Working Paper

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Corruption in the Land Sector

Unprecedented pressures on land have been created as new areas are cultivated, taken over by expanding urban centres or are abandoned due to degradation, climate change and conflict. These developments have strained the rules, processes and institutions that determine which land resources are used, by whom, for how long and under what conditions.

As evident around the globe, where land governance is deficient, high levels of corruption often flourish. Weak land governance tends to be characterised by low levels of transparency, accountability and the rule of law. Under such a system, land distribution is unequal, tenure is insecure, and natural resources are poorly managed. As a consequence, social stability, investment, broad-based economic growth and sustainable development are undermined.

Table of Contents

1. Land, governance and corruption: the linkages

Land governance is fundamentally about understanding power and the political economy of land. It involves the 'rules, processes and structures through which decisions are made about the use of and control over land, the manner in which the decisions are implemented and enforced, and the way that competing interests in land are managed'.[1] Land governance encompasses different decision-makers, processes and structures, including statutory, customary and religious institutions. When taken together as a system, land governance is ultimately centred on how people use and interact with land.

Effective and enforceable land governance provides a necessary framework for development and an important defence against many forms of corruption. It supports food security and ensures sustainable livelihoods that are essential for people and countries that rely on land as one of their main economic, social and cultural assets. For example, empirical findings from more than 63 countries show that where corruption in land is less prevalent, it correlates to better development indicators, higher levels of foreign direct investment and increased crop yields.[2]

Corruption in land is often the culprit or an offspring of the breakdown of a country's overall governance. Recent findings by TI show that there is a very strong correlation between levels of corruption in the land sector and overall public sector corruption in a country.[3] This result suggests that countries confronting pervasive public sector corruption are also suffering from a corrupt land sector — a finding which has broad and important implications for ensuring the integrity and effectiveness of initiatives related to natural resource management, including climate mitigation projects and agricultural output initiatives (see sidebar).[4]

2. Evidence and consequences

Corruption in the land sector can be generally characterised as pervasive and without effective means of control. It can be found in statutory as well as in customary systems. It can vary from small-scale bribes and fraud (e.g. administrative corruption), to high-level abuse of government power and political positions (e.g. political corruption). Corruption, whether administrative or political, does not favour the establishment of long-term national or local land strategies. When corruption is present in the land sector, related actions and decisions are driven by distorted interests and policies that favour the few. Examples of both administrative and political corruption are described in more detail below.

Administrative corruption

Corruption that occurs in public administration and government services is a common feature in the land sector. It can take the form of small bribes that need to be paid to register property, change or forge titles, acquire land information, process cadastral surveys, and generate favourable land use plans.[8] Such bribery is facilitated by complicated processes and limited information about

available services and any applicable fees. For example, a recent World Bank study on land administration in Vietnam found that incomplete and unclear information about administrative procedures was made available to the public. It also noted that the processes for issuing property rights and certificates were complicated and expensive.[9]

Findings from a Transparency International survey in 2009 suggest that the government bodies which oversee the land sector are one of the public entities most plagued by service-level bribery. Only the police and judiciary have higher levels of bribery.[10] Among the 69 countries surveyed in the study, more than one out of every 10 people who contacted a land authority reported paying a bribe. This figure exceeds reported rates of bribery for schools, health services, tax authorities and public utilities. Similar to other sectors affected by bribery, the findings show that lower income groups are often more affected.[11] The same survey also finds that although 34 per cent of people globally consider corruption in land authorities to be a very serious problem, the results vary by region. While one out of every two respondents in high income countries said corruption in land management was a serious problem, nearly four out of every five people in low-income countries shared the same concern.[12]

Country-level surveys, of administrative corruption in the land sector provide a deeper insight into the problem. In Mexico, a recent study reveals that illegal payments to land authorities ranked among the top 10 services plagued by bribery in the country.[13] The survey's results show that a bribe has to be paid at least once out of every 10 times that a person solicits a land permit. Another public opinion survey, conducted in Bangladesh, estimates these figures to be much higher. Findings from a national household survey show that land administration ranks among the top three institutions in Bangladesh with the worst rates of bribery (71.2 per cent) based on people who have had contact with the service.[14] This figure has risen by nearly 20 per cent since the last survey was done in 2007. The cost of bribes paid to land services is also the highest. These illegal payments typically are made to register land, transfer titles, pay property taxes and secure the right to lease government lands.

Attempts to document the cost and extent of administrative corruption in the land sector have been made by further country-level work. A study in India estimates that US$ 700 million worth of bribes are paid annually by users of the country's land administration services.[15] According to survey work in Kenya, the average bribe paid by those dealing with government land agencies was US$ 65 in 2011, a figure that had been rising in the last two years but which has since fallen.[16] The same survey also finds that Kenya's Ministry of Lands is the fourth most corrupt public administration body in the entire country. Nearly 58 per cent of people who have sought land services from the ministry have been asked to pay a bribe; of those requested to make an illegal payment, more than one-third did.[17]

The enormous prevalence of bribery in the land sector creates a high informal cost for those trying to register or transfer land. It can make land administration

Cases of corruption have tinged Spain's housing boom and have been indicated as one of the causes of the market's bust by 2009.[20]

During the height of the housing frenzy, up to 40 per cent of all new construction in Europe was taking place in Spain. Yet in the push to cash in on land, allegedly illegal and corrupt practices became frequent in the sector. Politicians and planning officials have been accused of taking bribes to approve building permits and re-zoning measures.

One state investigation in 2006 into land deals in the high-end resort of Marbella in Málaga led to the arrest of the mayor and the two previous heads of the city as well as dozens of local officials. Called 'Operación Malaya', the police seized more than US $3 billion in assets and froze 1,000 bank accounts after it was discovered that 30,000 homes had been illegally built in the town, including on environmentally protected land.[21]

services inaccessible to people who are not able to afford these illegal payments.[18] By creating a disincentive to register property transactions, the informality and insecurity of land tenure are increased and national land reform efforts undermined. People are left with little or no protection under the law, making them vulnerable to evictions and other abuses.[19]

Political corruption

Political corruption in the land sector aims to gain control over a country's resources — both what is above and beneath the ground. It can manifest as a result of opportunities created through land transactions, reforms and development projects that occur within a country, region or district (see side bar). Examples include when state-owned lands are privatised or leased, zoning or construction plans are approved, large-scale land acquisitions by investors are negotiated, and land is expropriated for government (or government-related) projects. While corrupt individuals at all levels can be involved in these acts, the roots of corruption often reside within the upper circles of power in the public and private sector.

Political corruption in the land sector relies on broader weaknesses or breakdowns in governance that compromise institutions' transparency, accountability and integrity. Illegal actions by elected leaders, public officials and the private sector may go unpunished as key national institutions are co-opted to serve the interests of the few. Parliament and parliamentary committees may be influenced or even controlled by members who have conflicts of interest when it comes to policy decisions on land governance. Judges may rule in favour of public officials and companies when land disputes arise, irrespective of evidence and the law.

Political corruption can be extremely hard to document and effectively prosecute, however, since the acts which trigger it may fall within the law. Political corruption can occur when influential groups seize the land of the poor and marginalised through forced, but legal, evictions (under the argument of eminent domain). Land may even be rightfully purchased by the state or private companies, but for significantly less than fair market value. This land, which often includes agricultural holdings found in peri-urban areas, may then be re-developed or sold but to the benefit of a few powerful individuals, as has been well-documented in Kenya's land reform over the last 50 years.[22] In other cases, corruption can be used to inflate the price of legal land sales. Regardless of the form that political corruption takes, the impacts are the same: the land rights of individuals and communities are violated.

National chapters of Transparency International across the globe rank the problem of land and political corruption as one of the top three issues that citizens have consulted them on through their advocacy and legal advice centres (ALACs).[23] For example in Georgia, complaints received by the chapter's centre are often about the abuse of property rights. Massive construction projects and a rapidly expanding tourism industry have put increasing pressure on land in the

country. The number of people affected is great; the Georgian centre has worked on two cases that alone affect over 400 residents.[24] Similar problems of property rights and corruption have been documented by other ALACs, including in Albania, Azerbaijan, Czech Republic, Guatemala, Liberia, Nepal and Russia.

Implied by this list of countries is that political corruption tends to be particularly salient in the land sector where nations are undergoing economic and political transitions. This may be the result of moving from a centrally-planned economy towards one that is based on markets and individual property rights.[25] It also may be a consequence of trying to rebuild a post-conflict country, where refugees are returning, or when countries are fragile and key institutions weak. In Cambodia, for example, investigations by the UN High Commissioner for Human Rights show that many state land concessions, granted after the country's civil conflict, have violated recently passed legislation and have been opaquely awarded to individuals who often come from the country's political and economic elite.[26]

3. Actors and forms of corruption

Corruption can involve various actors, ranging from public officials and local leaders to outside investors. Actors may include government officials (at the local and national level) as well as individuals that command political and economic power. Customary and communal authorities may also be involved, engaging in corrupt dealings and practices. Land investors, developers, owners and users (including renters and slum dwellers), as well as related service providers (real estate agents, lawyers and land surveyors), may also get tangled in corruption's web, along with civil society organisations and even the media.

In many cases, corruption may come to undo the legal and social legitimacy of these actors if they are considered to be too corrupt. For example, the public institutions in charge of land administration may see their authority and capacity undercut if they are publicly perceived to be highly corrupt. In such a situation, investors may view public officials as having little to offer and the public may opt for informal actors (e.g. informal promoters and un-registered service providers) to represent their interests. More importantly, as existing institutions and laws are ignored, the system of land governance fails, making it more difficult for citizens to hold their governments to account for sector-related decisions.

Corruption is often common in situations where land investments create new opportunities for illicit enrichment. Investments in the sector usually bring sizable amounts of capital with them as well as elevated corruption risks. The capital is used to purchase property, lease land, or undertake development initiatives (in land and infrastructure). When investments are related to environmental initiatives, such as climate mitigation, corruption can taint these payments as local officials and influential people try to profit.[27] In exchange for a bribe, local actors, including politicians and judges, may opt to secure land that is attractive to developers and investors for these types of projects.

By their nature, investments in land, involve different areas of the sector: land administration and management, customary land tenure, and land use planning

International and regional initiatives provide examples of best practice and guidance on how to improve land governance. These show the importance of setting up a dialogue among government administrations, customary land owners, civil society, media and the private sector. In developing anti-corruption measures for the land sector, it is essential to engage these stakeholders through interactive, participatory and inclusive processes.

At the international level, initiatives, such as the Voluntary Guidelines on Responsible Governance of Tenure of Land, Fisheries and Forests led by FAO have played a key role in getting different actors involved in land governance. The objectives are two-fold: to mainstream the governance around tenure into wider regional, national and local policies and to recognise the social, cultural, economic and environmental functions of land.

Important regional work is also advancing broad stakeholder efforts, including through the African Union's Land Policy Initiative (LPI). The LPI provides a framework and guidelines for strengthening land rights and the governance of land resources. The initiative demonstrates a regional consensus on how to secure access to land by all, increase agricultural output and ensure livelihoods.[30]

and conversion. Based on examples documented from literature and experience, it is possible to consider each of these components, assembling an overview of some of the key risk factors for corruption as well as the principal forms that it can take (see table on page 7).[28]

4. Measures and responses

Tackling corruption in the land sector is intrinsically linked to improving its governance. Land governance and anti-corruption now feature in the agenda of multilateral organisations such as the Food and Agriculture Organization of the United Nations, World Bank and UN-HABITAT.[29] National governments are taking steps to build transparent, effective and accountable land tenure systems, in addition to local and global civil society organisations that are raising awareness to ensure that the land tenure rights of people are respected, protected and fulfilled.

In addition to their effective enforcement, the revision of land policies is one important solution for improving governance in the land sector, particularly with regard to the legal and administrative frameworks. Transparent, accessible and accountable systems of administration of land, whether statutory or customary, can create a basis for corruption-free land dealings. Respect for these systems, however, depends on strong and effective oversight institutions — such as parliamentary committees, anti-corruption commissions and law enforcement bodies.

An initial step of land governance reforms would be for states to provide legal recognition to tenure rights that are considered legitimate but are not correctly protected by law. Such a legislative change can provide a legal basis for people to protect their resources against illegal acquisitions of land. Such changes would help to protect customary and communal lands from corruption and guard against new pressures from development.

A second step to strengthen land governance would be to promote more transparent and effective land certification and registration systems. There are viable and affordable solutions that can ease and simplify the process, be monitored and promote coordination between actors. Lithuania is an example of a country that has adopted such reforms, including e-governance. These changes have provided open access to information and ensured the incorporation of accountability mechanisms to get citizens engaged.[31]

Reversing weak governance in the land sector should be seen as a long-term, continual process of steps that demands political will and engagement. Citizens, civil society organisations and the media need to work with government officials and the private sector to find tailored solutions that fit each context.

Table: Risks and Forms of Corruption in the Land Sector

Area	Risk Factors	Forms
Land administration	- Inadequate land laws and procedures. - Excessive or unpublished fees for land services. - Lack of recognition of land uses and rights. - Under-developed and non-transparent land registration systems. - Absence of up-to-date and accurate land records. - Existence of multiple land management authorities. - Irregular practices in the collection of land taxes. - Limited accessibility of services. - Lack of effective complaint, grievance and independent oversight mechanisms. - Absence of a code of conduct.	- Bribery of land administration officials and law enforcement authorities. - Fraud and production of false land claim documentation.
Customary land tenure	- Lack of legal recognition and delineation of customary land. - Traditional practices of payments and exchanges. - Opaque systems, absence of outside control and lack of clarity in allocation of land. - Monetarisation and speculation on land sales.	- Abuse of power by chiefs. - Conversion of property and capture of revenues by chiefs and influential people. - National institutions and business interests override local land rights.
Management of state-owned land	- Lack of inventory, delineation and management of state land. - Irregularity of land prices for disposal and acquisition. - Unclear institutional responsibilities and decision mechanisms. - Absence or lack of clarity of regulations for leasing land or exercising eminent domain. - Lack of effective complaint, grievance and independent oversight mechanisms.	- Bribery of government officials to obtain public land at a fraction of market value. - Manipulation of compulsory land acquisition and compensation processes by government officials and investors. - Irregular conversion of property and land classification status by government officials.
Land use planning, conversion and investments	- Lack of transparency of planning processes and land allocation procedures. - Opaque, slow and bureaucratic processes for issuing building development permits. - Unclear land use and property rights. - Lack of effective complaint, grievance, independent oversight and enforcement mechanisms. - Lack of an independent media.	- Capture of rents and profits originating from land conversion and re-zoning by government officials and investors. - Abuse of government officials' discretionary power to propose real estate and land developments that increase the value of her/his personal property. - Acquisition of land through state capture and/or by investors and developers having received insider information from government officials. - Bribery of government officials by investors and/or developers.
Payments for environmental services (e.g. UN-REDD)	- Lack of legal recognition of tenure rights. - Lack of recognition of protected areas and lands reserved for environmental protection. - Opaque, slow and bureaucratic payment systems.	- Capture of funds by developers, investors and government officials. - Acquisition of parcels eligible for payments by developers, investors, and government officials.

References:

[1] David Palmer, Szilard Fricska and Babette Wehrmann 'Towards Improved Land Governance', Land Tenure Working Paper 11 (Rome, Italy: FAO, September 2009). ftp://ftp.fao.org/docrep/fao/012/ak999e/ak999e00.pdf.
[2] Correlations are statistically significant and have been tested using data collected from Transparency International's Global Corruption Barometer (GCB) for 2009 and other data series for that year. For more information, please see the annex that accompanies the working paper.
[3] Corruption is defined as both petty bribery and high-level or grand corruption. Findings are based on a regression analysis done for this paper. For more information, please see the annex that accompanies the working paper.
[4] The natural resources sector is very closely linked in some areas to the governance of the land sector. However, for the purpose of this paper, the land sector will be the main focus.
[5] Stefan Bringezu and Raimund Belischwitz, 'Preventing a resource curse fuelled by the green economy', in *The Global Corruption Report: Climate Change,* ed. Transparency International (London, UK: Earthscan, 2011).
[6] Comisión Interamericana de Derechos Humanos, 'Capítulo IV: Colombia', Informe Anual de la Comisión Interamericana de DD.HH. 2007 (Washington, DC: OAS, 2007). Oliver Balch and Rory Carroll, 'Massacres and paramilitary land seizures behind the biofuel revolution', The Guardian, 5 June 2007. 'Palmeros y el fantasma paramilitar', El Espectador, 24 April 2011.
[7] Lorenzo Cotula, Nat Dyer and Sonja Vermeulen, *Fuelling Exclusion? The biofuels boom and poor people's access to land* (Rome, Italy: FAO and IIED, 2008).
[8] Paul Van der Molen and Arbind Tuladhar, *Corruption and land administration*, International Federation of Surveyors (FIG) article of the month (Copenhagen, Denmark: FIG, 2007).
[9] World Bank, Embassy of Denmark and Embassy of Sweden, *Assessing risk factors for corruption in land management* (Hanoi, Viet Nam: World Bank, Embassy of Denmark and Embassy of Sweden, 25 November 2010).
[10] Transparency International, *Global Corruption Barometer 2009* (Berlin, Germany: TI, 2009).
[11] Findings from TI's Global Corruption Barometer have consistently shown that the poor pay more when it comes to petty bribery. For more information, see: www.transparency.org/policy_research/surveys_indices/gcb.
[12] Transparency International, *Global Corruption Barometer 2009* (Berlin, Germany: TI, 2009).
[13] Based on a nation-wide survey of more than 15,000 households. Transparencia Mexicana, *Índice Nacional de Corrupción y Buen Gobierno 2010* (Mexico City, Mexico: Transparencia Mexicana, 2011).
[14] Based on a survey of 6,000 households. Transparency International Bangladesh, *National Household Survey 2010 on Corruption in Bangladesh* (Dhaka: TI Bangladesh, 2010). www.ti-bangladesh.org.
[15] Based on estimated amount of petty bribes paid in land services for the period 2004-2005. Transparency International India, *TII-CMS India Corruption Study 2005: With Focus on BPL Households* (Delhi, India: TI India and CMS, 2005). www.transparencyindia.org/resource/survey_study/India%20Corruption%20Study%202005.pdf.
[16] See: TI Kenya, *East African Bribery Index 2011* (Nairobi, Kenya: Transparency International Kenya, 2011).
[17] Ibid.
[18] Farzana Nawaz, *Corruption in land administration/land management in Kosovo* (Bergen, Norway: U4 and Transparency International, 20 August 2008). www.u4.no/helpdesk/helpdesk/query.cfm?id=175.
[19] Wael Zakout, Babette Wehrmann, Mika Petteri-Törhönen, *Good governance in land administration. Principles and good practices* (Rome, Italy: FAO and WB, 2006).
[20] All information cited in the side bar is from: TI, *Global Corruption Report 2008* (Berlin, Germany: TI, 2008).
[21] See: 'Operación Malaya', El País, Website. www.elpais.com/todo-sobre/tema/Operacion/Malaya/173/.
[22] World Resources Institute and Landesa, *Kenya: Lesson 3: History of Land Conflicts*, Focus on Africa Brief, (Washington, DC: WRI and Landesa, March 2011); Kenya National Commission on Human Rights and the Kenya Land Alliance, *Unjust Enrichment: The Making of Land Grabbing Millionaires, The Plunder of Kenya's State Corporations and Protected Land*s, Vol. 2 (Nairobi, Kenya: KNCHR and KLA, 2008).
[23] TI operates Advocacy and Legal Advice Centres (ALACs) in 50 countries around the world. More than 70,000 citizens have contacted an ALAC for help; see: www.transparency.org/global_priorities/other_thematic_issues/alacs.
[24] TI, *ALAC Survey 2011: April – May 2011*, Unpublished (available upon request).
[25] Willi Zimmermann, *Cooperation between FAO and Transparency International. Design of land questions for the Global Corruption Barometer GCB 2008*. Unpublished; TI, GCB, 2009. (Berlin, Germany: TI, 2009).
[26] UN Cambodia Office of the High Commissioner for Human Rights, *Economic land concessions in Cambodia: A human rights perspectiv*e (Phnom Penh, Cambodia: UNOHCR, June 2007).
[27] Peter Bofin, Mari-Lise du Preez, André Standing and Aled Williams, *REDD Integrity. Addressing governance and corruption challenges in schemes for Reducing Emissions from Deforestation and Forest Degradation (REDD)* (Bergen, Norway: U4 and Chr. Michelsen Institute, 2011).
[28] For table, see: Van der Molen and Arbind (2007); Klaus Deininger, Harris Selon and Tony Burns, 'The land governance framework: Methodology and early lessons from country pilots' in Klaus Deininger, Clarissa Augustinus, Stig Enemark and Paul Munro Faure (eds.), *Innovations in land rights recognition, administration and governance* (Washington, DC: World Bank, GLTN, FIG and FAO, 2010); Anthony Arko-Adjei, Jitske de Jong, Jaap Zevenbergen, Arbind Tuladhar, *Customary tenure institutions and good governance*, paper presented at the FIG Congress in Sydney, Australia, 11-16 April 2010; FAO, *Private sector and investment workshop. Implementing responsible governance of tenure*, workshop, Rome, Italy, 28 February - 1 March 2011, unpublished report; FAO, *Expert meeting on land tenure issues and requirements for implementing climate change mitigation policies in the forestry and agriculture sectors*, paper presented in Rome, Italy, 15-17 November 2010.
[29] FAO is developing Voluntary Guidelines on Governance of Tenure of Land, Fisheries and Forests. See: www.fao.org/nr/tenure/voluntary-guidelines. The World Bank has developed a Land Governance Assessment Framework. At UN-HABITAT, the Global Land Tool Network and ITC have agreed on a joint venture to enhance the capacity concerning transparency in land administration.
[30] AU, AfDB and UNECA, *Land Policy in Africa: A framework to strengthen land rights, enhance productivity and secure livelihoods* (Addis Ababa, Ethiopia: AU, ECA and AfDB, 2010).
[31] 'Finding Common Ground. Tackling corruption in land and natural resources tenure', workshop, International Anti-Corruption Conference 2010. Bangkok, Thailand. http://14iacc.org/wp-content/uploads/ws2.1MikaTorhonen_LR.pdf.

Annex: Data Analysis

In completing the working paper, "Corruption in the Land Sector", various correlations were tested to better understand the interconnection among corruption, governance, land and development. This analysis was done using existing data from Transparency International and other global data sets. For TI, the Corruption Perceptions Index (CPI) was used as well as specific data on corruption and land that was extracted from the results of the Global Corruption Barometer (2009). For the other areas, the data sources looked at national income, human development, crop yields and foreign direct investment (FDI). The sections that follow explain the data sources, results and preliminary conclusions.

1. Data

GCB: Global Corruption Barometer 2009– The 2009 Global Corruption Barometer (GCB) surveyed a nationally representative sample of more than 1000 people in each of the 69[1] countries included in the study. The surveys were conducted between October 2008 and February 2009 by Gallup International (and their affiliates) on behalf of Transparency International.

The survey asked two questions relating to corruption in land management These questions were funded by the Food and Agriculture Organization (FAO) of the UN and developed in collaboration with international experts on the topic. Responses were scored on a scale from 1 to 5.

Now we have a set of questions on corruption in land management.

Q10.A. Using a scale of 1 to 5, where 1 means not a problem at all and 5 means a very serious problem

How serious do you think is in this country the problem of bribes being paid to land authorities to obtain favourable decisions in selling, buying, leasing, inheriting and registering land, or in land tax declaration, or in handling land disputes?

Not a problem at all				Very serious problem	Don't know/ not applicable
1	2	3	4	5	9

Q10.B. How serious do you think the problem of grand or political corruption in land matters is in this country?
(Optional definition of Grand or Political Corruption in land management refers to corruption in the privatisation of state-owned land, zoning or construction plans assigned without technical support, and/or land being expropriated (compulsory purchase) without appropriate or any compensation for actual land value.)

Not a problem at all				Very serious problem	Don't know/ not applicable
1	2	3	4	5	9

Answers given as "Don't know/Not applicable" were excluded from the calculations. The scale from 1-5 was then averaged across the population in each country, to calculate the average perception of corruption in land management in a given country, as relating to the two separate questions above (10.A and 10.B).

CPI: Corruption Perceptions Index 2009 – The CPI is an index produced annually by Transparency International, which scores and ranks countries on the perceived levels of corruption in that country. For this analysis we used the 2009 data to be consistent with the GCB results. In 2009 the CPI scored and ranked

180 countries on a scale of 0-10, with scores ranging from 1.2 (highest perceived corruption) to 9.7 (lowest perceived corruption).[2]

GDP: Gross Domestic Product per capita – This data comes from the United Nations Development Programme (UNDP) and provides the GDP per capita, given in Purchasing Power Parity (PPP) terms, for 2009. The data covers 174 countries from US$ 520 (Sierra Leone) to US$ 61,000 (Luxembourg).[3]

HDI: Human Development Index 2009 – The HDI is an index produced annually by the UN Development Programme (UNDP). This index combines data on life expectancy, educational attainment and income to score and rank countries. For this analysis we used the 2009 data to be consistent with the GCB results. In 2009 the HDI scored 175 countries on a scale of 0-1, with scores ranging from 0.27 (least developed) to 0.96 (most developed).[4]

Crop: Cereal yield 2009 – This data comes from the Food and Agriculture Organisation of the United Nations. The data measure the average kilogram (kg) of cereal output per hectare of farmland. The data covers 182 countries and ranges from 2,236 (Cape Verde) to 97,107 (Belgium).[5]

INV: Investment as a share of GDP 2007 – This data uses the Penn World Tables data for the share of investment as a percentage of GDP. The range of data is between -7 per cent (Sierra Leone) and 78 per cent (Suriname).[6]

2. Results

Drawing on the data, various relationships were tested. Each of these is described below, including the number of observations and the strength of the correlation.

1. Relationship between petty and grand corruption in land

Finding: We find a strong correlation between petty corruption in land (Q.10.A from the GCB) and grand corruption in land (Q.10.B from the GCB).

Correlation coefficient = 0.95 (p<0.01)

Number of observations = 69

2. Relationship between corruption in land and overall corruption perceptions in the public sector:

Finding: Both of the GCB measures for corruption in land correlate very strongly and negatively with the CPI measure of corruption perceptions for the public sector in general. This demonstrates that more corruption in land is associated with a lower CPI score (higher perceived public sector corruption)

For petty corruption: correlation coefficient is -0.69 (p<0.01)

For grand corruption: correlation coefficient is -0.73 (p<0.01)

Number of observations = 68

3. Relationship between corruption in land and income:

Findings: Both of the GCB measures for corruption in land correlate strongly and negatively with the GDP measure for income per capita. This demonstrates a negative relationship between higher levels of corruption in land and lower GDP per capita.

For petty corruption: correlation coefficient is -0.60 (p<0.01)

For grand corruption: correlation coefficient is -0.62 (p<0.01)

Number of observations = 64

4. Relationship between corruption in land and human development:

Findings: Both of the GCB measures for corruption in land correlate negatively with the HDI measure for human development, demonstrating a relationship for countries between high corruption in land and lower development outcomes.

For petty corruption: correlation coefficient is 0.47 (p<0.01)

For grand corruption: correlation coefficient is 0.47 (p<0.01)

Number of observations = 64

However this relationship becomes insignificant in regressions which control for income (GDP), suggesting that the relationship is working through the income variable.

5. Relationship between corruption in land and agricultural production:

Findings: Both of the GCB measures for corruption in land correlate strongly with the crop measure for crop yield (cereals). This demonstrates a negative relationship between countries where corruption in land is higher and crop yields are lower.

For petty corruption: correlation coefficient is 0.47 (p<0.01)

For grand corruption: correlation coefficient is 0.47 (p<0.01)

Number of observations = 61

However this relationship becomes insignificant in regressions which control for income (GDP), suggesting that the relationship is also working through the income variable.

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6. Relationship between corruption in land and investment:

Findings: Both of the GCB measures for corruption in land correlate strongly and negatively with the measure for foreign direct investment, demonstrating a relationship between countries where corruption in land is higher and investment is lower.

For petty corruption: correlation coefficient is 0.46 (p<0.01)

For grand corruption: correlation coefficient is 0.42 (p<0.01)

Number of observations = 67

However this relationship becomes insignificant in regressions which control for income (GDP), suggesting that the relationship is also working through the income variable.

3. Conclusions

The findings underscore the negative role that corruption in land plays in terms of country's development and growth. There are clear, strong and negative relationships between perceived higher levels of corruption in land and lower growth, investment, development and agricultural output. However, the strong force exerted by income in these equations suggests that further analysis would be useful to better understand the nature of these relationships and additional factors at play (such as inequality) that could be conditioning these results.

[1] For full country coverage of the Global Corruption barometer 2009 see http://www.transparency.org/content/download/43788/701097
[2] Data on the CPI can be accessed at: http://www.transparency.org/policy_research/surveys_indices/cpi.
[3] Figures for GDP can be found at: http://hdrstats.undp.org/en/indicators/62006.html.
[4] Data from the HDI can be found at: http://hdr.undp.org/en/statistics/.
[5] For figures, please see: http://faostat.fao.org/site/339/default.aspx.
[6] For figures, please see: http://pwt.econ.upenn.edu/php_site/pwt_index.php.

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