependent variable: Corruption (World Bank index)			
Independent variables	Model 1A	Model 1B	Model 2A	Model 2B
Constant	11.34***	12.27***	11.64***	12.341***
	(.35)	(.35)	(.38)	(.36)
Econ./Institution. Transparency	-.28***		-.16*	
	(.08)		(.09)	
Political Transparency		-.31***		-.43***
		(.05)		(.10)
GDP/capita	-.47***	-.48***	-.46***	-.51***
	(.08)	(.07)	(.08)	(.07)
Rule of Law	-.26***	-.28***	-.28***	-.24***
	(.06)	(.05)	(.06)	(.06)
Former British colony	-.47	-.54**	-.57*	-.53*
	(.29)	(.26)	(-.29)	(.27)
Electoral democracy			-.10**	.10
			(.05)	(.07)
N	110	110	106	106
Adjusted R2	.75	.79	.76	.79

Note: *p < .10, **p < .05, ***p < .01, standard errors in parentheses.

Table 2. The Publicity Condition. Interaction models.

	Dependent variable: World Bank corruption index					
Independent Variables	Model 3A	Model 3B	Model 4A	Model 4B	Model 5A	Model 5B
Constant	9.49***	9.14***	10.53***	11.35***	11.36***	11.76***
	(.92)	(1.01)	(.40)	(.43)	(.45)	(.51)
Econ./Institution. Transparency	.43*		-.12		-.31***	
	(.23)		(.10)		(.11)	
Political Transparency		.23		-.18***		-.24***
		(.16)		(.07)		(.07)
GDP/capita	-.76***	-.61***	-.43***	-.44***	-.40***	-.46***
	(.13)	(.11)	(.09)	(.07)	(.09)	(.07)
Rule of Law	-.16**	-.19***	-.19***	-.23***	-.24***	-.26***
	(.07)	(.06)	(.06)	(.05)	(.06)	(.05)
Former British colony	-.24	-.38	-.48*	-.62*	-.50*	-.55**
	(.35)	(.29)	(.28)	(.25)	(.29)	(.27)
Education	.61***	.76***				
	(.22)	(.22)				
Education*Transp.	-.12***	-.11***				
	(.04)	(.03)				
Newspaper circulation			.11	.25		
			(.18)	(.21)		
Newspaper circulation*Transp.			-.06**	-.05**		
			(.03)	(.02)		
Radio receivers					-.49	.31
					(.32)	(.46)
Radio receivers*Transp.					.04	-.04
					(.04)	(.05)
N	84	84	105	105	106	106
Adjusted R2	.77	.82	.77	.81	.75	.79

Note: *p < .10, **p < .05, ***p < .01, standard errors in parentheses

Table 3. The Accountability Condition. Interaction models

	Dependent variable: World Bank corruption index				
Independent Variables	Model 6A	Model 6B	Model 7A	Model 7B	Model 8
Constant	11.70***	11.05***	10.53***	11.87***	9.77***
	(.56)	(.68)	(.59)	(.77)	(1.72)
Econ./Institution. Transparency	-.19		.17		
	(.17)		(.17)		
Political Transparency		-.16		-.35**	.04
		(.15)		(.15)	(.48)
GDP/capita	-.46***	-.43***	-.48***	-.50***	-.62***
	(.08)	(.07)	(.08)	(.07)	(.13)
Former British colony	-.57*	-.53**	-.40	-.50*	-.20
	(.29)	(.26)	(.29)	(.27)	(.30)
Electoral Democracy	-.11	.28***	-.05**	.10	-.29
	(.07)	(.10)	(.04)	(.07)	(.30)
Electoral Democracy*Transp	.00	-.04**			.03
	(.02)	(.02)			(.06)
Rule of Law	-.28***	-.22***	-.10	-.17	-.13**
	(.06)	(.06)	(.09)	(.12)	(.06)
Rule of Law*Transp			-.05**	-.01	
			(.02)	(.02)	
Education					.42
					(.33)
Education*Transp					-.04
					(.10)
Education*Electoral Democracy					.13**
					(.06)
Political Transparency* Education*Electoral Democracy					-.02
					(.01)
N	106	106	106	106	81
Adjusted R2	.75	.80	.77	.79	.83

Note: *p < .10, **p < .05, ***p < .01, standard errors in parentheses.

Appendix

Data Information

Variables:	Description	Sources
Dependent Variable:		
• Corruption	Perceived level of corruption (-2.5 = lowest, 2.5 = highest).	World Bank Governance Indicators Dataset (Average 2002 - 2004)
• Corruption	Perceived level of corruption (0=highest level of corruption, 10=lowest level of corruption)	Transparency International (2003)
• Corruption	Perceived level of corruption	International Country Risk Guide (Average 2001 – 2003)
Independent Variables:		
Agent controlled transparency		
• Economic and Institutional Transparency	Assesses the degree of usefulness and accessibility of the information provided by public institutions. Measures economic transparency, transparency in the budget process, e-government, access to information laws, transparency of policy and transparency of the public sector.	Bellver & Kaufmann (forthcom.) (Data from 2003-2004.)
Non-agent controlled transparency		
• Political Transparency	Includes press freedom (5 different sources), transparency of political funding, freedom of speech and political competition.	Bellver & Kaufmann (forthcom.) (Data from 2003-2004.)
• Press Freedom	Press freedom (free: 0-30; partly free: 31-60; not free: 61-100)	Freedom House (2000)
• Press Freedom	Press freedom (0= Highest, 100= lowest)	Reporters Without Borders (2003)
Conditions for publicity		
• Education	Expected years of schooling.	World Bank (2003)
• Education	Combined primary, secondary and tertiary gross enrolment ratio and adult literacy rate.	UNDP (2003)
• Newspaper circulation	Daily newspapers published at least four times a week. Average circulation (or copies printed) per 1,000 people.	World Bank (2000)
• Radio receivers	Number of radio receivers in use for broadcasts to the general public per 1000 people	World Bank (1997-2003. Data from the latest year available in the period.)
Conditions for accountability		
• Electoral Democracy Polity	Includes political competition, public participation, constraints on the executive, etc. (0=lowest, 10=highest)	Marshall and Jaggers, Polity IV (2003)
• Electoral Democracy Freedom House	Includes the right of opposition parties to take part, the fairness of the electoral process, the real power attached to elected institutions, etc (1= highest, 7 lowest)	Freedom House (2003)
Control variables		
• Rule of Law	Legal impartiality and popular observance of the law (0=lowest, 6=highest)	UNDP (2003)
• GDP/Capita	GDP/capita (PPP US$)	UNDP (2003)
• Former British colony	1= Former British colony, 0= Not a British former colony.	Treisman (2000)
• Economic openness	Imports+Exports/GDP	UNCTAD 2003
• Democracy over time	Mean value of the product of Freedom House's and Polity's electoral democracy indexes, per country over the period 1972-	Freedom House and Polity (1972-2004)

	2004	
• Energy imports	Import share of total energy use	World Bank (2003)

Note: All indexes (except from former British colony) are transformed to a scale from 0 to 10. 0 = lowest and 10 = highest.

Bivariate correlations of main variables

	Ec/inst trans	Pol trans	ElDem	Edu	News	Radio	Rule	GDP	Brit col
Ec/inst trans	1								
Pol trans	.76	1							
ElDem Pol	.68	.88	1						
Education	.70	.59		1					
Newspap	.58	.54	.50	.59	1				
Radio	.64	.56	.44	.60	.71	1			
Rule of law	.50	.38	.19	.57	.53	.53	1		
GDP	.73	.62	.54	.83	.64	.59	.62	1	
Brit col	-.01	.04	-.04	-.20	-.17	.01	-.09	-.24	1

Endnotes

[1] For assertions of the power of transparency to reduce corruption, see, for example, Rose-Ackerman 1999:162ff, Montinola & Jackman 2002:151, Gerring & Thacker 2004:316.

[2] See Finel & Lord 1999 (arguing that the relationship between transparency and violent conflicts may be curvilinear, since 'noisy' signals stemming from moderate transparency could easily be misinterpreted or deliberately misused by the opponent), MacCoun 2006 (pointing at psychological mechanisms which imply that increasing transparency may eliminate both the most corrupt and inept decisions *and* the most wise and inspired), Prat 2005 (arguing that conformist pressures may imply that transparency with respect to the consequences of agency behavior may be beneficial to the principal, while transparency of behavior itself could have adverse effects), Stasavage 2004 (pointing at risks for public posturing, and subsequent negotiation breakdown, of open-door bargaining, and the consequent trade-off between accountability and effective negotiations).

[3] Cf. Besley & Burgess 2002 and Stromberg 2004 (both demonstrating that groups of voters that are more informed tend to obtain more favourable policy decisions by politicians).

[4] Positive value means that it is possible to construct a more efficient contract, including welfare improvements for both the principal and the agent.

[5] Cf. Zaller 1992 (pointing out that the effect of information on public opinion is a function not only of exposure but also of reception, which in turn may be influenced by political awareness and ideological orientations).

[6] These studies either do not control for electoral democracy (Brunetti and Weder 2003, Svensson 2005) or use measures of democracy that do not distinguish between free and manipulated elections (Besley and Prat 2004, Chowdhury 2004, Lederman, Loayza and Reis Soares 2001).

[7] In total 18 different sources were used, including international organizations, risk-rating agencies and NGO:s. The indexes are aggregated by an unobserved component model, which constructs a weighted average of the sources for each country as the best estimate of transparency for that particular country. The weights are proportional to the reliability of each source, which means that the model automatically assigns lower weights to those sources that have larger noise and/or measurement errors (Bellver & Kaufmann forthcoming).

[8] To further check for the robustness of the findings we have also run all the analyses including controls for economic openness (defined as the sum of exports and imports as a percentage of GDP) and energy imports (defined as import share of total energy use) and with 'Jackknife' standard errors (which checks the vulnerability of the results of outlier cases). Except in one case all the main findings reported below remain stable when these controls are included. The exception is the interaction effect between transparency and newspaper circulation which fails to reach conventional levels of significance under the jackknife test.

[9] Calculations based on Clarify (King et.al 2000).

[10] The correlation between transparency and corruption is negative and highly significant in all the 12 different specifications of the base model (including the three different measures of corruption, three different measures of non-agent controlled transparency and one of agent controlled transparency). The effect of agent controlled transparency is weakened in all models when electoral democracy is included, although to a lesser degree for the alternative indexes of corruption compared to the World Bank index. Also in the 24 specifications of the base model with current levels of electoral democracy (two different indicators) included all transparency effects are negative, although the statistical uncertainty increases when democracy is included. In 10 out of the 24 models (4 of which include the Reporters Without Borders press freedom index) we can not say with 90 percent certainty that the effect is not due to chance. Substituting current level of democracy for democracy over time (the mean value of electoral

democracy 1972-2004) in model 2A economic/institutional transparency fails by a small margin the significance test, while the results in model 2B remain stable.

[11] Varying the indices of corruption (three different indexes), transparency (four) and education (two) gives a total of 24 specifications for the interaction models with education. All of these indicate negative interaction effects. The alternative measure of education (UNDP), however, fails the significance tests when interacted with Political Transparency and the press freedom index of Reporters Without Borders. In total 18 of the 24 specifications including the education interaction are statistically significant.

[12] Figures 1-3 were calculated in STATA with the help of the commands from Brambor, Clark & Golder (2006) found at: http://homepages.nyu.edu/~mrg217/interaction.html.

[13] The robustness tests confirm also these findings. All 12 specifications for the interaction model with newspaper circulation indicate negative interaction effects which are statistically significant on the 90% level or higher.

[14] Varying the three different measures of non-agent controlled transparency (Political Transparency and the two press freedom indexes), the three corruption indexes and the two measures of current levels of electoral democracy gives a total of 18 different specifications. All are negative and 17 are statistically significant on a 90% level or higher. They range in size from 0.3 to 0.8. In the six different specifications including Economic and Institutional Transparency only one indicate a statistically significant negative interaction effect with electoral democracy. Furthermore, all the results in models 6A, 6B and 7 hold when we substitute the current level of democracy for the variable democracy over time.

[15] Again the VIF-factor for the interaction coefficient is high (20), which makes the lack of statistical significance in this case unreliable.