Modelling Indicators of Land Governance

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SUMMARY

This paper is a first step towards trying to answer the question as to what determines land governance and what factors are associated with whether governance in land matters is weak or good. It examines inter-country relationships using data on corruption in land administration, the speed, cost and number of processes required to register property and to deal with construction permits, the security of property rights, and the efficiency and transparency of the commercial property market. It draws on data from Transparency International's Global Corruption Barometer, the World Bank *Doing Business* survey, the World Economic Forum's Global Competitiveness Report, the Heritage Foundation's Index of Economic Freedom, and Jones Lang LaSalle's Global Real Estate Transparency Index and discusses and evaluates these sources. The paper examines whether petty and grand corruption in land matters is associated with the general pattern of corruption in a country or whether the approach to probity in land matters differs from that found in other areas of public services. It concludes that the level of corruption and perceptions of corruption in land matters are associated with the extent of corruption in other public services. The relationship between the efficiency of property regulation, as measured in terms of the number of procedures, time taken and cost in order to carry out business legally, and the strength of property rights is explored. The relationship appears to be a weak one, indicating that strength of property rights depends on other factors than just the efficiency of property regulations. The transparency and efficiency of the commercial property market is associated with the quality of business management, the level of business sophistication, the quality of the education system, the efficiency of the goods and labour markets, and the strength of the legal system. In other words, land governance cannot be divorced from the quality of governance in business. Countries appear to find it more difficult to develop efficient systems for transmitting land market information than they do in developing efficient systems of regulating land markets and for land transactions. Efficiency in land markets is associated with freedom of information, association and thought, indicating that the quality of land governance depends on the quality of governance in society.

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1. INTRODUCTION

Governance has become a fashionable area of academic research in recent years. The production of governance indicators by bodies such as the World Bank (2010) and data on corruption, such as the surveys by Transparency International (2009, 2010) have enabled a large number of inter-country comparisons and time series analyses to take place. However, these studies tend not to consider land governance and how poor governance in land matters affects the wider economy and society. There are some formidable statistical problems in handling the data sets on governance. In a recent critique of the research methods used, Gunardi (2008, chapter 2) notes the problems of multi-collinearity in the data as the variables are inter-related, the simultaneity problem because of the possibility of a feedback relationship between what is to be explained and its determinants, indirect effects in which one variable directly affects what is being measured but also indirectly affects it through another variable, and parameter heterogeneity in which variables do not necessarily have the same impact in each country. The result may be that the choice of variables are open to question and that a certain variable can be significant in a particular model but become insignificant once other variables are taken into account. The neglect of land matters raises the question as to how robust the results are and whether introducing a land dimension would destabilise or enhance the conclusions drawn from these studies.

The paper is a first step towards trying to answer the questions as to what determines land governance and, if a land dimension is introduced into the analysis of governance, whether this changes the conclusions about what determines it. It is an attempt to get away from the case study approach to land governance by examining inter-country relationships. There are a number of case studies of land governance in different countries and the policies that have been pursued in particular instances to improve the quality of governance but large scale cross-sectional studies are more limited. Case studies often provide important insights but the inherent problem is how to extract what is of wider applicability. The emphasis on case studies is not surprising – there is very limited data about land governance available that enables international comparisons to be made and conclusions drawn about what factors are associated with its qualities. This is likely to change over time. The World Bank (2010) is engaged in collecting data on land governance in a systematic fashion under the thematic headings of legal and institutional framework, land use planning, management and taxation, the management of public land, the public provision of information, and dispute resolution and conflict management, which will greatly assist in this. This has been applied to Peru, Ethiopia, Kyrgyzstan, and Tanzania.

What this paper seeks to do is to use the currently available international data to explore land governance and the influences on it. It reviews the sources of data available as problems are likely to be encountered if one rushes into the analysis performing high level statistics without

exploring the relevance, reliability and validity of the data. There is data available on corruption in land administration, the strength of property rights, the efficiency of land administration processes, and property market transparency available from a number of bodies. The data sets do not cover a consistent group of countries but do enable various aspects of governance to be explored. In particular, they permit examination of what aspects of land governance are related to each other, and with what the elements of governance in society at large and of a country's economic structure, good governance in land matters is associated. It presents the results of analyses of the relationships between the various manifestations of governance in land matters and what these appear to be associated with. Governance is undoubtedly multi-dimensional with many different facets. The extent to which these are related to each other and whether there may be some central cause of good governance or policy that can achieve it is only likely to become apparent through exploring the dimensions of the available data.

2. LAND GOVERNANCE

Governance is the process by which a society is governed. It is the way in which the competing priorities and interests of different groups are reconciled. Governance is about much more than the absence of bribery and corruption but is concerned with how a society organises and manages itself. The World Bank, for example, states,

> Governance consists of the traditions and institutions by which authority in a country is exercised. This includes the process by which governments are selected, monitored and replaced; the capacity of the government to effectively formulate and implement sound policies; and the respect of citizens and the state for the institutions that govern economic and social interactions among them (http://info.worldbank.org/governance/wgi/index.asp).

Governance includes the formal institutions of government, but also informal arrangements that help to secure the reconciliation of what may be the conflicting objectives of different groups. These may not necessarily be part of the formal government structure or incorporated into laws and regulations, or be resolved through formal dispute resolution systems such as courts.

Land is a major resource in all societies and land and natural resources are the single greatest source o wealth in many countries. The governance of land is likely, therefore, to be an important influence on the welfare of a society and the living standards of its citizens. Governance has to address issues like land tenure and property rights, administrative support for these such as land registration and cadastres, how land is managed, controls over land use and construction, and the taxation of land. Informal arrangements of governance are particularly important in land matters since land rights and the working of the land often involve the governance of communities rather than formal institutions of government whether they are concerned, for example, with how a group of co-owners manages an area of communal grazing or how those living in a block of flats manage a garage block and communal garden.

FAO (2007) identifies the following features as being aspects of good governance.

> The avoidance of corruption is one obvious aspect of good governance. However, features of good governance also include accountability, political stability, government effectiveness, regulatory quality and rule of law, as well as control of corruption. Good governance means that the government is well managed, inclusive, and results in desired outcomes. The principles of good governance can be made operational through equity, efficiency, transparency and accountability, sustainability, subsidiarity, civic engagement and security FAO 2007, p6).

The problem when seeking to assess what factors can enhance good governance and which can hold it back is to define good governance in land matters in an operational sense so that the impact of other variables on its performance can be identified. In this way the factors that influence the quality of governance can be identified and their impact modelled and quantified. Once this is known, policy advice can be formulated so that countries seeking to enhance the quality of land governance can develop a strategy based upon evidence.

3. DATA SOURCES

Data on governance can examine the *processes* of governance or the *outcomes* of governance. In other words data can be about the inputs into governance or the outputs from it. This raises the question as to whether governance can be said to be good because the processes are sound or should governance only be regarded as good if certain outcomes stem from it? Should governance be regarded as weak if the outcomes are poor, even if the processes themselves are sound? Should governance be regarded as being good if in spite of weaknesses in the processes themselves, there is evidence of good quality outcomes? This is particularly significant in land governance since there are some countries which appear to have very strong and effective property markets but whose land administration systems contain a number of weaknesses.

The main areas for which data on land governance is available are:

- Corruption in land administration;
- The speed, cost and number of processes required to carry out various aspects of land administration;
- The security of property rights; and
- Market efficiency and transparency.

The last two of these areas are concerned with outcomes of land governance. One would expect that if land governance is effective, property rights will be secure and property markets will function efficiently. The second area is concerned with the processes of governance themselves and how efficient they are. The hypothesis is that if these processes are efficient, a higher standard of land governance can be achieved. Incompetence and ineffectiveness are unlikely to result in good governance. The first area is about a factor that can undermine the efficiency of governance processes and subvert their outcomes. Officials working in land administration frequently find themselves in a monopoly position in which they can grant or block access to certain land services and can abuse this power. The powerful in societies

frequently have interests in land and natural resources and may seek to further these by capturing the state and using its powers for their own ends. Corruption can therefore have an important influence on the quality of land governance. However, it is important to recognise that good governance in land matters is not exclusively concerned with the avoidance of corruption. A society in which corruption is minimal may still have ineffective or inefficient governance processes that can undermine the objectives that good governance is aimed at securing.

3.1 CORRUPTION IN LAND ADMINISTRATION

Several organisations produce data on corruption. The World Economic Forum surveys 15,000 executives in 139 countries and seeks their views on questions such as public trust of politicians, diversion of public funds, irregular payments and bribes, and favouritism in decisions of government officials (Schwab 2010). The data feeds into Transparency International's Corruption Perception Index These are questions about corruption in government in general rather than specifically about land administration.

In its 2009 survey, Transparency International included questions about land administration. It asked respondents in 69 countries whether in the past 12 months they, or anyone living with them, had paid a bribe to land services, and how serious they thought the question of bribes being paid to land authorities to secure favourable decisions and the problem of grand or political corruption in land matters was in their country. This produced the headline finding that 15% of people reported paying a bribe for land services in the previous 12 months compared with 24% for the police, 16% for the judiciary, 13% for registry and permit services, and 7% for the tax authorities (Transparency International, 2009, p9).

The data was collected through public opinion surveys, mainly by Gallup International using a mixture of telephone surveys, face-to-face interviews and on-line surveys. Responses were weighted according to the characteristics of the population in order to achieve a representative sample. The Transparency International data is a rich source of information since it enables bribe-paying activity between different services to be compared as well as public attitudes towards bribery and what a society considers constitutes bribery. With any survey of this type there are always potential issues about whether respondents understate or inflate their behaviour. Views about what behaviour should be regarded as corrupt could vary between countries so that respondents in one country may be outraged by behaviour that is considered quite acceptable in another, and may possibly rate their own country as being more corrupt as a result. Issues such as these may indicate that a degree of caution is necessary about the absolute levels of corruption respondents perceive to exist and instead to use relative levels and patterns of corruption. Triangulation with other sources, such as the World Economic Forum survey, enables the reliability of the data to be probed.

3.2 EFFICIENCY OF PROPERTY REGULATIONS

The World Bank in its annual *Doing Business* survey collects quantitative data on business regulations and analyses the ease of doing business in 183 economies. The survey takes a

standardised scenario approach so that there is comparability between economies and makes benchmarking possible. It focuses on the formal requirements of doing business legally. Two of the areas examined are specifically concerned with land governance processes, namely registering a property and obtaining a construction permit.

For registering a property the scenario concerns a ten year old two-storey warehouse in good condition of 10,000 square feet (929 square metres) on a land area of 6,000 square feet (557.4 square metres) in a peri-urban commercial zone. There is no mortgage on the property which has already been registered. It is sold between two limited liability companies that are domestically and privately owned. The property is assumed to have a value of 50 times the per capita income. The survey identifies the number of procedures required by law for the transfer of ownership to take irrespective of whether they have to be undertaken by the buyer or the seller, and the time taken to complete them, excluding that needed to gather any necessary data. The cost is calculated as a percentage of the assumed value and includes fees, transfer taxes and stamp duties and payments to notaries and lawyers by the buyer and the seller. They exclude other taxes and any additional costs the buyer may have to meet such as title insurance. The ranking is based on the simple average of the percentile rankings of the three component indicators – numbers of procedures, time taken, and cost.

The scenario for dealing with construction permits involves the building of a warehouse for general storage in a peri-urban area of the economy's biggest business city. The warehouse has two storeys with a surface area of 14,000 square feet (1,300.6 square metres) and a 3-metre floor height. It is on a land area of 10,000 square feet (929 square metres). The procedures include those for obtaining standardised electricity, water, sewerage and fixed line connections and the registration of the property. The building company is a limited liability one which owns the land. It employs a licensed architect and the necessary qualified technical staff. The procedures include submitting the relevant project-specific documents, obtaining the permits, clearances and certificates, completing required notifications, and receiving the necessary inspections. The number of procedures, time taken and the cost as a percentage of economy's income per capita are calculated. The ranking is based on the simple average of the percentile rankings of the component indicators.

In both cases the implicit assumption is that fewer procedures, less time taken to complete them, and lower costs of procedures make it easier to undertake business in the economy and that this enhances the prospects for economic growth. Having more procedures that take longer to complete and are more costly is likely to lead to the exclusion of part of the population from legal ways of undertaking business and steer them towards the informal economy where governance is likely to be weaker. However, more procedures may reflect the desire by a country to strengthen property rights by providing greater protection or to protect construction workers and those working in the building from injury. The relationship between procedures, time and cost, the apparent efficiency of governance, and the quality of the outcomes may be complex. Less government is not necessarily better governance. The use of standardised scenarios helps comparisons between countries but some of the decisions as to what should be included or not do raise issues. A country that imposes stamp duties on land transfers rather than a capital gains or betterment tax appears to have a system that is less

efficient than one that raises tax revenues in the alternative way. Nothing is said about the efficiency of the outcomes. For example, a country may have fewer, speedier and cheaper procedures for registration but such a system would not improve governance if buyers have to take out title insurance in order to protect their property rights rather than rely on land registration.

3.3 SECURITY OF PROPERTY RIGHTS

How secure property rights are is an important aspect of land governance. One would expect that countries in which there is a high standard of governance would be characterised by a high level of security of property rights. In such countries property is less likely to be expropriated by public bodies without the payment of fair compensation and without following due process with opportunity for property owners to argue their case before an independent tribunal. Public bodies are even-handed in their treatment of property owners and do not discriminate against particular groups or in favour of others. The government is willing and able to defend the property of property owners from incursion by private individuals or bodies seeking to dispossess them or trespass on their land. It is also able to defend its own property rights from incursion and land grabbing. The recording of property rights is effective and efficient so that individuals can rely upon them to protect their rights and to identify what rights they may be purchasing or leasing. Financiers can grant loans secured against land rights confident that the rights are secure. Therefore secure property rights can be regarded as an important outcome of good governance. They cannot exist unless there is political stability, effective government, high quality regulation, an absence of corruption, and the prevalence of the rule of law.

There are various sources of data on the security of property rights, including ones produced by the World Economic Forum and the Heritage Foundation. The Index of Economic Freedom, produced annually by the Heritage Foundation and the Wall Street Journal, examines ten economic freedoms, one of which is property rights (Miller & Holmes 2011). This is an assessment of "the ability of individuals to accumulate private property, secured by clear laws that are fully enforced by the state." The approach is one of expert assessment that draws principally on the Economist Intelligence Unit's *Country Profiles, Reports* and *Commerce*, the U.S. Department of Commerce *Country Commercial Guides* and the U.S. Department of State, *Country Reports on Human Rights Practices*, supplemented by news and magazine articles. In other words, the source material comes from organisations that have the ability to monitor events on the ground in a large number of countries. The 2011 Index uses data for the period 2005-09 and covers 179 countries. The property rights of each country are graded on a 100 point scale. A score of 100 means that private property is guaranteed by the government; the court system enforces contracts efficiently and quickly; the justice system punishes those who unlawfully confiscate private property; and there is no corruption or expropriation. By contrast a score of 0 means that private property is outlawed and all property belongs to the state; people do not have the right to sue others and so do not have access to the courts; and corruption is endemic. Although the scale moves in 10-point steps, intermediate scores are possible. Scores range from 95 for New Zealand, 90 for countries like Australia, Canada, Scandinavia, Germany and the Netherlands, and 85 in UK and USA down

to 5 for Burma, North Korea, Venezuela, and Zimbabwe.

The other 'freedoms' used by the Heritage Foundation are described as business freedom, trade freedom, fiscal freedom, government spending, monetary freedom, investment freedom, financial freedom, freedom from corruption, and labour freedom. Essentially, the definition of freedom is the ability to operate without government interference. Whilst there is recognised to be a role for government in areas like laws that protect property and courts that enforce contracts, nonetheless, the benchmark for government spending is zero. There are some interesting correlations between property rights and the other freedoms as Table 1 below shows. There were strong correlations with business, investment and financial freedom, and freedom from corruption. The data for freedom from corruption was taken from Transparency International's Corruption Perceptions Index (CPI). There were inverse correlations with fiscal freedom and government spending, suggesting that the protection of property rights requires government intervention. All of the correlations were statistically significant.

Table 1 Correlations between property rights and the other "freedoms" used by the Heritage Foundation

Pearson correlations with:	Business Freedom	Trade Freedom	Fiscal Freedom	Government Spending	Monetary Freedom	Investment Freedom	Financial Freedom	Freedom from Corruption	Labour Freedom
Property Rights	0.731	0.491	-0.208	-0.214	0.486	0.721	0.735	0.944	0.352
	p=0.000	p=0.000	p=0.005	p=0.004	p=0.000	p=0.000	p=0.000	p=0.000	p=0.000

n = 182
Source: calculated from Miller & Holmes (2011)

The World Economic Forum data on property rights is part of a study of competitiveness that covers 139 countries (Schwab 2010). This analyses what are termed 12 pillars of competitiveness – institutions, infrastructure, the macroeconomic climate, health and primary education, higher education and training, goods market efficiency, labour market efficiency, financial market development, technological readiness, market size, business sophistication, and innovation. Property rights form one part of the institutions pillar, the legal and administrative framework in which income and wealth is generated. As well as the institutions of government and the legal system, crime and the ethical behaviour of companies form part of this pillar. The data is collected in a very different way from the Heritage Foundation. It involved 15,000 executives being surveyed between January and May 2010 resulting in 13,607 usable responses, a median response of 87 respondents per country. Respondents were selected randomly with care taken to ensure a balance of industries. This is a colossal survey that is translated into over 20 languages. The survey method should reduce the potential for bias that could be present in a small panel of editors. However, the quality of the responses depends crucially on the experience of the respondents and their ability to calibrate responses about their countries compared with others. This can result in responses that may put a more favourable gloss on the state of a country than objectively may be justified or an undue degree of pessimism.

As the World Economic Forum covers fewer countries than the Heritage Foundation, an

important question is how closely the two sources of data are related. There is a high degree of correlation between the data on property rights produced by the World Economic Forum and the Heritage Foundation with a correlation coefficient of 0.833 (p = 000). However, there are some important differences between them as the Table 2 shows. The Heritage Foundation data has a greater skew towards lower values with less symmetry than that from the World Economic Forum. A possible explanation for this is the different ways in which the two bodies compile their data. The Heritage Foundation's use of expert panel data seems to generate a greater proportion of lower values. The World Economic Forum's respondents may be more reluctant to put a significantly low score on their own country's performance than an expert panel.

Table 2 Comparison between property rights data for the Heritage Foundation and World Economic Forum

Security of Property Rights	Heritage Foundation	World Economic Forum
Coefficient of variation	49.88%	24.09%
Kurtosis	-0.825	-0.707
Skewness	0.511	0.047

Source: calculated from Miller & Holmes (2011) and Schwab (2010)

3.4 MARKET EFFICIENCY AND TRANSPARENCY

Jones Lang LaSalle has produced its Global Real Estate Transparency Index every two years since 1999. The 2010 Index covers 81 countries (Jones Lang LaSalle 2010). Although most parts of the world are represented, there is limited coverage of Sub-Saharan Africa, apart from South Africa. It aims at providing information about the efficiency with which real estate markets in different countries function. The Index is concerned with the commercial property market and not the residential market. The data is the product of a survey of business leaders and researchers across the company, who produce an answer for their respective countries. Jones Lang LaSalle has a presence in most of the significant real estate markets in the world and is one of the leading international real estate consultancies. Regional coordinators work to ensure objectivity and rigour and a benchmarking process ensures that questions are interpreted consistently by participants. The conditions relate to the principal city except for China, India and Russia where data is recorded for Tier 1, 2 and 3 cities.

There are 20 major questions, with 10 being answered separately for domestic and non-domestic owners and corporate occupiers. They cover five areas (Goodchild 2010): performance measurement, which is concerned with the availability of public and private investment indices and the frequency and credibility of property valuation; market fundamentals, which is concerned with the availability of time series on supply, demand, rentals and yields; listed vehicles, which is concerned with whether financial reporting and corporate governance meet international standards; the regulatory and legal environment, which includes the enforceability of contracts, the security of title, the fair administration of taxes and the fair administration of zoning and building codes; and the transaction process, which includes the availability of pre-sale data and fairness of bidding arrangements, professional standards of service providers, the transparency of service charges and

management fees, and availability of information on debt. The model behind the Index regards property rights as being a tradable commodity. It focuses on the flows of information needed to make property markets function efficiently and the environment needed for reliable contractual bargains. The countries that are ranked most highly are those that have these.

The data is amalgamated to produce a composite score. A low score means that a market has a high level of transparency, whereas a high score means that the market is more opaque. High transparency means better availability of market data and greater fairness for market participants. Countries are classified according to how transparent their property markets are using this composite score: Tier 1 highly transparent; Tier 2 Transparent; Tier 3 Semi-Transparent; Tier 4 Low Transparency; and Tier 5 Opaque. Countries in Tier 1 include Australia, Canada, UK, New Zealand, Sweden and USA and those in Tier 5 include Syria, Sudan and Algeria.

4. CORRUPTION, BRIBERY AND STATE CAPTURE

Good governance of land and land administration can be undermined by petty corruption in which officials exploit their control over access to public services and exercise discretion over the enforcement of regulations. Owners of property rights may be compelled to pay officials for services that they have the right to expect or may bribe officials not to enforce regulations, for example, those concerned with town planning or building control. They may also be subject to coercion by officials who can extract payment for not enforcing imprecise regulations in a burdensome or officious manner. Grand corruption is where the state is captured by a group, clan or family, who can bend its powers to promote its own interests. Examples include the re-registration of state land as private land, land swaps in which inferior privately-owned land is exchanged for state land, and using the courts and tax system to attack rivals and undermine their wealth and influence (Johnston, 2005, pp 136-42).

An important question is how far is corruption in land matters related to corrupt practices in the society at large? Is it possible for land matters to be free from corruption in societies in which it is endemic in other areas of public life? Conversely, does one find societies which are substantially free from corruption in most areas of public life but in which land matters are riddled with it? Table 3 suggests that the incidence of corruption in land matters is closely related to that in other areas. It examines the correlations between the proportions of respondents answering yes to the question, whether in the past 12 months they or anyone living with them had paid a bribe in any form for each of seven public service areas. The high level of correlation suggests that land matters are not distinct from a culture of corruption in other public services. Bribery in land services is most likely in those countries in which there is also bribery in other services.

Table 3 Bribery in public services correlations

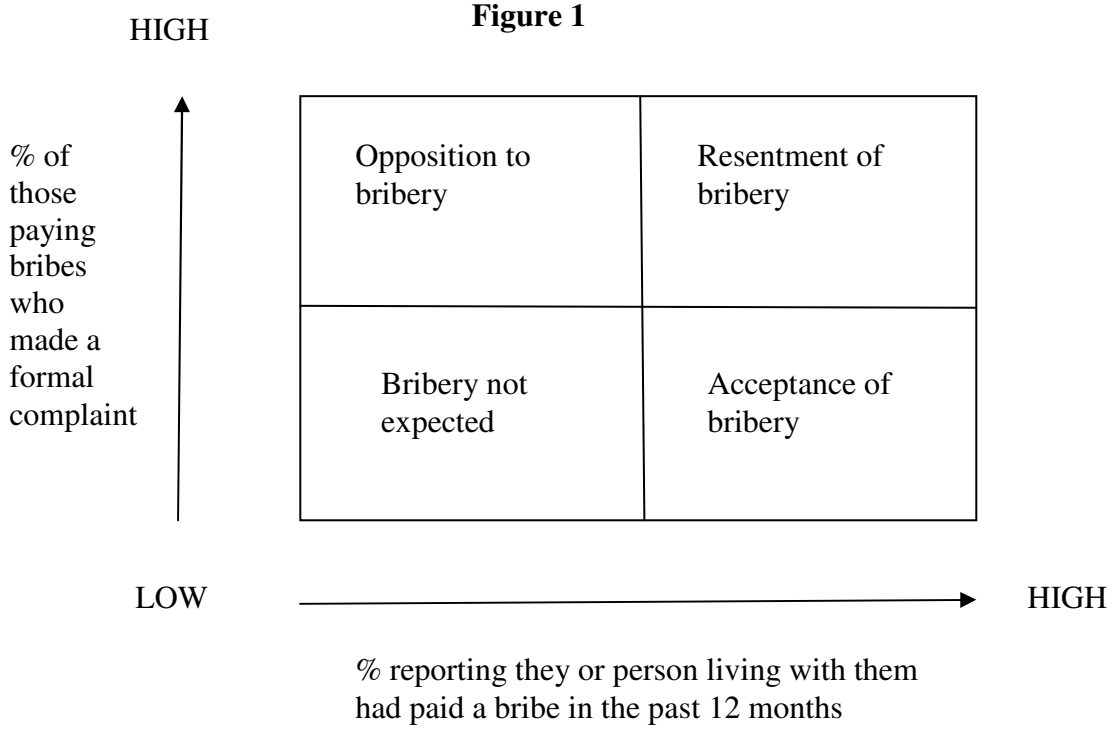
Percentage responding yes to the question whether they or a member of their household had paid a bribe in the last 12 months in the following services.

	Education System	Judiciary	Medical Services	Police	Registry & permit services	Utilities	Tax revenue
Judiciary	0.818	1.000					
Medical Services	0.793	0.755	1.000				
Police	0.770	0.904	0.670	1.000			
Registry & permit services	0.779	0.870	0.715	0.861	1.000		
Utilities	0.728	0.730	0.585	0.691	0.770	1.000	
Tax revenue	0.759	0.776	0.644	0.732	0.841	0.924	1.000
Land services	0.752	0.877	0.725	0.801	0.922	0.820	0.853

n=68, p = 0.000

Source: computed from Transparency International (2009)

Figure 1



The payment of bribes is associated with certainty of the outcome. The correlations suggest that the bribe payers have a degree of certainty that their payments will be effective. Only the correlation between the payment of bribes for utilities and certainty of outcome is not statistically significant. This may have something to do with the inherent unreliability of utility services in the some countries in which bribery is endemic that not even corruption is capable of improving!

Paying bribes to officials, putting notes in a tipping box after a public official has granted a licence, and officials receiving gifts at an office annual party were universally regarded as being unacceptable behaviour by public officials. The average proportion of respondents per country agreeing that this was acceptable behaviour was 6.6%, 16.8% and 22.4% respectively. Similarly the overwhelming majority did not regard these activities as being acceptable behaviour by a shopkeeper seeking a license, with the average proportion of respondents per country agreeing that such behaviour was acceptable being 13.3%, 22.8%, and 28.6% respectively. Majorities of respondents in each case viewed the behaviour as a bribe, with the average proportion of respondents per country being 82.6%, 68.2%, and 60.7% respectively. The use of tipping boxes and gifts at annual office parties were less widely condemned or regarded as being bribes than direct payments to officials. There were statistically significant correlations between the proportions of respondents stating they or someone they were living with had paid a bribe for a service in the last 12 months and whether the behaviour of the official and the payer was regarded as being acceptable. There were similar statistically significant correlations between the proportion paying bribes and whether it was acceptable behaviour on the part of the official and the payer for gifts to be delivered at the annual office party. These correlations indicate that those paying and receiving bribes do not share the condemnation of this behaviour of the population at large or else had rationalised their behaviour in some way.

Table 4 indicates that those respondents who thought that their country had a serious problem with bribes being paid to land authorities to obtain favourable decisions also thought that it had a serious problem with grand or political corruption in land matters. There is a statistically significant, though relatively low correlation (0.423), with the proportion of respondents who stated that they or a member of their household had paid a bribe to land services in the last 12 months and the perception that a country had a serious problem of bribery in land services. There are statistically significant correlations between the World Economic Forum respondents' views on the diversion of public funds, irregular payments and bribes, favouritism in the decisions of government officials, and public trust of politicians, and the proportion of Transparency International's respondents who reported paying bribes to land services and its respondents' views on the seriousness of bribes being paid to land authorities and grand corruption in land matters. The World Economic Forum's scale rates 1 as being low and 6 as being a high level of probity. The correlations with the Transparency International data, which measures the proportions of respondents agreeing, are therefore inverse ones. There are also statistically significant correlations between Transparency International's respondents' views about the seriousness of bribery and grand corruption in land and the World Economic Forum's respondents' views on the wastefulness of government spending and the reliability of public services. This would be consistent with corruption having an adverse impact on the efficiency of public services. There is also correlation between Transparency International's respondents' perceptions of corruption in land services and the World Economic Forum's scores on the ethical behaviour of firms, suggesting that low levels of corruption are associated with high levels of probity amongst firms.

Table 4 Correlations between Transparency International bribery in land services indicators and those of the World Economic Forum

	In the past 12 months have you or anyone living with you had paid a bribe in any form to the: land services? % yes	How serious do you think in this country is problem of bribes being paid to land authorities to obtain favourable decisions? % saying serious or very serious	How serious do you think the problem of grand or political corruption in land matters in this country? % saying serious or very serious
How serious do you think in this country is problem of bribes being paid to land authorities to obtain favourable decisions? % saying serious or very serious	0.423 p=0.001 n=60	1.000	0.916 p=0.000 n63
How serious do you think the problem of grand or political corruption in land matters in this country? % saying serious or very serious	0.751 p=0.000 n=60	0.916 p=0.000 n=63	1.000
Diversion of public funds WEF score	-0.480 p=0.000 n=60	-0.739 p=0.000 n=63	-0.752 p=0.000 n=63
Public trust of politicians WEF score	-0.305 p=0.018 n=60	-0.709 p=0.000 n=63	-0.640 p0.000 n=63
Irregular payments & bribes WEF score	-0.578 p=0.000 n=60	-0.713 p=0.000 n=63	-0.770 p=0.000 n=63
Favouritism in decisions of government officials WEF score	-0.364 p=0.004 n=60	-0.685 p=0.000 n=63	-0.649 p=0.000 n=63
Wastefulness of government spending WEF score	-0.268 p=0.039 n=60	-0.671 p=0.000 n=63	-0.606 p=0.000 n=63
Reliability of public services WEF score	-0.478 p=0.000 n=60	-0.673 p=0.000 n=63	-0.703 p=0.000 n=63
Ethical behaviour of firms WEF score	-0.446 p=0.000 n=60	-0.602 p=0.000 n=63	-0.633 p0.000 n=63

Source: calculated from Transparency International (2009); Schwab (2010)

The data on corruption from Transparency International and the World Economic Forum was subjected to a cluster analysis. Six clusters were extracted in which all the variables were statistically significant. Cluster 5 is dominated by countries from Western Europe and North America, or who have adopted similar models for doing business, such as Hong Kong and Singapore. Cluster 6 is dominated by emerging economies and includes a number of countries that have in the relatively recent past been under authoritarian rule. Those OECD countries which are not in Cluster 5 are to be found in Cluster 6. Organisations like the OECD and the European Union place obligations on their members with respect to governance. The advantages of membership can be a strong incentive to improve standards of governance, as well as membership being a clear break with the past.

Table 5 Bribe paying culture clusters

Cluster 1	**Cluster 2**	**Cluster 3**	**Cluster 4**	**Cluster 5**	**Cluster 6**
Cambodia	Azerbaijan	Armenia	India	Austria	Argentina
	Cameroon	Bolivia	Kuwait	Brunei	Bosnia-Herzegovina
	Ghana	Indonesia	Moldova	Canada	Bulgaria
	Morocco	Kenya	Nigeria	Denmark	Chile
	Senegal	Lebanon	Panama	Finland	Colombia
	Zambia	Mongolia	Russia	Georgia	Croatia
		Pakistan	Thailand	Hong Kong	Czech Republic
		Uganda		Iceland	Greece
		Ukraine		Japan	Hungary
				Korea	Israel
				Luxembourg	Lithuania
				Netherlands	Macedonia FYR
				Norway	Malaysia
				Poland	Peru
				Singapore	Philippines
				Switzerland	Portugal
				UK	Romania
				USA	Salvador
					Serbia
					Spain
					Turkey
					Venezuela

Source: calculated from Transparency International (2009); Schwab (2010)

5. EFFICIENCY OF PROPERTY REGULATIONS

In principle, one would expect to find that more procedures and time required for registering property and dealing with construction permits would be related and that the cost of doing so would vary with them. However as Table 6 shows, the correlations are weak. There are statistically significant correlations between the number of procedures for registering property and the time taken and cost, and between the number of procedures for dealing with construction permits and the time taken and between the time taken and the cost. The time taken to register property is correlated with the time taken for dealing with construction permits. In each case though the variation explained by the correlations are relatively low. There was a Spearman rank order correlation between the ease of registering property and

dealing with construction permits of just 0.22. The *Doing Business* data is concerned with quantities rather than the quality of government processes, and this may be the reason for the limited correlations, since the quantitative data may mask significant variability in the efficiency of the processes.

Table 6 Correlations between Ease of Registering Property and Dealing with Construction Permits

	Registering Property			**Dealing with Construction Permits**	
	Procedures (number)	Time (days)	Cost (% of property value)	Procedures (number)	Time (days)
Registering Property					
Time (days)	0.226 p=0.002	1.000			
Cost (% of property value)	0.180 p=0.015	0.105 p=0.156	1.000		
Dealing with Construction Permits					
Procedures (number)	0.031 p=0.681	-0.073 p=0.325	-0.123 p=0.098	1.000	
Time (days)	0.093 p=0.212	0.211 p=0.004	0.152 p=0.040	0.205 p=0.005	1.000
Cost (% of income per capita)	0.126 p=0.089	0.062 p=0.401	0.131 p=0.076	0.084 p=0.261	0.340 p=0.000

n = 183
Source: calculated from World Bank (2009)

Table 7 suggests that there is no statistically significant relationship between the proportion of those saying that they or someone they were living with had paid a bribe to land services during the past 12 months and the number of procedures or time taken to register property or the cost. However, there are statistically significant correlations between the number of procedures taken to register property and perceptions of the seriousness of bribery to land authorities and the seriousness of the problem of grand or political corruption in land matters in a country.

There were statistically significant correlations between the perceptions of bribes being paid to land authorities and of political or grand corruption in land matters and the time and cost of dealing with construction permits as Table 8 shows.

Table 7 Correlations between the Ease of Registering Property and Perceptions of Corruption

Correlations with Transparency International data:	Registering property: Number of procedures	Registering property: Time (days)	Registering Property: Cost as % property value
In the past 12 months have you or anyone living with you had paid a bribe in any form to the land services? % replying yes	0.226 p=0.085 n=59	0.081 p=0.543 n=59	0.245 p=0.061 n=59
How serious do you think in this country is problem of bribes being paid to land authorities to obtain favourable decisions? % serious & very serious	0.450 p=0.000 n=62	0.277 p=0.029 n=62	0.222 p=0.082 n=62
How serious do you think the problem of grand or political corruption in land matters in this country? % serious & very serious	0.422 p=0.001 n=62	0.251 p=0.049 n=62	0.273 p=0.058 n=62

Source: calculated from World Bank (2009) and Transparency International (2009)

Table 8 Correlations between the Ease of Dealing with Construction Permits and Perceptions of Corruption

Correlations with Transparency International data:	Dealing with construction permits: Procedures (numbers)	Dealing with construction permits: Time (days)	Dealing with construction permits: Cost (as % income per capita)
In the past 12 months have you or anyone living with you had paid a bribe in any form to the: land services? % replying yes	0.151 p=0.253 n=59	0.356 p=0.006 n=59	0.165 p=0.211 n=59
How serious do you think in this country is problem of bribes being paid to land authorities to obtain favourable decisions? % serious & very serious	0.225 p=0.078 n=62	0.361 p=0.004 n=62	0.399 p=0.001 n=62
How serious do you think the problem of grand or political corruption in land matters in this country? % serious & very serious	0.242 p=0.058 n=62	0.435 p=0.000 n=62	0.367 p=0.003 n=62

Source: calculated from World Bank (2009) and Transparency International (2009)

There is some limited support for the proposition that improving the registration of property is associated with better security of property rights. Table 9 shows the correlations between the Heritage Foundation's Property Rights and the measures used by *Doing Business* for the efficiency of property registration. The negative correlations suggest that property rights are more secure the fewer the number of procedures, the shorter the time taken, and the lower the cost of registration. However, the low correlation coefficients indicate that improved procedures account for relatively little of the strength of property rights. There was a Spearman rank order correlation of 0.41 between the Heritage Foundation's property rights

and the ease of property registration, which suggests that the combination of fewer procedures, speedier registration times, and lower cost is associated with the security of property rights. It might be expected that higher costs and difficulties encountered in registering property would result in discouragement of the use of formal systems for protecting property rights. The level of variability explained by the relationship indicates that there are also other factors involved.

Table 9 Correlations between the World Bank's efficiency measures of registering property and Heritage Foundation's property rights

Correlations with:	Procedures (number)	Time (days)	Cost (% of property value)
Heritage Foundation Property Rights	-0.281 p=0.000 n=170	-0.252 p=0.001 n=170	-0.186 p=0.015 n=170

Source: calculated from Miller & Holmes (2011) and The World Bank (2009)

6. MARKET TRANSPARENCY

Market transparency examines the efficiency with which the commercial property market functions in each country. The more transparent a market, the greater its efficiency and fairness to all participants, as information is widely available and the transactions processes do not consistently favour any group of buyers or sellers. The Jones Lang LaSalle Global Real Estate Transparency Index provides a method of measuring market transparency. The five sub-indices are highly correlated with each other as Table 10 shows. This indicates that a country is likely to perform relatively well or badly in all the areas. Countries which have open and fair transactions processes are also likely to be the ones in which market information is more readily available, titles are secure, and there is compliance with international standards of financial reporting and corporate governance.

Table 10 Correlations between the Sub-indices in the Jones Lang LaSalle Global Real Estate Transparency Index

	Performance Management	Market Fundamentals	Listed Vehicles	Regulatory & Legal
Market Fundamentals	0.7895			
Listed Vehicles	0.7676	0.6641		
Regulatory & Legal	0.7769	0.7697	0.7539	
Transactions Process	0.8570	0.8289	0.7395	0.8461

p = 0.000 n = 83

Source: calculated from data supplied by Jones Lang LaSalle

However, there are some interesting differences in the distributions of the data between the five sub-indices. The listed vehicles, regulatory and legal processes and the transactions processes sub-indices are skewed towards high levels of market transparency, although in each case there is a tail of poorly performing markets. Performance management and market fundamentals are skewed in the opposite direction. There is a tail towards the countries with

greater market transparency. The figures would seem to indicate that countries find it more difficult to achieve greater transparency in market data than in market processes and the infrastructure that enable property markets to function effectively. A likely explanation is that Performance Management and Market Fundamentals are both concerned with the availability of land market information. Valuation data requires the existence of a valuation profession capable of carrying out valuations in accordance with the International Valuation Standards, something that many of the countries covered by the Index lack. However, if transactions typically take place on a principal-to-principal basis rather than through agents, there is likely to be a lack of market transparency with limited information about transactions being available. Agency-based transactions should be more transparent but this implies the existence of a degree of professionalism and ethical standards on the part of the agents so that buyers and sellers are willing to trade through them

Table 11 Distribution characteristics of the Sub-indices in the Jones Lang LaSalle Global Real Estate Transparency Index

	Performance Management	Market Fundamentals	Listed Vehicles	Regulatory & Legal	Transactions Process
Coefficient of variation	39.1%	38.3%	45.5%	38.6%	31.7%
Kurtosis	-1.142	-1.210	-0.654	-1.034	-0.523
Skewness	-0.393	-0.312	0.478	0.051	0.079

Source: calculated from data supplied by Jones Lang LaSalle

A further issue concerns freedom of information. The Universal Declaration of Human Rights contains three main requirements on information: the right to seek, receive and impart information and ideas (article 19); the right of peaceful assembly and association (article 20) so that information can be freely communicated; and freedom of thought (article 18). These human rights are fundamental to the efficient functioning of markets. Markets cannot function efficiently unless traders and potential traders are able to seek out, transmit and publish relevant information about prices and the qualities of the goods available and can meet with other traders and those with potentially useful information. A number of countries covered by the Index have, at best, limited compliance with the Universal Declaration of Human Rights, and tend to censor information.

The relationship between property market transparency and freedom of information can be examined by comparing the scores on the Global Real Estate Transparency Index and those of the World Bank's Governance Indicators. One of these is Voice and Accountability, which examines the extent to which a country's citizens are able to participate in selecting their government and freedom of expression, freedom of association, and how free are the media (Kaafmann et al, 2010). Whilst this indicator goes beyond just freedom of information, this is an important component. Table 12 shows how well correlated the Global Real Estate Transparency Index and Voice and Accountability are. It shows high levels of correlation indicating that a transparent market requires freedom of information and association to function. The inverse correlations are because low scores in the Global Real Estate

Transparency Index indicate a high level of transparency whilst high scores in Voice and Accountability indicate high levels of freedom.

Table 12 Correlations between the World Bank Voice and Accountability Indicator and the Jones Lang LaSalle Global Real Estate Transparency Index and Sub-indices

Correlations with:	Performance Measurement	Market Fundamentals	Listed Vehicles	Regulatory and Legal	Transaction Process	GRETI
World Bank Voice & Accountability Indicator	-0.709	-0.641	-0.579	-0.799	-0.806	-0.787

n =74 p = 0.000

Source: calculated from World Bank (2010) and data supplied by Jones Lang LaSalle

Table 13 examines the relationship between the Global Real Estate Transparency Index and a number of indicators from the World Economic Forum about the level of development of an economy and elements of governance. High levels of association are shown by negative correlations as high scores in the World Economic Forum are associated with high levels of development and low scores in the Global Real Estate Transparency Index indicate a high level of market transparency. There are a some relatively high correlations between the Global Real Estate Transparency Index and a number of the World Economic Forum's institutional factors, particularly the strength of intellectual property rights, the absence of irregular payments and bribes and the reliability of public services, and the strength of the legal system in settling disputes and challenging regulations. There were similar correlations with a number of aspects of the management of firms, including the ethical behaviour of firms, the strength of auditing and reporting standards, and the efficacy of corporate boards, and also with a number of the indicators of business sophistication, goods and labour market efficiency, and innovation. The costs of crime and terrorism seemed to have little impact on property market transparency. Market transparency was associated with good quality in primary education and health care and in higher education, reliable electrical supply, and with high penetration of fixed telephone lines. Perhaps surprising financial market development was an area where correlations were limited other than with the availability of financial services and, to a lesser extent, the free movement of capital, the affordability of financial services, and the regulation of securities exchanges. This may reflect the emphasis in the Index on commercial rather than residential property. These correlations indicate that the countries with greater market transparency and the development of their property markets are also ones with high levels of development in other aspects of business. Correlation is about association and does not indicate causation. Therefore caution should be exercised before one concludes that property market transparency either results in or results from the development of an environment that is supportive of business. Rather, it is quite plausible that a common set of factors have led to greater property market transparency and an environment in which business can flourish.

Table 13 Correlations between Jones Lang LaSalle Global Real Estate Transparency Index and selected World Economic Forum indicators

World Economic Forum scores	Pearson correlation with JLL composite index	Statistical significance
4. Heath & primary education	-0.590	p=0.000
7. Labour market efficiency	-0.571	p=0.000
10. Market size	-0.429	p=0.000
12. Innovation	-0.706	p=0.000
1. Institutions		
1.02 Intellectual property rights	-0.718	p=0.000
1.05 Irregular payments & bribes	-0.655	p=0.000
1.07 Favouritism in decisions of government officials	-0.478	p=0.000
1.08 Wastefulness of government spending	-0.229	p=0.055
1.09 Burden of government regulation	-0.173	p=0.149
1.10 Efficiency of legal framework in settling disputes	-0.504	p=0.000
1.11 Efficiency of legal framework in challenging regulations	-0.574	p=0.000
1.13 Business costs of terrorism	-0.253	p=0.033
1.14 Business costs of crime and violence	-0.169	p=0.158
1.15 Organized crime	-0.359	p=0.002
1.16 Reliability of public services	-0.579	p=0.000
1.17 Ethical behaviour of firms	-0.631	p=0.000
1.18 Strength of auditing and reporting standards	-0.647	p=0.000
1.19 Efficacy of corporate boards	-0.572	p=0.000
1.20 Protection of minority shareholders' interests	-0.460	p=0.000
1.21 Strength of investor protection	-0.398	p=0.001
2. Infrastructure		
2.07 Quality of electrical supply	-0.591	p=0.000
2.08 Fixed telephone lines	-0.662	p=0.000
2.09 Mobile telephone subscriptions	-0.124	p=0.301
5. Higher Education		
5.01 Secondary education enrolment rate	-0.509	p=0.000
5.02 Tertiary education enrolment rate	-0.536	p=0.000
5.03 Quality of the educational system	-0.575	p=0.000
5.04 Quality of mathematics and science education	-0.406	p=0.000
5.05 Quality of management schools	-0.574	p=0.000
5.07 Local availability of specialized research and training services	-0.519	p=0.000
5.08 Extent of staff training	-0.489	p=0.000

6. Goods Market Efficiency		
6.01 Intensity of local competition	-0.528	p=0.000
6.02 Extent of market dominance	-0.590	p=0.000
6.03 Effectiveness of anti-monopoly policy	-0.604	p=0.000
6.04 Extent and effect of taxation	0.121	p=0.316
6.11 Prevalence of foreign ownership	-0.537	p=0.000
6.12 Business impact of rules on Foreign Direct Investment	-0.255	p=0.032
6.14 Degree of customer orientation	-0.508	p=0.000
6.15 Buyer sophistication	-0.623	p=0.000
Financial Market Development		
8.01 Availability of financial services	-0.646	p=0.000
8.02 Affordability of financial services	-0.483	p=0.000
8.03 Financing through local equity market	-0.340	p=0.004
8.04 Ease of access to loans	-0.210	p=0.078
8.05 Venture capital availability	-0.356	p=0.002
8.06 Restrictions on capital flows	-0.503	p=0.000
8.07 Soundness of banks	-0.024	p=0.845
8.08 Regulation of securities exchange	-0.497	p=0.000
9.04 Internet users	-0.206	p=0.084
11. Business Sophistication		
11.01 Local supplier quantity	-0.314	p=0.008
11.02 Local supplier quality	-0.703	p=0.000
11.03 State of cluster development	-0.486	p=0.000
11.04 Nature of competitive advantage	-0.643	p=0.000
11.05 Value chain breadth	-0.649	p=0.000
11.06 Control of international distribution	-0.404	p=0.000
11.07 Production process sophistication	-0.704	p=0.000
11.08 Extent of marketing	-0.732	p=0.000
11.09 Willingness to delegate authority	-0.050	p=0.678

Source: calculated from Jones Lang LaSalle (2010) and Schwab (2010)

7. CONCLUSIONS

The paper has reviewed land governance through a study of the available statistical sources on corruption, the efficiency of land administration processes, the security of property right, and commercial property market efficiency and transparency. Although the data sets do not completely overlap, this approach has enabled comparisons to be made using data from large number of countries and the correlations between them to be explored. The data indicates that corruption in land services is associated with corruption in other public services. Bribery was higher where there was greater certainty about the outcomes from paying it. Countries which respondents thought had higher corruption in land matters were ones in which they thought had higher levels of favouritism in decisions by officials, lower public trust of politicians,

greater wastefulness in government expenditure, lower reliability in public services, and less ethical behaviour by firms. There appears to be a limited but weak association between the efficiency of land administration and the security of property rights, suggesting that other factors are also likely to be involved, which could include the quality of land administration. There is some evidence to suggest that certain aspects of market efficiency and transparency may be easier to achieve than others. In particular, the achievement of efficiency in the dissemination of market information appears to be more demanding than regulatory, legal and transactions processes. This requires the existence of a valuation profession able to carry out valuations in accordance with international standards and freedom of information, association and thought. The quality of land governance is therefore associated with some key aspects of the governance of society as a whole. Property market transparency and efficiency is associated the strength of a country's legal system, the quality of its education system, the quality of business management, efficiency in the goods and labour markets, and the level of business sophistication. The quality of governance in land matters would appear to be related to the quality of governance of business. Land governance would not appear to be something that stands in isolation from other aspects of governance. Societies in which the quality of governance is good are likely also to have high standards of governance in land matters.

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REFERENCES
Burns T, Deininger K, Selod H & Dalrymple K (2009), Implementing the Land Governance Assessment Framework, *FIG Congress 2010, Facing the Challenges - Building the Capacity*, Sydney, Australia, 11-16 April 2010
FAO (2007) *Good governance in land tenure and administration*, Food and Agriculture Organization of the United Nations, FAO Land Tenure Studies 9, Rome
Goodchild R (2010) *Global real estate: Similarities and differences*, Plenary Session of European Real Estate Society, 24 June 2010
Gunardi H S (2008) *Corruption and Governance around the World: An Empirical Investigation*, PhD thesis, Rijksuniversiteit Groningen
Johnston M (2005) *Syndromes of Corruption: Wealth, Power and Democracy*, Cambridge University Press, Cambridge
Kaafmann D, Kraay A & Mastruzzi M (2010) *The Worldwide Governance Indicator: Methodological and Analytical Issues,* World Bank Policy Research Working Paper 5430, Washington DC, September
The World Bank (2010) *Land Governance Assessment Framework: Implementation Manual for Assessing Governance in the Land Sector*, The World Bank, Washington DC
Transparency International (2010) *Corruption Perceptions Index 2010,* Berlin, www.transparency.org

Sources
Jones Lang LaSalle (2010) *Mapping the world of transparency: Uncertainty and risk in real estate,* www.joneslanglasalle.com/Transparency
Miller T & Holmes K R (eds) (2011) *2011 Index of Economic Freedom*, The Heritage Foundation & The Wall Street Journal, Washington DC
Schwab K (ed) (2010) *The Global Competitiveness Report 2010-2011*, World Economic Forum, Geneva
The World Bank (2009) *Doing Business 2010: Reforming through Difficult Times*, The World Bank, Washington DC
The World Bank (2010) *The Worldwide Governance Indicators Dataset 1996-2009*, http://info.worldbank.org/governance/wgi/
Transparency International (2009) *2009 Global Corruption Barometer Report*, Transparency International, Berlin

BIOGRAPHICAL NOTES

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Christine Grover is a Senior Lecturer in Business at the University of Winchester. Formerly a lecturer in Mathematics and Statistics, she now lectures on the numerical aspects of Business. She recently completed a PhD entitled 'The Suburban Development of Winchester from c1850 to 1912'. This traced the development of agricultural land, which was either owned by the Dean and Chapter or was part of Abbot's Barton Farm purchased by William Simonds from Jane Austen's brother. The study ends in 1912 when the valuation survey was published, so providing a reliable picture of Winchester prior to the First World War..

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