Public Information and Performance: The Role of Spatial Dependence in the Worldwide Governance Indicators among African Countries

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Abstract

The Worldwide Governance Indicators (WGI) provide transparent and comparable country statistics for different dimensions of governance linked to (under)development. Yet, does the public availability of governance data actually enhance performance? If investors, donor agencies and citizens are made aware of relative governance performance, competition for inward investment, such as FDI and ODA, and domestic legitimacy become plausible mechanisms for diffusion of good governance. We test whether such mechanisms operate using the WGI for Africa, and find evidence for spatial diffusion of democracy, rule of law, and corruption control. There is no evidence for diffusion of regulatory quality and government effectiveness.

Key Words

(1) Worldwide Governance Indicators

(2) Africa

(3) Spatial Dependence

(4) Competition

(5) Learning

(6) Network Games

Introduction

Quality of governance has become a key element in explanations for (lack of) development and economic growth, regime legitimacy, civil conflict and even state failure (North, 1990; Collier et al., 2003; Fukuyama, 2004; Seldadyo, Pandu Nugroho, & de Haan, 2007; Bates, 2008). Improving governance is also central to efforts of the international community to deal with underdevelopment and post-conflict situations; e.g., the World Bank (WB) and the IMF have made support conditional on improved governance. The US Millennium Challenge Account, launched by the Bush administration in 2003, introduced an aid allocation mechanism based on competitive assessment of governance performance in developing countries (Knoll & Zloczysti, 2012).

A number of cross-national indicators of the quality of governance have been developed (UNDP, 2007). Prominent among these are those developed by the WB (Kaufmann, Kraay, & Mastruzzi, 2007; 2010): the Worldwide Governance Indicators (WGI) provide statistics for different dimensions of perceptions of governance quality. A rationale for compiling and publicly distributing governance indicators is the belief that such information contributes to improving governance:

> Such findings, and the data behind them, reinforce the experiences and observations of reform-minded individuals in government, civil society, and the private sector, who know that good governance is essential for development. Their growing recognition of the link between good governance and successful development has stimulated demand for

> monitoring the quality of governance across countries and within individual countries over time. (World Bank, 2007: 2).

Does information about governance indicators indeed improve the quality of governance in ways the quote above suggests? Information matters for governance; countries are better governed if they have more political accountability (Adserà, Boix, & Payne, 2003) and transparency, providing more economic data (Islam, 2006; Hollyer, Rosendorff, & Vreeland, 2014). We argue that because rulers have to compete for external resources, such as FDI and ODA, and political support, they have reasons to care about how they are perceived to govern. This does not require that ordinary citizens or rulers in developing countries pay close attention to the WGI, but they should care about how well their country is governed, and the indicators should reflect the perceptions of citizens, investors, and politicians.

Below we outline internal or domestic competition for political legitimacy and external competition for flows of inward investment as plausible mechanisms linking the availability of indicators to better performance. The first mechanism focuses on comparisons of the quality of government by politicians and civil society. The second mechanism draws attention to increased importance of governance for decision-makers in the private (FDI) and public (ODA) sector. Drawing on the literature on policy diffusion, the two mechanisms are modeled in an integrated manner as best responses to external and internal pressures to improve governance. Transboundary networks are appropriate to capture possible external pressures suggesting interdependence between observations, where spatial econometrics can account formally for such interdependencies (Anselin, 1988; Ward & Gleditsch, 2002;

Plümper & Neumayer, 2010). The empirical focus in upon Africa – a key continent for organizations like the WB interested in governance and development.

It is well known that democracy clusters geographically (Gleditsch & Ward, 2008), but visual inspection suggests similar patterns for the whole array of WGIs revealing a cluster of countries with low governance score in Central Africa (World Bank, 2007: 4-5). Also globally, countries that are geographically nearer to each other are more likely to have similar WGI scores (Seldadyo et al., 2007; Seldadyo, Elhorst, & de Haan, 2010). There is, however, no strong theoretical explanation for clustering. It is possible to control for similar domestic-level structural constraints countries face if they are located in closer proximity. Lack of governance may also have transboundary effects; for example, Collier (2007: 57) argues that being surrounded by poor—and poorly governed—countries limits opportunities for development because it restricts access to markets. Moreover, refugees and internally displaced people congregate in border areas putting additional pressure on the governing capacity of neighboring states (Salehyan, 2009). Similarly, traders, soldiers and peacekeepers have contributed to the spread of HIV/Aids across Sub-Sahara Africa imposing additional burdens on the governing capacity of African states (Smallman-Raynor & Cliff, 1991). Buhaug and Gleditsch (2008) emphasize the importance of transnational ethnic ties for the spatial clustering of conflict (see also de Groot, 2011).

Yet, neither structural nor transboundary factors can fully account for observable variation in levels and improvements of governance; for example, Tanzania and Botswana are seen as positive outliers in their region. The literature on governance also points towards lack of political leadership; van de Walle (2001) suggests neo-

patrimonialism as a shared feature of African regimes, explaining lack of governance. If the quality and clustering of governance depends partly on political decisions, then there may be reasons for rulers to condition their provision of governance on quality of governance in neighboring countries. It is relevant to note that this does not mean that rulers necessarily care about the quality of governance in their country, or that they are preoccupied with relative performance for its own sake. Also, we do not have to assume that rulers are overly worried about WGI data and spend time trying to manipulate numbers. We can simply assume that they want to hold on to power and that they are only willing to make investments in governance as long as it provides them with domestic support and allows them to attract inward investment or other economic resources.

A crucial part of our model of spatial diffusion of governance is how the position of a country in international *networks* affects the pressure on rulers to improve governance. If performance is higher in neighboring states, rulers lose domestic legitimacy because it is easier for citizens to make relevant comparisons. At a more abstract level, countries can be conceived as being closer in a 'competition network' if there is a greater degree of competition between them for inward investment. A country is under competitive pressure if it is central to this network (so it has many competitors) and the competitors generally have higher governance scores. Arguably, spatial clustering is related to the fact that information flows more freely between neighbors, and they are likely to be close in the competition network (Zhukov & Stewart, 2012). Using similar distinctions between information and competition, Simmons and Elkins (2004) and Cao (2012) discuss the importance of various spatial networks for the diffusion of policy and political institutions. We draw upon the

recent economics literature analyzing games played on networks (Goyal, 2007; Jackson, 2008), and apply this to competition between political units (Ward & John, 2013). In their strategic interaction on networks, countries are linked by two sorts of ties: (i) a competition network that specifies for each pair of countries the degree to which mobile resources are likely to respond to performance differentials, and (ii) a spatial network that specifies citizens' ability to make comparisons of their country's relative performance (compare Besley & Case, 1995; Cao, 2012; Zhukov & Stewart, 2012). Our theoretical contribution is to model these processes in an integrated manner and to show how they interactively condition rulers' decisions.

Our empirical contribution is to provide a unique test of the effectiveness of governance indicators to drive up performance. Do higher governance scores of countries that are close in network terms lead to improvement in performance? The quality of governance—as measured by the WGI compiled for Africa for the period 1996 – 2011—provides the empirical test for our model (Kaufmann et al., 2010). The period is also appropriate since the quality of governance, especially as applied to Africa, became a serious concern for the international community (for example, the UN Millennium Project). We find some evidence that competition for inward investment and the need to ensure domestic legitimacy drive up performance, but only in relation to some aspects of governance, namely regarding democracy, rule of law and corruption control. There is however no evidence for diffusion of regulatory quality and government effectiveness. The next section briefly surveys existing literature on quality of governance with a focus on studies that consider spatial and network effects. Then we outline the theoretical framework formalizing internal and

external constraints. In the sections after that we elaborate on our research design and present the main empirical findings.

The Diffusion of Governance

It is generally acknowledged that measuring governance demands an encompassing view of government, including central and local political authorities as well as bureaucracies, and considering both their internal workings and the interaction between state and economic and societal actors (Overseas Development Institute, 2006). Kaufmann et al. (2010: 4) define governance as "the traditions and institutions by which authority in a country is exercised. This includes (a) the process by which governments are selected, monitored and replaced; (b) the capacity of the government to effectively formulate and implement sound policies; and (c) the respect of citizens and the state for the institutions that govern economic and social interactions among them."

The WGI have been criticized for a number of reasons; for example, Kurtz & Schrank (2007) and Andrews (2008) question the value of the WGI on theoretical and ideological grounds, and Thomas (2010) methodologically. Even though Kaufmann et al. (2007) provide an extensive rebuttal, we share some of the concerns about the use of WDI to explain phenomena such as economic development, to guide fund allocation or to provide policy advice (see also, Kelley & Simmons, 2015). Our interest in the WGI is however more limited, namely how information about the (relative) quality of governance may compel political leaders to improve governance.

There may be a number of different causal processes at work that could lead to the diffusion of governance practices, and indirectly WGI scores, between countries. Surveying hundreds of articles in the diffusion literature, Graham, Shipan, and Volden (2013) categorize the discussion of causal mechanisms under four headings – learning, competition, coercion and socialization (also see Bailey & Rom, 2004; Simmons & Elkins, 2004; Simmons, Dobbin, & Garrett, 2008). Seldadyo et al. (2010: 626) list spillovers, resource flows, policy convergence, interdependent policy decisions and transmission of government forms as possible factors for spatial dependence. In practice it has proven very difficult to differentiate between possible causal mechanisms given the existing state of theory and available econometric techniques (Gilardi, 2010). Nevertheless we argue that it is useful to distinguish the following diffusion mechanisms.

Norm diffusion Ideas about 'right' policies spread among the political elite through socialization in international forums. Simmons and Elkins (2004) highlight the relevance of communication networks for the diffusion of the norms associated with economic liberalization. Apart from transmitting information, norm diffusion takes place by way of learning via analogy with relevant reference groups: "The policies of culturally similar countries are perceived to (and in fact may) contain highly relevant information on the appropriateness of a particular policy in a specific context of shared values" (Simmons & Elkins 2004, 176).

Regional and global intergovernmental organizations are often considered central to the socialization of *political* actors; consider, for example, the role of the United Nations in advancing human rights as a global norm. Specifically in relation to good

governance, Bauhr and Nasiritousi (2012) argue that international organizations not only promote governance by using integration strategies, including building networks between member states via workshops, conferences and negotiations, but also by using governance indicators like the WGI to challenge governments about the adequacy of their performance. Even IGOs that do not explicitly spread democracy, human rights and other norms relating to good governance often have this as a *latent* function, because political leaders communicate with each other informally at meetings. A country is more embedded in the IGO system if it is a member of more IGOs, and especially of those with a larger membership. More embedded countries are more exposed to external pressures both from the IGOs and from other members, but are also more influential in spreading their norms of good governance. In terms of network theory, such a country is more central to the IGO network (see also Dorussen & Ward, 2008).

Internal competition Rulers face challenges to their tenure either via competitive elections, or alternatively via insurrections or coups. Rulers are more likely to face a challenge if they are perceived to govern poorly. What potential challengers consider to be adequate governance is influenced by what they see happening in other countries. As in theories of yardstick competition in economics, the precise standard of comparison will be influenced by performance in neighboring states (Besley & Case, 1995; Baybeck, Berry, & Siegel, 2011). In contrast, improved performance on governance should increase rulers' legitimacy and support, and reduce the probability of a leadership challenge.

Not only the perception of potential challengers (or political entrepreneurs) matters but also of the population at large. For the latter, performance matters not only in absolute but also in relative terms: the evaluation of citizens will be based, at least partly, on how comparator states are governed. However, for most citizens it is not rational to acquire detailed information on national governing performance over and beyond what can be obtained through everyday experience. Performance is a public good, and individual citizens are unlikely to be able to influence levels of provision through gathering information. So citizens make crude judgments using limited information where any knowledge about how neighboring countries are performing will be particularly useful. Information about neighboring countries is easier to obtain, because people are more likely to experience them through travel, work or personal contacts, and by means of coverage of regional news.[1] Further, information about neighboring countries will be much easier to interpret and to relate to personal experience. Performance in neighboring states thus sets a standard of comparison. The net benefits of good performance in one's own country will be lower, if neighboring countries have a higher level of performance. In this respect, the aim of the WGI to measure and communicate perceptions of governance is particularly relevant.

External competition The possible impact of governance performance, and in particular control of corruption, on the willingness of donors to provide aid has received a lot of attention. Notably, Dietrich interviewed donor officials who suggested that the WGI serve as a primary source for cross-country governance measures.[2] Winters & Martinez (2015: 518) observe that "studies of governance tend to find that poor governance negatively predicts overall aid flows", but also note that these findings do not apply uniformly. Sensitivity to poor governance varies across

donor countries where some of them actually give *more* aid to more corrupt countries (Alesina & Weder, 2002). Donors that care more about governance still give aid to poorly governed countries, but prefer to use types of aid over which they retain more control (Winters & Martinez, 2013; Clist, Isopi, & Morrissey, 2012). Dietrich (2013; n.d.) finds that donors tend to by-pass official government channels in poorly governed countries. Governance has also affected aid allocation criteria (Claessens, Cassimon, & van Campenhout, 2009), and the willingness of donors to provide debt relief (Freytag & Pehnelt, 2009). Barthel et al. (2014) observe spatial dependence in aid allocation among donor countries driven by competition for export markets, but we are not aware of any studies of spatial dependence among receiving countries.

Arguably of particular importance for rulers of poor developing countries is the competition for foreign direct investment and overseas aid. Competition could lead to similar performance, and clustering could be due to neighboring countries being competitors (Elkins, Guzman, & Simmons 2007; Cao 2012). Not only is quality of governance relevant for investors and donors, it is also plausible that they are aware of the information provided by the WB (or the various sources on which the WGI rely). Investors and donors look for a stable political environment and low levels of corruption among other considerations, such as foreign policy goals, strategic ties, access to raw materials, size of market, nature of the workforce, or historical ties to donors and investors. Resources are more likely to flow to a higher performing country when donors and investors compare two potential target countries, at least if the countries are sufficiently similar in all other relevant respects.

Private investors seek to invest in countries with higher returns, and obviously look for investment opportunities in their line of activity. It is plausible that, all things being equal, returns increase with the performance of states on governance indicators; for instance, corruption will be lower and investments less subject to expropriation.[3] Investors also have incentives to seek out some information on the performance of any pair of countries they consider investing in, because the returns for being better informed are private goods for them. The WGI are publicly available and there is some evidence that investors take them into consideration.[4] Using the WGI, Morrissey and Udomkerdmongkol (2012) find the FDI is greater in developing countries that have good governance, although it may also crowd out domestic private investment in these countries. Kurtz & Schrank (2007), however, question the importance the World Bank, IMF and some other international organizations place on governance as an influence on foreign direct investment. Moreover, Asiedu (2002) finds that Sub-Sahara Africa may be unique in that higher return on investment and infrastructure do not seem to have an impact on FDI, and that the impact of trade openness is weaker there compared to the rest of the world. We accept that governance is unlikely to be the only consideration, but if two countries are equally attractive to an investor given its line of business, the one with the higher governance score will tend to attract investment that might have gone to the other. Supporting this assumption, Bloningen et al. (2007) observe that FDI into a host country depends on FDI in proximate countries, while Blanco (2012) finds that surrounding market potential, rather than spatial autocorrelation, explains FDI in Latin America; interestingly, he also finds that control of corruption promotes FDI.

Strategic Interaction in Networks and Governance Diffusion

This section develops a governance performance game played by political leaders on the networks highlighted above. Success in the network of competition for foreign direction investment can be achieved by performing better on governance scores than competitors. Internal legitimacy is gained by performing well relative to comparator countries defined by the information network. However, any improvements in performance can also have political costs. They need to be funded through taxation or extraction. Improved governance may also reduce the availability of rents.

Internal competition We assume that citizens make crude judgments using limited information. Information should come for free, or at relatively low costs. Let $d_{ij} \geq 0$, $d_{ii} = 0$, denote how easy it is for citizens in country *i* to obtain information about country *j*'s governing performance. Personal contacts, for example by means of trade, or information picked up through coverage of regional news are the most likely source of easily accessible information. The costs for obtaining information should thus relate to geography and trade links. The most straightforward argument concerns geography: the further *j* is from *i*, the higher the costs of obtaining information about *j* and the less weight *j* will have in a composite index for performance comparison. Thus, we assume the index of comparison used by citizens of *i* to equal: $\sum_{\forall j} d_{ij} p_j$, where $p_j \in [0, \infty)$ is *j*'s level of performance and $j \neq i$.

External competition We model external competition as a game played on a valued network where the network tie between units *i* and *j*, $c_{ij} \geq 0$, $c_{ij} = c_{ji}$, $c_{ii} = 0$, represents the strength of competition for FDI and ODA. Suppose there is a set of characteristics governing attractiveness. These might include nearness to external markets, access to

raw materials, skills of the labor force, size and wealth of the market, transport links, etc. We can think of states being located at a point is the characteristic space. Then c_{ij} is a function of the reciprocal of the distance between the positions of states in this space. Distance in this sense measures a dyad's *structural similarity* as investment locations (Cao, 2012).

Accordingly, the utility function of the ruler of country *i* can be represented as follows: (1)

$$U_i = \sum_{\forall j} c_{ij}(p_i - p_j) + (\varphi_i p_i - \theta_i p_i^2) \Big/ \sum_{\forall j} d_{ij} p_j$$

The first term represents payoffs to a ruler from external competition. We treat these payoffs as the numéraire relative to the first form of benefits and to costs. For a given degree of competition between countries *i* and *j* (given by c_{ij}) *and* $p_i > p_j$, country *i* expects differentially to attract inward investment that might otherwise have been located in country *j*. Country *i* expects to lose such investment if $p_i < p_j$. The larger the value of c_{ij}, the more governance performance differentials matter to whether the ruler of *i* attracts flows of inward investment that would otherwise have gone to country *j*.

The second term relates to net gains from internal competition. First, we expect rulers' marginal gains from good performance on governance indicators to be declining. As with any standard good, marginal utility of performance declines for citizens; hence marginal gains in support for rulers decline also. Moreover, there are political costs of governance, because taxation may have to increase as provision of infrastructural capital investment, education and health go up. Also, good governance decreases rents available to special interests through corrupt practices. The political

resistance of such groups can be expected to increase as governance scores are pushed higher. Allowing for costs, we expect domestic political gains to be a strictly concave function of performance. Therefore, in the second term: $\varphi_i > 0$; $\theta_i > 0$; and for sufficiently low levels of p_i, $\varphi_i p_i - \theta_i p_i^2 > 0$ and $\delta U_i/\delta p_i > 0$. Secondly, we expect such gains to be lower the better the performance of comparator states. Net benefits from good performance are lower the higher performance in comparator countries, hence $\Sigma d_{ij}p_j$ is the divisor in the third term.

Reaction functions Assuming the ruler of country *i* does not choose the corner solution $p_i = 0$, we can derive the best response from the first-order condition, because expression (1) is strictly concave in p_i:

(2)

$$dU_i/dp_i = \sum_{\forall j} c_{ij} + (\varphi_i - 2\theta_i p_i)/\sum_{\forall j} d_{ij}p_j = 0$$

Re-arranging:

(3)

$$p_i = \left(K_i^{COMP} \sum_{\forall j} d_{ij}p_j + \varphi_i \right) \Big/ 2\theta_i$$

Here $K_i^{COMP} = \sum c_{ij}$ is country *i*'s centrality in the valued competition network. The solution of the game has an intuitive interpretation: countries with higher centrality in the competition network can be seen as under more competitive pressure from other countries. Moreover the effects of centrality increase as a function of the term $\Sigma d_{ij}p_j$, the average performance level of other countries as perceived by the citizens of country *i*. Since K_i^{COMP}, and $d_{ij} > 0$, *i*'s performance is an increasing function of *j*'s.

Thus the first term in equation (3) captures the interaction between external competition through the competition network and the desire for internal legitimacy driven by yardstick competition.

Testing for causal mechanisms Suppose that terms d_{ij} increase as the distance between countries *i* and *j* gets larger, because it should be more difficult for citizens to find out about and meaningfully assess the performance of countries that are more distant. Then equation (3) signifies a spatial lag: the performance of country *i* is predicted to be a weighted average of the performance of other countries, where the weight on another country's performance declines with distance (as well as being a function of centrality score). Assume unit homogeneity so that θ_i, and φ_i are the same across some relevant group of states. Then from expression (3), we can estimate the effects of external competition for inward investment using a linear statistical model including spatial lags.[5] Specifically: a significant positive spatial lag coefficient on $K_i^{COMP} \sum_{\forall j} d_{ij} p_j$ in equation (3)) suggests that external competitive pressures are important.

Data and Research Design

Estimation We estimate spatio-temporal autoregressive models (Franzese & Hays, 2008) of the form

$$\mathbf{p}_t = \alpha + \tau \mathbf{p}_{t-1} + \mathbf{X}_{t-1}\beta + \rho \mathbf{W}\mathbf{p}_t$$

where **p** is an $NT \times 1$ vector of observations of governance performance, for $N = 47$ African states for $T = 13$ periods. We focus on Africa partly because we think it is more likely that unit homogeneity is satisfied in a single region and because Africa has been a particular focus for the link between governance and development for international organizations. Microstates with populations under 1 million are excluded.[6] The observations on performance from 1996 to 2002 are biannual; from 2003 to 2011 the observations are annual. **X** is a battery of controls characterizing individual states**,** including network centrality scores suggested by the model, to be discussed shortly**.** The connectivity matrix, **W**, is a *N'(T-1)* by *N'(T-1)* block-diagonal matrix with *(T-1) N'XN'* sub-matrices along the leading diagonal, and typical non-zero element w_{ijt} capturing relative connectivity or influence from unit *j* to *i* at time t.[7] The first year of observations is lost because of the inclusion of the temporal lag, hence *T-1*. There is some further missing data on the controls, hence N' < N.

The estimate of ρ is the spatial lag coefficient that captures the strength of policy interdependence. The models include a temporal lag both because we expect path dependence in policies affecting governing performance and because of high levels of temporal autocorrelation in the residuals of models estimated without the temporal lag τ. Maximum likelihood estimation avoids simultaneity bias due to including the dependent variable on both sides of the equation (Anselin, 1988; Franzese & Hays, 2008).

Governance The WGI are based on perceptions of governance relating to the selection of political leaders, and the effectiveness of and respect for their rule. Accordingly, the WGI provide six aggregates. 'Voice and accountability' covers

democracy and political freedoms. ‘Political stability/absence of violence’ takes in perceptions of unconstitutional or violent threats to governments. ‘Government effectiveness’ covers the quality of public services and servants. ‘Regulatory quality’ concerns whether policies promote or hinder markets. As indices of respect for institutions and rules, ‘Rule of law’ captures the extent to which government agents abide by the rules of society, and ‘control of corruption’ the extent to which public power is used for private gain. Each indicator combines information from a large number of sources using an unobserved-components model, based on the assumption that indicators are a linear function of some unobserved concept plus an error. Kaufmann et al. (2010) argue that this method averages out idiosyncratic features of particular sources of data while also allowing them to provide standard errors for each indicator.

The WGI are used extensively in academic research. Winters and Martinez (2014: 517-8) survey 19 studies that examine governance as determinant of foreign aid and find that eight use the WGI. The most commonly used alternatives are the International Country Risk Guide (ICRG), which is a source in the WGI, and the Freedom House scores. They also note that many studies either rely on specific indicators, such as corruption control or government effectiveness, or use the average over a subset of indicators. Consequently, our empirical analysis below considers spatial diffusion for five of the six dimensions of governance separately.[8] Some alternative governance indicators may have more public exposure, but they cannot match the comprehensive scope of the WGI; in effect, they have become the ‘industry standard’ (see also, Kaufmann et al., 2007).

Distance Contiguity and the reciprocal of distance are standard ways to operationalize purely geographical spatial effects, and helpful to capture the idea that citizens pay more attention to performance in states that are nearby. We have tried both approaches but generally found weaker effects with respect to contiguity (not reported). We use Gleditsch and Ward's (2001) data on the distance between capital cities. For our purposes, this is the most relevant measure of distance because capital cities tend to be the largest centers of population, and rulers have to pay special attention to popular legitimacy in them (Bates, 2005). Accordingly, for each dyad we define[9]

$$rec\_dist_{ij} = 1/(1 + \text{distance between capitals})$$

Competition Competition for external resources between members of a dyad should be high if they are (a) geographically close to each other and (b) similarly attractive to foreign investors. [10] Geographical closeness controls for aspects such as nearness to raw materials, markets, and transport costs. When other factors, such as labor costs, that make a country attractive for foreign investors are similar and the countries are nearby, it is more likely that good governance will indeed tip the balance in making investment decisions.

The World Economic Forum (WEF) reports competitiveness scores for individual countries (Sala-i-Martin et al., 2013). Scores rest on standard internationally comparable data from organizations such as the WB and also on expert judgments. There are four 'basic requirements' resting on twelve 'pillars' of competitiveness. As we are attempting to capture aspects of competiveness that do not relate to current governance performance, we cannot include pillars such as institutions or health and

primary education. Instead, we focused on infrastructure (listed among the basic requirements) and market size (listed among efficiency enhancing pillars). Given African countries' stage of economic development, the WEF suggest that infrastructure should weight roughly twice as much as market size, and the scores are weighted accordingly. A drawback is that scores for African countries are only available for the years after 2006. However, it is possible to fit a very simple predictive model that explained around 68% of the variance in the scores across these cases – a quadratic in real GDP per capita in year 2000 $.[11] We used the estimated coefficients from this model and values of *GDPpc* to calculate monadic competiveness scores $index\_comp_{it}$ for all cases, including those for which data were actually available, to ensure consistency.

The measure of dyadic competition corresponding to the parameter c_{ij} in the theoretical model becomes:

$$comp_{ijt} = rec\_dist_{ij} * (1/(1 + |index\_comp_{it} - index\_comp_{jt}|).$$

Competition between two countries is higher if they are closer together (captured by the first term) and they are similarly competitive with regard to their infrastructure quality and market size (captured by the second term). However, the model suggests that what matters to performance is actually a country's degree centrality in the competitiveness network. Taking account of time, this is defined as follows:

$$K_{it}^{COMP} = \sum_{\forall j} comp_{ijt}$$

Competition centrality in a given year is, thus, a measure of the *overall* pressure a country is under in its competition for external resources, in particular, FDI.

The theory—to be precise, the first term in equation (3)—suggests that spatial lags, interacting distance and centrality in the competition network, are needed. Accordingly we define a spatial weight matrix ***compXrec_dist_w*** where for non-zero cells:

$$compXrec\_dist_{ijt} = K_{it}^{COMP} * rec\_dist_{ij}$$

It is common practice to row-standardize spatial weighting matrices (that is, to divide entries by row totals) as this makes interpretation of results somewhat more straightforward. However the decision on whether to do this or not should ideally be led by theory (Plümper & Neumayer, 2010). Here row-standardizing corresponds to the idea that citizens of all states have a fixed total amount of attention to allocate to other states' performance, allocating within this total in inverse proportion to distance. Not row-standardizing corresponds to the idea that citizens of states generally located further away from neighbors allocate less attention in total than those that generally have close neighbors. This seems to make more sense when information is costly; so we do *not* row-standardize.[12]

Controls The degree to which countries are embedded in the IGO network affects their exposure to the governance scores of other countries. The Correlates of War Project Inter-Governmental Organization Data version 2.3 (Pevehouse, Nordstrom, & Warnke, 2004) measures the number of IGOs to which both members of a dyad are affiliated, igo_{ijt}. Since the data only runs up to 2005, we linearly extrapolated them to 2011. This is justifiable both because dyadic scores are very slow moving year-by-year and because there is a general upward trend in IGO membership and the number of IGOs. The degree centrality of country *i* in the IGO network at time *t* becomes

$K_{it}^{IGO} = \sum_{\forall j} igo_{ijt}$. The theory suggests that states with higher centrality scores should have better governance performance.

The idea that political decentralization improves government performance has been of considerable interest to the World Bank, leading to a major effort to develop indicators (Ivanyna & Shah, 2012). Some hold that decentralization leads to greater citizen control and accountability of politicians, increased transparency and lower corruption, less burdensome bureaucracy and a better fit between demand and supply of public services. In a federal system competition between units, due to possibilities for exit by citizens and investment in other states in the federation, may also improve performance. On the other hand, decentralization can lead to clientelism at local level, and weakened national political parties and cooperation across units; and in practice power may not really be decentralized in nominally federal systems (Weingast, 2014). The empirical evidence from studies of the relation between decentralization and particular performance indicators on economic development, health and education is ambiguous (Faguet, 2014: 10). Nevertheless the theory might still apply to governance, and some work has been done to test it using case studies and within-country variance in governance (see Faguet (2014) for a survey of studies in a special issue of *World Development*). Generally the WB's indicators of political decentralization in Africa have somewhat wider coverage than its indicators of fiscal decentralization. Accordingly, we use its coding for *federation*, a dummy variable taking on the value 1 if the system is federal. Decentralization can be related to the average area covered by lower-tier units of government. We also use the number of second-tier political units divided by the country's land area as a *decentralization* measure.

The WGI cover a wide spectrum of types of performance. Lacking strong theoretical models for each of the indicators, the models also include a set of generic controls. Firstly, they include GDP per capita and its squared term. Wealthier countries are expected to perform better but with decreasing marginal returns. The models further include centrality in the competitiveness network as a control, because in the spatial lags the variable interacts with distance making it appropriate to include it. Moreover, the theory suggests that if internal legitimacy does *not* matter to rulers, performance should be a function of centrality in the competition network.[13] Net *overseas development aid* as a percentage of total GDP is included, because such aid may be aimed at improving governance. Preliminary work suggests that *rural population* as a percentage of total population tends to correlate positively and significantly with governance performance. We are not sure whether this reflects any causal process, however. Since each of our control variables may be endogenous to performance—though results in relation to our theory do not seem sensitive to this—we lagged each of these variables by one year in an attempt to address this issue.

The models include two time-invariant controls. The first is Fearon's (2003) data on *ethnic fractionalization*, and the second is the absolute value of the average *latitude* of the country reflecting its distance from the equator. Both controls are clearly exogenous, but the direction of their impact on governance is disputed. Fractionalization correlates positively with some aspects of performance. Latitude captures any colonial legacy possibly associated with higher governance scores on some measures (Acemoglu, Johnson, & Robinson, 2001).

Results

Table 1 summarizes the findings for five different WGI governance indicators. Each model includes as a spatial weight matrix the interaction between centrality in the competition network and reciprocal of distance. The theoretical expectation is that the relevant spatial autocorrelation coefficients (ρ) are positive and significant. We note that the correlations between the various control variables as well as the correlations between the controls and the spatial weights are modest (< .6). The reported coefficients on controls actually only capture instantaneous effects, not equilibrium effects.

(Table 1 about here)

The WGI score for 'voice and accountability' is the dependent variable of the first model of Table 1. The positive and significant spatial autocorrelation provides quite strong evidence that competition for external resources matters. Further, the lagged values of centrality in the competition network are also significant, though the coefficient for (lagged) centrality in the IGO network is clearly insignificant.

The results for the other control variables are largely as expected. The lagged dependent variable is highly significant. Wealthier countries are more likely to have high scores but with decreasing marginal effects. Overseas development aid appears to promote voice and accountability. Possibly more surprising is that the coefficients for ethnic fractionalization and larger share of rural population are positive. There is

some evidence for the idea that scores are higher in parts of Africa further from the equator, though *latitude* is only marginally significant. Since ethnic fractionalization and latitude are only significant in the models for 'voice and accountability', our findings clearly provide little support for the suggested link between colonial heritage and governance (Acemoglu, Johnson, & Robinson 2001). Finally, neither measure of decentralization is significant.

The second and third model in Table 1 report respectively on government effectiveness, the quality of public services and servants, and regulatory quality, the extent to which policies promote or hinder markets. Very few variables are significant in both models with exception of the lagged dependent variable and (marginally for government effectiveness) decentralization. The latter suggests that decentralization may indeed have a positive impact on the quality of public service. In the second model for government effectiveness, wealth is also significant as is, again marginally, rural population. Ethnic fractionalization is not significant, suggesting that power-sharing arrangements may indeed contribute to higher scores on 'voice and accountability' while not necessarily improving the quality of public service.

Importantly, there is little indication that network ties matter for government effectiveness or regulatory quality. The spatial lags for competitiveness weighted by distance is insignificant in both models with a p-value of less than 0.15. The controls for centrality in the competitiveness network and the IGO network do not reach significance either. Finally, the coefficients for ODA are insignificant and inconsistent. Clearly, we do not find evidence for the spatial diffusion of, or external pressures for, government effectiveness and regulatory quality. Even though

government effectiveness and regulatory control would appear to be based on political decisions to invest in bureaucratic effectiveness and efficiency, and in contrast to the literature emphasizing the diffusion of economic liberalization (Simmons, Dobbin & Garrett 2008; Graham, Shipan & Volden 2013), we are unable to find clear evidence for the spatial diffusion of best practices on the governance dimensions that are most closely related.

In Table 1, Model 4 reports on 'rule of law' and Model 5 on 'control of corruption'. For both indices we find evidence that spatial correlation matters: the spatial lag on competition is significant at the 95% level in the model for rule of law, while the p-value of the spatial lag equals 0.07 (and thus is significant at the 93% level) in the control of corruption model. In both models, centrality in the competition network is significant at the 90% level, but IGO centrality is insignificant. Overall, these findings still suggest that the scores for 'rule of law' and 'control of corruption' are driven externally—via the competition for inward investment. Some further support for this suggestion can be found in the control variables. Apart from the lagged dependent variables and wealth (which are always significant), overseas aid (ODA) is positively linked with the upholding the rule of law. External donors seem indeed increasingly concerned with rule of law (and human rights). Aid is, however, not significant for control of corruption. Federalism and decentralization are not significant for rule of law and control of corruption either.

To summarize, we find evidence for spatial diffusion of democracy, rule of law, and corruption control. There is no evidence for diffusion of regulatory quality and government effectiveness.

Robustness Structural equivalence is a possible alternative approach to capture competition between a pair of countries; countries are structurally equivalent if there is a high, positive bivariate correlation between vectors of characteristics that are considered relevant for competition (Cao & Ward, 2014). Members of a dyad with a high, positive correlation are said to be in a *structurally equivalent position*, hence they are under similar competitive pressure (Cao, 2012). Accordingly, we calculate structural equivalence using data from the African Development Indicators database, relying as much as possible on indicators that can be considered exogenous to governance. Replacing the spatial lags based on centrality in the competitiveness network weighted by distance with spatial lags based on structural equivalence, we find that the ρ values are typically not significant at conventional levels. Including alternative spatial lags has however little impact on the coefficients for the controls.

A classic liberal argument is that trade between countries increases awareness, both because some citizens have a greater incentive to find out about conditions in the other country and because trade is often accompanied by travel by citizens. Arguably, geographical distance between two countries is then not necessarily a good indicator of how much information citizens have about governance in the other country.[14] Accordingly, we generated a spatial weighting matrix based on data for total bilateral trade flows between countries in constant dollars (Barbieri, Keshk, & Pollins, 2009) and used this in the models of Table 1 as an alternative spatial lag. Again, none of the coefficients on spatial lags based on bilateral trade is significant at conventional levels, but the coefficients for the controls were unaffected.

The models in Table 1 address possible endogeneity by lagging the independent variable by one period. As a (more demanding) alternative, we have re-run the models using a five period lag on all temporally varying control variables apart from the lagged dependent variable. The direction of the effects (both of the controls and the spatial lags) was unaffected. The findings on the spatial lags are similar apart for the spatial lag in the model for control of corruption. In this case, the spatial lag is not quite significant at the 90% level anymore. There is little change in results for controls from those reported in text, and in few instance the findings are actually marginally stronger when using a five period lag.

Finally, the models in Table 1 are estimated separately even though they could be considered related. As an alternative specification, we implanted GLM with seemingly unrelated regressions using spatial lags. The key results remain robust with similarly signed coefficients and significance levels and only marginal differences in the size of some coefficients.[15]

Conclusions

The quality of governance has become prominent in debates on underdevelopment with clear and obvious implications for policy: rulers of 'poor' countries have their own responsibilities to 'deserve' their internal legitimacy and external attention. A lot of attention has been given to pressures for political and economic liberalization mainly from 'western' developed countries and the institutions they control, and less to the impact of regional developments. In this respect, the World Bank WGI indicators have been criticized for functioning as headline figures (Kurtz & Schrank

2007; Andrews 2008; Kelley & Simmons, 2015). We contribute to these debates in three ways.

First of all, we present a model in which governance follows from political decisions. The theory recognizes the relevance of information and competition for scarce resources. However, even though inward investment generally comes from faraway places (the West and China), the main focus of the competition is *regional*. External sponsors decide to give aid (or to invest) in one country rather than another, where the 'other country' is often a neighboring one. Similarly, internal legitimacy will depend more on comparison with countries nearby than with countries faraway: for citizens of Libya, the relevant country of comparison is Egypt or Tunisia rather than Germany, the UK or the USA.

The second contribution is that our empirical models control not only for spatial linkages and/or the position (or centrality) of countries in competition and information networks (Simmons & Elkins, 2004) but also for spatial linkages *conditional on* the same competition and information networks. Importantly, the specification follows directly from our theoretical framework. We recognize, however, that the results reported only capture instantaneous and not necessarily equilibrium effects.

Finally, even though we acknowledge that the strength of our findings is mixed, there is evidence for diffusion for some of the WGI indicators, specifically voice and accountability, rule of law, and control of corruption. There is no evidence for such effects in relation to government effectiveness and regulatory quality. Selecting from the various attempts to increase awareness of the quality of governance, we decided to

focus on the WB WGI because they are the most comprehensive and consistent. The development and publication of these governance indicators may well have had a positive impact in some dimensions. At least, we find some, competition-driven, diffusion of the quality of governance, which may be based on either the World Bank governance indicators directly or on the perception of underlying levels of performance captured by the WGI. Competitive pressures from other countries' performance seem, however, to have no impact on quality of government effectiveness and regulatory quality. These areas are definitely of concern to the WB and the focus of governance in the economic literature (Simmons, Dobbins, & Garrett, 2008).

There are several possible explanations, none of which we find entirely satisfactory. It may be that institutional and legal frameworks are easier to address compared to government effectiveness and regulatory quality. Improving the quality of government officials is quite costly, and lack of regulatory quality presents opportunities for rent seeking. Alternatively, compared to the other dimensions of governance, political leaders may care less about perceived lack of government effectiveness and regulatory quality. Possibly, African political leaders consider especially these dimensions of governance as externally contrived and less applicable to local conditions. A final possibility is that the quality of data is particularly poor in these areas. Of course, the data quality of all governance indicators for Africa remains a reason for concern, and the WGI acknowledge the uncertainties surrounding their estimates. Control of corruption and democratization seem, however, to have been more salient than the general quality of government officials and regulations. If so,

the WGI may reflect more accurately perceptions of the former dimensions compared to the latter.

References

Acemoglu, D., Johnson, S., & Robinson, J. (2001). The Colonial Origins of Comparative Development. *American Economic Review, 91*(5), 1369–1401.

Adserà, A., Boix, C., & Payne, M. (2003). Are you being served? Political accountability and the quality of government. *Journal of Law, Economics, and Organization, 19*(2), 445 – 490.

Alesina, A. & Weder. B., (2002). Do corrupt governments receive less foreign aid? *American Economic Review, 92*(4), 1126–1137.

Andrews, M. (2008). The Good Governance Agenda: Beyond Indicators without Theory. *Oxford Development Studies, 36*(4), 379–407.

Anselin, L. (1988). *Spatial Econometrics, Methods and Models*. Dordrecht: Kluwer Academic Publishers.

Asiedu, E. (2002). On the Determinants of FDI to Developing Countries: Is Africa Different? *World Development, 30*(1), 107–119.

Bailey, M., & Rom, M., (2004). A Wider race? Interstate Competition Across Health and Welfare programs. *Journal of Politics, 66*(2), 326–347.

Barbieri, K., Keshk, O. M. G., & Pollins, B. (2009). Trading Data: Evaluating our Assumptions and Coding Rules. *Conflict Management and Peace Science, 26*(5), 471–491.

Barthel, F., Neumayer, E., Nunnenkamp, P., & Selaya, P. (2014). Competition for Export Markets and the Allocation of Foreign Aid: The Role of Spatial Dependence among Doner Countries. *World Development, 64*(12), 350–365.

Bates, R. H. (2005). *Markets and States in Tropical Africa: The Political Basis of Agricultural Policies.* Berkeley: University of California Press, 2nd edition.

Bates, R, H. (2008). *When Things Fell Apart: State Failure in Late-Century Africa.* Cambridge: Cambridge University Press.

Baybeck, B., Berry, W. D., & Siegel, D. A. (2011). A Strategic Theory of Policy Diffusion via Intergovernmental Competition. *Journal of Politics*, *73*(1), 232–247.

Bauhr, M., & Nasiritousi, N. (2012). How do International Organizations Promote Quality of Government? Contestation, Integration, and the Limits of IO Power. *International Studies Review*, *14*, 541–566.

Besley, T., & Case, A. (1995). Incumbent Behavior: Vote Seeking, Tax Setting and Yardstick Competition. *American Economic Review*, *85*(1), 25-45.

Blanco, L. R. (2012). The Spatial Interdependence of FDI in Latin America. *World Development*, *40*(7), 1337–1351.

Bloningen, B., Davies, R., Waddel, G., & Naughton, H. T. (2007). FDI in space: Spatial autoregressive relationships in foreign direct investment. *European Economic Review*, *51*(5), 1303–1325.

Buhaug, H., & Gleditsch, K. S. (2008). Contagion or Confusion? Why Conflicts Cluster in Space. *International Studies Quarterly*, *52*(2), 215–233.

Cao, X. (2012). Global Networks and Domestic Policy Convergence. A Network Explanation of Policy Changes. *World Politics*, *64*(3), 375–425.

Cao, X., & Ward, M. D. (2014) Do Democracies Attract Portfolio Investment? Transnational Portfolio Investments Modeled as Dynamic Network. *International Interactions*, *40*(2), 216–245.

Claessens, S., Cassimon, D., & Van Campenhout, B. (2009). Evidence on changes in aid allocation criteria. *World Bank Economic Review*, *23*(2), 185–208.

Clist, P., Isopi, A., & Morrissey, O. (2012). Selectivity on aid modality: Determinants of budget support from multilateral donors. *Review of International Organizations*, *7*(3), 267–284

Collier, P. (2007). *The Bottom Billion: Why the Poorest Countries Are Failing and What can be Done About it*. Cary, NC: Oxford University Press.

Collier, P., Elliot, L., Hegre, H., Hoeffler, A., Reynal-Querol, M., & Sambanis, N., (2003). *Breaking the Conflict Trap*, Washington, D.C: World Bank and Oxford University Press.

Dietrich, S. (2013). Bypass or engage? Explaining donor delivery tactics in foreign aid allocation. *International Studies Quarterly, 57*(4), 698–712.

Dietrich, S. (n.d.). Donor Political Economies and the Pursuit of Aid Effectiveness. *International Organization* forthcoming.

Dorussen, H. & Ward, H. (2008). InterGovernmental Organizations and the Kantian Peace: A Network Perspective. *Journal of Conflict Resolution*, *52*(2), 189–212.

Elkins, Z., Guzman, A. T., & Simmons, B. A. (2008). Competing for Capital: The Diffusion of Bilateral Investment Treaties, 1960–2000. In: B. A. Simmons, F. Dobbin, & G. Garrett (Eds.), *The Global Diffusion of Markets and Democracy* (pp. 220 – 260). Cambridge: Cambridge University Press.

Faguet, J.-P. (2014). Decentralization and Governance. *World Development*, *53*(1), 2–13.

Fearon, J. D. (2003). Ethnic and Cultural Diversity by Country. *Journal of Economic Growth*, *8*(2), 195–222.

Franzese, R. J., & Hays, J. C. (2008). Interdependence in Comparative Politics: Substance, Theory, Empirics, Substance. *Comparative Political Studies*, *41*(4/5), 742–780.

Freytag, A., & Pehnelt, G. (2009). Debt relief and governance quality in developing countries. *World Development*, *37*(1), 62–80

Fukuyama, F. (2004). *State-Building: Governance and World Order in the Twenty-First Century*. London: Profile Books.

Gilardi, F. (2010). Who Learns from What in Policy Diffusion Processes? *American Journal of Political Science*, *54*(3), 650–666.

Gleditsch, K. S., & Ward, M. D. 2001. Measuring Space: A Minimum Distance Database. *Journal of Peace Research*, *38*(4): 749–768.

Gleditsch, K. S. & Ward, M. D. (2008). Diffusion and the Spread of Democratic Institutions. In B. A. Simmons, F. Dobbin, & G. Garrett (Eds.), *The Global Diffusion of Markets and Democracy* (pp. 261–302). Cambridge: Cambridge University Press.

Goyal, S. (2007). *Connections: An Introduction to the Economics of Networks*. Princeton, NJ: Princeton University Press.

Graham, E. R., Shipan, C. R., & Volden, C. (2013). The Diffusion of Policy Diffusion Research in Political Science. *British Journal of Political Science*, *43*(3), 673–701.

de Groot, O. (2011). Spillovers of Institutional Change in Africa. *Kyklos*, *64*(3), 410 – 426.

Hollyer, J. R., Rosendorff, B. P., & Vreeland, J. (2014). Measuring Transparency. *Political Analysis*, *22*(4), 413–434.

Islam, R. (2006). Does more transparency go along with better governance? *Economics and Politics*, *18*(2), 121–167.

Ivanyna, M., & Shah A. (2012). How Close Is Your Government to Its People? Worldwide Indicators on Localization and Decentralization. *World Bank Policy Research Working Papers no. 6138*, Washington, D.C.: World Bank.

Jackson, M. O. (2008). *Social and Economic Networks*. Princeton: Princeton University Press.

Kaufmann, D., Kraay, A., & Mastruzzi, M. (2007). The Worldwide Governance Indicators Project: Answering the Critics. *World Bank Policy Research Working Paper 4149*, Washington, D.C.: World Bank.

Kaufmann, D., Kraay, A., & Mastruzzi, M. (2010). The Worldwide Governance Indicators. Methodology and Analytical Issues. *World Bank Policy Research Working Paper 5430*, Washington, D.C.: World Bank.

Kelley, J. G., & Simmons, B. A. (2015). Politics by Numbers: Indicators as Social Pressure in International Relations. *American Journal of Political Science, 59*(1), 55 – 70. DOI: 10.1111/ajps.12119.

Knoll, M., & Zloczysti, P. (2012). The Good Governance Indicators of the Millennium Challenge Account: How Many Dimensions are Really Being Measured? *World Development*, *40*(5), 900–915.

Kurtz, M. J., & Schrank, A., (2007). Growth and Governance: Models, Measures, and Mechanisms. *Journal of Politics*, *69*(2), 538–554.

Morrissey, O., & Udomkerdmongkol, M. (2012) Governance, Private Investment and Foreign Direct Investment in Developing Countries. *World Development*, *40*(3), 437–445.

North, D. C. (1990). *Institutions, Institutional Change and Economic Performance*. New York, NY: Cambridge University Press.

Overseas Development Institute (ODI) (2006). Governance, Development and Aid Effectiveness: A Quick Guide to Complex Relationships. ODI Briefing Paper, March 2006. (http://www.odi.org.uk/sites/odi.org.uk/files/odi-assets/publications-opinion-files/218.pdf, accessed 25/3/2013)

Pevehouse, J. C., Nordstrom, T., & Warnke, K., (2004). The COW-2 International Organizations Dataset Version 2.0. *Conflict Management and Peace Science, 21*(2), 101–119.

Plümper, T., & Neumayer, E. (2010). Model Specification in the Analysis of Spatial Dependence. *European Journal of Political Research*, *49*(3), 418–442.

Sala-i-Martin, X. et al. (2013). *The Global Competitiveness Index 2012-13: Strengthening Recovery by Raising Productivity*. Davos: World Economic Forum.

Salehyan, I. (2009). Rebels without Borders. *Transnational Insurgencies in World Politics*. Ithaca, NY: Cornell University Press.

Seldadyo, H., Elhorst, J. P., & de Haan J. (2010). Geography and governance: Does space matter? *Papers in Regional Science*, *89*(3), 625–640.

Seldadyo, H., Pandu Nugroho, E., & de Haan, J. (2007). Governance and Growth Revisited. *Kyklos, 60*(2), 279–290.

Simmons, B. A., Dobbin, F., & Garrett, G. (Eds.) (2008). *The Global Diffusion of Markets and Democracy*. Cambridge: Cambridge University Press.

Simmons, B., & Elkins, Z. (2004). The Globalization of Liberalization. Policy Diffusion in the International Political Economy. *American Political Science Review*, *98*(1), 171–189.

Smallman-Raynor, M. R., & Cliff, A. D. (1991). Civil War and the Spread of AIDS in Central Africa. *Epidemiology and Infection, 107,* 69 – 80.

Thomas, M. A. (2010). What Do the Worldwide Governance Indicators Measure? *European Journal of Development Research*, *22*(1), 31–54.

United Nations Development Program (UNDP) (2007). Governance Indicators-A Users' Guide (2nd Edition). Downloaded from http://www.undp.org/content/dam/aplaws/publication/en/publications/democratic-governance/oslo-governance-center/governance-assessments/governance-indicators-2nd-edition/governace_indicator_undp_users_guide_online_version.pdf.

van de Walle, N. (2001). *African Economies and the Politics of Permanent Crisis, 1979 – 1999*. Cambridge: Cambridge University Press.

Ward, H., & John, P. (2013). Competitive Learning in Yardstick Competition. Testing Models of Policy Diffusion. *Political Science Research and Methods*, *1*(1): 3–25.

Ward, M. D., & Gleditsch, K. S. (2002). Location, Location, Location. An MCMC Approach to Modeling the Spatial Context of War and Peace. *Political Analysis*, *10*, 244–260.

Weingast, B. R. (2014). Second Generation Fiscal Federalism: Political Aspects of Decentralization and Economic Development. *World Development*, *53*(1), 14–25.

Winters, M. S., & Martinez, G. (2014). The Role of Governance in Determining Foreign Aid Flow Composition. *World Development*, *66*, 516 – 531.

World Bank (2007). *A Decade of Measuring the Quality of Governance. Governance Matters 2007. Worldwide Governance Indicators, 1996 – 2007*. Washington D.C.: The International Bank for Reconstruction and Development / The World Bank.

Zhukov, Y. M., & Stewart, B. M. (2013). Choosing Your Neighbors: Networks of Diffusion in International Relations. *International Studies Quarterly*, *57*(2), 271 – 287.

Table 1. *Spatial Correlations (Competitiveness and Distance Weighted) of Worldwide Governance Indicators*

		Y	Model 1 Voice & Accountability	Model 2 Government Effectivenes	Model 3 Regulatory Quality	Model 4 Rule of Law	Model 5 Control of Corruption
T	Y (lagged)		0.926	0.933	0.934	0.931	0.894
			(0.015)***	(0.015)***	(0.017)***	(0.013)***	(0.018)***
B	GDP pc (lagged)		-6.77e-05	5.3e-05	3.46e-05	6.6e05	7.29e-05
			(2.78e-05)*	(2.21e-05)*	(2.79e-05)	(2.11e-05)**	(2.66e-05)**
	GDP pc (lagged, squared)		-7.18e09	-6.42e-09	-3.42e-09	-7.10e-09	-8.99e-09
			(3.58e-09)*	(2.84e-09)*	(3.44e-09)	(2.67e-09)**	(3.41e-09)**
	Competitiveness (centrality, lagged)		6.258	1.726	1.914	2.604	3.472
			(2.066)**	(1.552)	(1.787)	(1.536)+	(1.909)+
	IGO network (centrality, lagged)		7.04e-06	-1.53e-06	1.84e-06	-1.43e-05	-1.79e-05
			(1.7e-05)	(1.28e-05)	(1.54e-05)	(1.27e-05)	(1.57e-05)
	ODA (lagged)		0.001	0.001	-0.000	0.001	0.001
			(0.001)*	(0.000)	(0.001)	(0.000)*	(0.001)
	Rural Population (lagged)		0.002	0.001	0.001	0.001	0.001
			(0.001)+	(0.001)+	(0.001)	(0.001)	(0.001)
	Ethnic Fractionalization		0.096	-0.038	0.026	0.017	-0.017
			(0.049)*	(0.033)	(0.041)	(0.034)	(0.042)
	Latitude (absolute)		0.003	-3.12e-04	2.70e-04	-4.62e-05	3.31e-04
			(0.001)+	(0.001)	(0.001)	(0.001)	(13.44e-04)
	Federation		-0.022	0.012	-0.002	-0.014	-0.019
			(0.030)	(0.022)	(0.026)	(0.022)	(0.028)
	Decentralization		8.821	10.419	13.836	4.128	8.162
			(7.253)	(5.411)+	(6.319)*	(5.379)	(6.725)
	Constant		-0.414	-0.159	-0.160	-0.170	-0.183
			(0.126)***	(0.090)+	(0.117)	(0.091)+	(0.111)+
P	Competitveness (centr) * Distance Weighted		3.278	1.154	1.406	1.726	2.099
			(1.137)**	(0.799)	(0.957)	(0.778)*	(1.155)+
Σ			0.175	0.132	0.154	0.130	0.164
			(0.005)***	(0.004)***	(0.005)***	(0.004)***	(0.005)***
Chi2			7,407.12	9,288.50	7,158.88	11,073.93	5,137.03
N			545	545	545	545	545

Note: Statistically significant at: + $p<0.1$; * $p<0.05$; ** $p<0.01$; *** $p<0.001$

[1] News coverage does not always reflect geographical distance, and 'world news' pays more attention to the rich, developed countries. Citizens may, however, be more attentive to local news and will definitely find it easy to put such news in its proper context.

[2] Personal correspondence, January 23 2015.

[3] Investors might be concerned about the costs of good governance, but we assume they seldom are held liable for significant amounts of tax in countries they invest in.

[4] The governance indicators compiled by Mo Ibrahim Foundation focus on Africa and are presumably read by the business community, see: http://www.economist.com/blogs/baobab/2012/10/african-governance (accessed January 30, 2015), and http://www.moibrahimfoundation.org (accessed January 30, 2015). A further alternative is the corruption perception index published by Transparency International, http://www.transparency.org (accessed January 30, 2015).

[5] We can only to estimate key parameters relative to θ; but we can make inferences about the direction of other effects if we are willing to assume $\theta > 0$. If $\theta < 0$, the legitimacy gains from better performance would not be concave, which is implausible.

[6] We exclude Cape Verde, Seychelles, Sao Tome, Comoros, Equatorial Guinea and Djibouti from those nations that the World Bank includes in its database on Africa.

[7] Weighting matrices have entries of zero along the leading diagonal and for cells not in blocks along the diagonal. To save unnecessary repetition we only define non-zero cells in the text.

[8] We do not report of political stability/absence of violence because the diffusion dynamics specified in our theory are less clearly applicable to this particular dimension of governance. The empirical model was also a very poor fit.

[9] Gleditsch and Ward (2001) code the distance between Kinshasa and Brazzaville as zero. Internet sources give travel distances in the range 8-12 kilometres including ferry crossing. Reported results assume the distance is 8 kilometres. They do not seem sensitive to recoding (not reported).

[10] The operationalization primarily follows the logic for competition for FDI, but we expect a similar logic to apply to ODA.

[11] Like other variables for which we do not give an explicit data source, *GDPpc* was drawn from the World Bank's African Development Indicators. Data was only available up to 2010, so we linearly interpolated 2011 values. Data for Somalia on *GDPpc* was missing for some years from World Bank data, so we used data from Penn World Tables. Fitting the model on a total of 120 observations gives an adjusted R^2 of 0.67, $F(2, 117) = 123.00$ ($p < 0.001$), and with highly significant ($p < 0.001$) coefficients for GDP_{pc} and GDP_{pc} squared.

[12] Results (not reported) were generally weaker after row standardizing.

[13] If legitimacy does not matter the second term of expression (1) equals zero. Differentiating (1) with respect to p_i leaves centrality terms in the competition network (K_i^{comp}) on the right-hand side.

[14] We are not necessarily convinced by this argument; even though citizens may have acquired more information about China because of increased trade, for most people (at least outside Asia) China is still a very distant country about which they know very little.

[15] Results not reported by available upon request from the authors.