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RESEARCH ARTICLE

Two sides of the coin: exploring the duality of corruption in Latin America

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Abstract

The ambiguous phenomenon of corruption has long been the cause of great theoretical debate in economics. By using Structural Equation Modelling, with the two types of corruption as a latent variable, this paper employs causal and indicative variables to the Latin American region to test for rent seeking and systemic corruption during 1980–2018. The findings provide evidence for two types of corruption, one generated by greed, and the other a solution to market failures. Such results support the view that corruption encompasses a complex set of social behaviours that may require a stronger definitional approach.

Key words: Latin America; rent seeking corruption; shadow economy; systemic corruption

JEL Codes: D73; H3; K42; O17; O5

1. Introduction

Corruption is an insidious plague that is thought to cripple economic growth. Over the last 30 years, successive governments and international agencies have focused on stamping out this plague (Rose-Ackerman, 1999a; Shen and Williamson, 2005; World Bank, 2018). However, evidence surrounding the actual impact of corruption has remained a challenge, leading to debates within the corruption literature (Cotte Poveda and Martinez Carvajal, 2019; Huang, 2016; Huntington, 1968; Leff, 1964; Mauro, 1995; Meon and Sekkat, 2005; Nur-tegin and Jakee, 2019; Saha and Sen, 2021). While many would assume that the contention stems from measurement issues, the challenge begins with the definition of corruption (Hodgson and Jiang, 2007). A major part of the definitional problem stems from the lack of consensus on the difference between appropriation of public goods for personal gain and privatisation, governmental distortion of the market and regulation, or even the difference between a bribe and a gift (Hodgson and Jiang, 2007; Huntington, 1968; Leff, 1964; Leys, 1965; Muir and Gupta, 2018; Smart, 1993). These debates create major problems when trying to compare study results with different baseline definitions of what is and what is not included in measurements of corruption (Muir and Gupta, 2018). For example, Transparency International (TI) defines corruption simply as the abuse of entrusted power for private gain. Hodgson and Jiang (2007) criticise that economics does not sufficiently emphasise the private domain of corruption, even though corporate corruption or business corruption is widely used in popular or legislative discourse[1]. Hodgson and Jiang refer to the powerful example of enduring corruption in Russia, which dramatically increased in the 1990s despite extensive privatisation.

[1]Also, in the area of sports, see, e.g., Duggan and Levitt (2002) study on Sumo wrestling.

Moreover, other disciplines such as anthropology use a broad definition of corruption (Muir and Gupta, 2018), where corruption is not limited to the abuse of power caused by greed. The anthropological definition of corruption describes clandestine transactions outside officially recognised channels, or a set of hidden alliances and social norms that lead to illicit or cryptic relations, which blur the boundaries between public and private, and calls forth efforts to redefine social relations (Feldman, 2018; Muir and Gupta, 2018). The primary element of the anthropological definition is that corruption should not be restricted to considering greed and/or the abuse of power but needs to encompass a much more complex and nuanced set of social behaviours. Torsello and Venard (2016) point out that:

> anthropologists favour a nuanced approach by analysing corruption from the point of view of the people concerned… anthropologists have no moral valuation of corruption concerning the system in which it takes places, the consequences of corruption, the act of corruption, or the social actors involved in the corruption. Thus, anthropologists reject the moral dualism of corruption… This does not mean that anthropology justifies corruption, but that anthropological perspectives of what can count as moral standards in relation to resorting to bribery or similar practices are attentive to analysing the different, often conflicting, moral concerns that inform actors' decision making (pp. 38–39).

Poor government policy, bureaucratic inefficiencies, or inequitable access to administrative processes creates not only government failure but also market failure. In such cases, corruption is a coping strategy and a way of sidestepping the official markets, which may result in community acceptance of corrupt behaviours as the method by which they are able to actively engage in the market.

Hernando de Soto (1989, 2000) documented the considerable challenges involved in creating a new and legal small business in Lima, the Philippines, Egypt, or Haiti. When setting up a small garment factory in Lima, they were asked on ten occasions for a bribe to speed up the process, and twice a bribe was necessary to continue setting up the factory (de Soto, 1989). Rather than being driven by greed and self-interest, this behaviour could be classed as an active effort to promote social change within a system of inefficient governance. At the very least, it is an attempt to circumnavigate the market failures – or, as de Soto argues – to fill the gaps in the legal economy. The notion that corruption could be used to promote efficiency within an incompetent bureaucratic system is not new; numerous studies point out that it is an effective 'grease' when presented with bureaucratic red tape (Huntington, 1968; Leff, 1964; Leys, 1965; Lui, 1985).

Ever since the corruption debates in the 1960s, corruption has resisted simple definition as a single ubiquitous and destructive activity, as there are in fact two sides: one that hinders economic growth, and one that promotes growth in the face of bureaucratic inefficiency and 'red tape' (Lui, 1985). Mauro (1995) proposed that corruption could either 'grease or throw sand in the wheels' of economic development, an idea that was preceded by Leff (1964). Our study contributes to the literature confirming that corruption is not a homogenous phenomenon. Influenced by the work of Huntington (1968), Leff (1964), Leys (1965), Coase (1988) and Mauro (1995) we stress that the two forms of corruption do in fact simultaneously exist: one being rent seeking driven by strategic self-interest and greed, and the other being systemic, used as a way of coping with government failure. We therefore empirically conceptualise corruption as two discrete behaviours that in sum are part of the complex phenomenon of corruption (Muir and Gupta, 2018), which may work in opposite directions in terms of helping or hindering economic growth. Thus, the aim of this paper is to empirically examine the dichotomy by employing Structural Equation Models (SEM) to explore existence of both Rent Seeking (RS) and Systemic Corruption (SC). In Section 2 we discuss the broader definition of corruption. Section 3 and 4 present the empirical model, methodology, and data used to provide evidence of rent seeking and systemic corruption. Section 5 discusses the results, and the final section presents our conclusions.

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2. An overview of systemic and rent seeking corruption

Corruption has been ever present within society since the birth of public power (Chen *et al.*, 2018). Previous studies have investigated the relationship between culture, social norms, institutions, and corruption, showing that these concepts share a complex synergy (Andriani and Luca Bruno, 2021). Humans may engage in controlling behaviour to achieve greater payoffs (monetary or non-monetary[2]), strategies that are traditionally linked to rent seeking, whereby individuals seek greater economic returns than would normally be available to them.

The meaning of corruption has proved to be a contested point among economists, resulting in definitions that focused only on the public sector which is a problem as aforementioned (Hodgson and Jiang, 2007). The definition traditionally accepted within economics is too narrow, as certain types of rent seeking behaviours can be considered a form of corruption (Aidt, 2016; Lambsdorf, 2002b). The standard definition of rent seeking as presented by Hillman (2013) is the quest for privileged benefits from the government, which may be in the form of monetary gain or power. If we were to broaden the definition of corruption as suggested by Lambsdorf (2002b: 98), corruption can be defined as a special means by which private agents may seek to pursue their interest in competition for preferential treatment by government officials or politicians (Aidt, 2016: 145). Comparing this definition of corruption alongside the standard definition of rent seeking highlights the possibility of these two activities being seen as 'influence seeking' or a form of rent seeking corruption (Aidt, 2016). If the rent seeking activity involves a beneficial transfer to the gatekeeper, who uses factors of production in an unproductive way, this can be considered rent seeking corruption (Aidt, 2016).

Rent seeking corruption may occur in different forms, and Ang (2020) provides an in-depth analysis into the two dimensions of corruption by splitting the phenomena into multiple categories. Corruption has been defined as either a two-way exchange between officials and social actors, which includes but isn't limited to bribes, or as a transaction between elite political actors and the non-elites (Ang, 2020). Defining corruption as multi-dimensional allows for its actions to be captured through its high- and low-level actors who may engage in numerous types of corruption (Ang, 2020).

Ang (2020) further defines corruption as either grand theft or petty theft. Like rent seeking corruption, petty theft refers to the misuse of public funds by street level bureaucrats, whereas grand theft refers to the misappropriation of large sums of public money by political elites (Ang, 2020). Petty theft acts in the same way as economic rent seeking – it uses money or power to influence policies to one's own advantage to escape the invisible hand of the market, creating excess rents from the government (Lambsdorff, 2002a). Unfortunately, rent seeking behaviour exists in both legal economies and illegal shadow economies around the world. This is evident in the numerous forms of embezzlement experienced by corporations and governments. Rent seeking corruption can be identified through, for example, the Panama Papers, FinCen Files and Pandora Papers, where criminal elites strategically aim to subvert financial markets via corrupting governing agencies (Bhuiyan, 2022; O'Donovan *et al.*, 2019; Tanzi, 2000).

In contrast, systemic corruption is driven by individuals trying to solve inefficiency problems present in ill-functioning bureaucracies. It is purely focused on the government and its failures (Cooray and Schneider, 2018; Saha and Sen, 2021)[3]. Ang (2020) refers to this as speed money and access money. Systemic corruption has also been presented by Aidt (2016) as the 'helping hand' type of corruption. This type of corruption has long been present, for example, within developing Asian economies where it has simply existed as the way of doing business for many years, with under-the-table deals and illicit contributions from big business to the political party becoming commonplace (Wedeman, 2012). Speed money refers to the petty bribes that businesses or citizens pay to

[2]A reviewer noted that the 'Me too' movement casts light on the widespread non-monetary corruption (namely sex abuse) in the workplace.

[3]However, as a reviewer pointed out, systemic corruption can be welfare-enhancing or welfare-degrading. As an example, the reviewer notes that under Soviet-style economies systemic corruption economizes on prohibitive transaction costs (therefore welfare enhances). But it can also be related to oligarchs' selective imposture of rules of the game to achieve an asymmetric access to resources for their closed private which would be welfare-degrading.

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bureaucrats to speed activity up or get around hurdles (Ang, 2020). This has also been thought to increase economic growth by encouraging government employees to supplement their income by leveraging bribes (De Soto, 1989; Saha and Sen, 2021). Access money refers to high stake rewards extended by business actors to powerful elites or access to exclusivity (Ang, 2020).

This type of 'street level' corruption is decisively different from rent seeking corruption and represents the 'grease in the wheels' argument from Mauro (1995). It differs in the sense that the bribes are associated with access to regular services rather than the special treatment associated with grand corruption (Justesen and Bjørnskov, 2014). Such government behaviour is linked to extortive corruption, where government officials use their discretionary power to refuse or delay services to extract benefits (Brunetti and Weder, 2003). Such blackmailing activities reduce a private agent's ability to function properly in the formal economy. As Coase (1988) has pointed out, '[i]t is in the interest of the blackmailer to make payment of money more attractive than the alternative' (p. 668). Thus, blackmailing involves a trade and the 'problem is that all trade involves threatening not do some something unless certain demands are met' (Coase, 1988: 675). Corrupt bureaucrats take advantage of their monopoly on granting licenses that allow private sector activity (Charap and Harm, 1999).

Empirical evidence shows that governments suffering with high levels of bureaucratic 'red tape' actually slow down economic growth (Leff, 1964) and limit opportunities for entrepreneurial innovation (Cooray and Schneider, 2018). These inefficient government systems create demand for 'systemic' corruption, through which the public are trying to find solutions and speed up economic activity where ineffective policy is present (Aidt, 2009; Cooray and Schneider, 2018; Meon and Sekkat, 2005). By working around a flawed bureaucracy, business may be able to 'grease the wheels' of the economy, but at the same time, they may unintentionally create the foundations for the emergence of rent seeking corruption. However, systemic corruption may be a way to achieve growth and efficiency in an ill-functioning bureaucracy (Cooray and Schneider, 2018; Leff, 1964). While all these actions are almost always illegal, they do not always have sinister motivations and may be seen more as a sludge rather than an efficient grease (Ang, 2020).

3. Model and methodology

To model systemic corruption (SC) and rent seeking (RS) corruption as two distinct latent variables, we employ a type of Structural Equation Modelling (SEM) known as the Multiple Indicators Multiple Causes model (MIMIC). SEM is a technique for assessing theoretical models that hypothesise how sets of variables define latent variables (constructs) and how these constructs are related to each other (Frey and Weck-Hannemann, 1984; Joreskog and Sorbom, 1996; Shen and Williamson, 2005). This method tests direct and indirect effects of variable relationships by employing multivariate regressions. The MIMIC model was introduced to econometrics by Goldberger (1972) and successfully pioneered by Dreher *et al.* (2007) to measure corruption. In our study, MIMIC is used to construct a measure of corruption using indicative and causal variables. This model estimates the unknown coefficients separately through a set of structural equations with the use of observed indicator variables to indirectly capture the effect of the unobserved variables (Dreher *et al.*, 2007). Through the use of causal and indicative variables, this model specifies the causal relationships among the two latent variables (rent seeking and systemic corruption) and explains their effects (Buehn and Schneider, 2012; Dreher *et al.*, 2007).

The MIMIC model consists of two parts: the structural equation and the measurement model. The measurement model specifies how the observed endogenous (indicator) variables are determined by the unobserved latent variable, and the SEM identifies the relationship between the latent variable and its exogenous variables (Dreher *et al.*, 2007; Joreskog and Goldberger, 1975). The following equations specify the MIMIC model as presented by Gertler (1988):

$$y_{i,j} = \beta_j \xi_i + \upsilon_i \tag{1}$$

$$\xi_i = \lambda_k x_{i,k} + \zeta_i \tag{2}$$

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where $y_{i,j}$ is an observation of a systemic or rent seeking indicator j for country i, $x_{i,k}$ is an observation for a potential systemic or rent seeking cause k for country i; ξ_i is a latent variable representing the effect of systemic or rent seeking corruption in country i; β and λ are vectors of the coefficients, and υ and ζ are error terms. The measurement model, equation (1), links j indicators (denoted by y) to the unobservable measure of systemic and rent seeking corruption, whereas equation (2) models the determination of rent seeking and systemic corruption as a function of k causes (denoted by x) (Rose and Spiegel, 2012). To derive a model that is no longer a function of the latent variable ξ_i, we substitute equation (2) into (1), therefore making the MIMIC model a system of j equations with the right hand sides restricted to be proportional to each other (Gertler, 1988; Rose and Spiegel, 2012). Imposing proportionality constrains the one factor model of the latent variable; with the addition of normalisation, they achieve the identification of parameters in equations (1) and (2).

For this study, we estimate our latent variables (RS and SC) with two individual MIMIC models using Maximum Likelihood Missing Variables (MLMV) which assumes that the data is normally distributed. Systemic corruption will be estimated using 6 indicative variables and 6 causal variables. Rent Seeking corruption will be estimated with 7 indicative variables and 7 causal variables. To ensure robustness within the model, variables that may be considered both an indicator and a cause will be modelled as such.

4. Data

The data represents a panel on 24 Latin American countries covering the period of 1980–2018. Tax havens and countries without complete sets of data were removed from the study. Latin America as a coherent cultural region (Inglehart and Carballo, 1997) was chosen due to the similar cultural heritage[4] of these countries (although there are identity differences and differences with respect to their colonisation histories) as well as the diverse mix of developing and developed countries within the region[5]. There is a concern that excluding countries from the study will introduce bias from missing data points; however, as the model requires near complete data sets, removing countries is consistent within the literature (Shen and Williamson, 2005). We used several causal and indicative variables within the empirical analysis to estimate the effect of each type of corruption. The variables used within this analysis are based on previous findings of relevant theoretical and empirical literature that are also grounded within public choice, institutional economics, and anthropology. Where the literature is indecisive as to whether variables are causal or indicative, they were run both ways to confirm robustness and to ensure that endogeneity and causality issues are addressed (Dreher *et al.*, 2007). The following section summarises the variables in each model.

4.1 Indicative variables

4.1.1 Corruption perceptions

Corruption is used as an indicative variable for the perception of corruption within a region in our model. As these indexes are based on personal perceptions, there are uncertainties regarding the validity of this data. To ensure robustness, the models were estimated using Transparency International's Corruption Perception Index (CPI) or the Political Risk Services International Country Risk Guide (ICRG). These are two of the most used datasets within the literature and are suitable for our analysis as they cover a significant period of time. CPI is the most used perceptions-based index, but it is not without its faults. The methodology changes regularly, so to ensure consistency, the values have been transformed to match the current methodology. CPI estimates corruption from 0–10 ('totally corrupt'

[4]Inglehart and Carballo (1997) refer to the Hispanic cultural heritage, the Roman Catholic religious heritage that shaped societies of Latin America, and the influence by indigenous American cultures (in particular in Mexico and Peru). Using World Values Survey data, Inglehart and Barballo also show that the Latin American countries in the 1990 dataset (Mexico, Argentina, Chile, and Brazil) had similar values systems.

[5]For an exploration on social norms of compliance differences see Torgler (2005).

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to 'not corrupt'). The ICRG ranks countries from 0–6 (totally corrupt to not corrupt) and provides an annual corruption rating by country-based experts. The CPI represents the perceptions of country-based analysts, businesspeople, and experts.

4.1.2 Macroeconomic indicators

Gross domestic product (GDP) per capita acts as a proxy for economic growth within the systemic model. Developing countries that experience low levels of economic growth tend to have insufficient public services, which may result in citizens bribing officials to gain access to general services (Transparency International, 2020). GDP (in USD) has been taken from the World Bank. It is a weighted average of the current levels of GDP divided by the midyear population (World Bank, 2020a). As SEM models and MLMV require the data to be normally distributed, the variable has been transformed via logarithms, which is common practice within the literature. Corruption has been shown to cause high inflation in countries experiencing insufficient tax revenue (Al-Marhubi, 2000). Governments wishing to have optimal taxation create inflation as a source of income when they experience significant tax evasion (Ali and Sassi, 2016). This can also be caused by corrupt officials lowering the amount of public funds available to finance expenditures resulting in government reliance on more seigniorage (Blackburn and Powell, 2011). Thus, it could be theorised that countries experiencing high levels of rent seeking and systemic corruption will generally have higher monetary growth inflation. Inflation data are taken from the World Bank (World Bank, 2020b). Transition economies that experience high levels of corruption have higher levels of foreign Direct investment (FDI), as corruption enables the replication of the financial market mechanisms that are absent due to poorly designed regulation (Cuervo-Cazurra, 2008; Huntington, 1968; Leff, 1964). Firms that place more value on efficiency and access to goods are more likely to pay bribes to officials to guarantee admittance (Cuervo-Cazurra, 2008; Leff, 1964). Rent seeking corruption is thought to deter FDI; firms are less likely to invest in a country where corruption yields increased costs and uncertainty (Cuervo-Cazurra, 2008). FDI taken from the World Bank is measured as the direct investment equity flows in the reporting economy, which refers to the sum of equity capital, reinvestment of earnings, and other forms of capital present (World Bank, 2020c).

4.1.3 Education

Individuals with higher levels of formal education may have a more complete perception of corruption (Arnold, 2012). As education is the driver of moral perspectives and actions, a lack of education can result in an acceptance of 'corruption culture' (Fisman and Miguel, 2008); whereas the presence of greater education levels has been shown to reduce such 'corruption culture' in certain regions (Truex, 2011). Gross enrolments taken from the World Bank will be used as an indicative education variable within both models, as higher levels of education can lead to a reduction in both systemic and rent seeking corruption. The data taken from the World Bank Gender Parity Index of Education consists of pre-primary, primary, secondary, and tertiary enrolments as a gross enrolment ratio. This ratio is the proportion of total enrolment (regardless of age) to the population of the age group that corresponds to the level of education (World Bank, 2020d). The variable (logged values) has been constructed as an additive index.

4.1.4 Intentional homicides per capita

Countries experiencing high levels of crime have been characterised with a high level of corruption and a low level of efficiency within the criminal justice system (Neapolitan, 1999). It is theorised that this is caused by the erosion of social rules that may lead to abnormal levels of violence and political uncertainty (Cotte Poveda *et al.*, 2019). Intentional homicides per capita serves as the indicative variable for rent seeking corruption, acting as a proxy for the level of corruption within South America. The data from the United Nations Office on Drugs and Crime, records intentional homicide as unlawful homicide purposely inflicted as a result of domestic disputes, interpersonal violence,

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violent conflicts over land resources, intergang violence, and predatory killing by armed groups (World Bank, 2020e).

4.1.5 Cement imports and exports

Large construction projects provide a lucrative opportunity for corruption as the exact value of the project is hard to monitor (Dreher *et al*., 2007). We use cement imports and exports (log values) as an indicator for rent seeking corruption within a region. Rose-Ackerman (1999a: 30–31) provides a sound justification for cement imports and exports as a proxy variable for corruption, noting that '[in] Nigeria in 1975, the military government ordered cement that totalled two-thirds of the estimated needs of all of Africa and which exceeded the productive capacity of Western Europe and the Soviet Union'. The data was taken from the Observatory of Economic Complexity by Alexander Simoes. The data contains Standard International Trade Classifications for cement imports and exports from 1962–2017, gathered from the United Nations Statistical Division (CommTrade) and the Centre for International Data by Robert Feenstra (Simoes, 2020). As some countries within the study are producers of cement, we have taken the difference between imports and exports to narrow consumption.

4.1.6 Unemployment

Unemployment is defined as significant levels of underemployment or employment in the informal economy. In regions where shadow economy activities (i.e. corruption) are more profitable than traditional labour, it can be argued that the decline in labour force participation and a high unemployment rate can be indicative of rent seeking corruption (Dell'Anno and Solomon, 2008).

4.2 Causal variables

4.2.1 Foreign pressure

The global anti-corruption agenda has placed political conditionality and anti-corruption policy at the centre of good governance programmes implemented by international financial institutions (Bracking, 2007). While the global anti-corruption campaign has aimed for a tailored approach to combating corruption, foreign pressures have proven to be counterproductive, especially in post-communist and developing countries (Ivanov, 2007). The ICRG defines foreign pressures as the actual or potential risk posed by pressures on the government from one or more foreign states in forcing policy change. This pressure can be in the form of diplomatic demands, suspension of aid, and trade sanctions on the country (Howell, 2011). Foreign pressure will be used as a causal variable within the rent seeking corruption model.

4.2.2 Law and order

Traditionally, law and order are assumed to sufficiently restrict the activities of politicians and bureaucrats by deterring corrupt deals, but excessive regulation can impede the function of market forces and promote corruption (Lambsdorff, 2003). If judicial decisions can be purchased, then countries cannot develop a strong legal system (Lambsdorff, 2003). Law and order are measures of two factors: the law component developed by the ICRG assesses the strength and impartiality of the judicial system, and the order assesses popular observance of the law through the rate of crime (Howell, 2011). Each element is scored from zero to three, with zero representing high risk.

4.2.3 Internal conflict

Cartels and other groups may use anti-state violence to influence government policy through non-violent and violent forms of lobbying and corruption (Lessing, 2012). Cartels expend resources to influence legislation through bribes but will turn to violent forms of lobbying when traditional bribes are no longer effective. Internal conflict measures the level of political violence within a state and its actual potential impact on governance (Howell, 2011). The variable is a sum of three sub components

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from the ICRG: civil war/coup threat, terrorism/political violence, and civil disorder; a high score (4) represents little to no risk and a low score (0) represents very high risk (Howell, 2011).

4.2.4 Repatriation

The World Bank estimates that corrupt leaders in undeveloped nations launder as much as US$40 billion each year and hide stolen assets in offshore financial centres (Mugarura, 2017). Countries with developed financial sectors have strong legal instruments to prevent the movement of illicit financial transactions at an international level (Mugarura, 2017). Repatriation derived from the ICRG is a measure of the extent to which profits can be transferred out of the host country. This can be inhibited by exchange controls, excessive bureaucracy, and undeveloped financial sectors (Howell, 2011). This variable will demonstrate the ease of fund movement within a country.

4.2.5 Governance indicators

To measure areas of government failure, we employ governance indicators from the ICRG. Failure to curb corruption can directly threaten the legitimacy and stability of political regimes (Dix *et al.*, 2012). An unstable political landscape threatens economic growth (Brunetti *et al.*, 1998). Government stability is the extent of the state's ability to carry out its declared programme and retain office. It is measured through the sum of government unity, strength, and popular support. The higher the rating, the lower the risk of instability within the government. This variable will be implemented as a causal variable within the systemic corruption model, as low government stability may suggest the presence of political favours within the country. Government cohesion, like government stability, is the measure of the extent to which the executive is united around the government's general policy goals. Zhu and Zhang (2017) have demonstrated that governments that maintain relatively stable leaderships promote secure predictable corruption which reduces hindrance to business in societies with serious corruption.

When the government system is inefficient and easily corrupted, corruption can be used to compensate various aspects of an ill-functioning bureaucracy. Agents may pay bribes to gain access to public services and resolve bureaucratic slowness, bypass tariffs, or gain special or extra-legal treatment (Justesen and Bjørnskov, 2014; Lui, 1985). Therefore, bureaucratic quality will be used to measure the presence of systemic corruption. This variable is a measure of institutional strength and quality of the bureaucracy in terms of political pressures (Howell, 2011).

Control of the legislature is the most lucrative political asset in question, as it confers influence over the legislative process and influence upon political outcomes (Kaufmann and Vicente, 2011; Yadav, 2012). Cartels access the legislative process through bribery and violent lobbying to move policy in their favour (Lessing, 2012). Legislative strength will be used to model the ability of the government to realise its policy agenda (Howell, 2011). Weak governments are subject to numerous forms of illegal and legal political tactics when interest groups lobby for policy change (Yadav, 2012). This measure assigns each country a score of 1–4, with a higher score representing a strong legislature that can execute its policy goals.

Transparency and political accountability can help control political corruption. Better citizen monitoring of public officials can deter them from engaging in corruption (Arnold, 2012). The ICRG measures democratic accountability as whether there are fair elections within a state and how responsive the government is to its people (Howell, 2011). Governance is categorised by ICRG into alternating democracy, dominated democracy, de-facto one-party state, de jure one-party state, and autarchy/autocracy (Howell, 2011). A high rating represents low risk, as the country has a sufficient level of democratic accountability, whereas a low rating represents a high risk.

4.2.6 Socioeconomic conditions

Socioeconomic conditions and corruption do not have a clear-cut relationship; therefore, it will be used as a causal and indicative variable in both the RS and SC model. Low socioeconomic conditions can cause high levels of RS and SC. Members of lower socioeconomic groups tend to pay more bribes

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to access public services normally not available, and then they turn to rent seeking corruption to increase their economic status when traditional labour pays poorly (Justesen and Bjørnskov, 2014). Traditional rent seeking corruption diverts funds away from government programmes, creating income inequality, limiting economic growth, and therefore limiting poverty reduction (Gupta *et al*., 2002). This variable will be taken from the ICRG, which provides a measure of the socio-economic pressures present within society that restrict government action or create social dissatisfaction.

5. Results

The estimation results of the SEM for systemic and rent seeking corruption are presented in Table 1, reported as standardised coefficients of causes and indicators focusing on systematic corruption and rent seeking. Estimates are obtained through MLMV. The goodness of fit shows an acceptable fit for most of the specifications. If the model fits the data perfectly and the parameter values are known, the sample covariance matrix equals the covariance implied by the model (Buehn and Schneider, 2012). The root mean squared errors of approximation (RMSEA) indicate a good fit as they are close to 0.08 in most specifications. A measure of 0.08 is a good fit and a measure of 0.05 represents an extremely good fit. To ensure robustness, multiple tests were performed and can be found in our supplementary material.

Not all variables were included in the rent seeking and systemic models, as some variables were deemed inappropriate for the type of corruption in question; thus, to limit the number of variables used in each model, we focused on the definition of corruption being assessed. Variables that were related to – or could cause – market failures and inefficient government systems were allocated to the Systemic (S) model, while variables that would lead to private gain, greed, or larger company profits were allocated to the Rent Seeking (RS) model. The model of systemic corruption purely focuses on government corruption or public sector corruption caused by market failures. The model of rent seeking corruption is focused on private and criminal corruption.

A pattern is immediately evident and repeats across most of the analysis; specifically, a directional duality of corruption between our Rent Seeking (RS) and Systemic (S) models. We observe a fairly robust and significantly positive effect of the variable on *Systemic Corruption*, but a significantly negative effect on *Rent Seeking Corruption*. This duality is observed in *Law and Order, Inflation*, *FDI*, and *Education*, and appears for *Socioeconomic Conditions*. The results provide strong supporting evidence for our hypothesis that corruption is not a singular construct; rather, it can be broken down into two distinctly separate actions with significantly different outcomes. Such a duality may also explain the conflicting empirical results in the literature.

As *Law-and-Order* increases, we start to see a reduction in *Rent Seeking Corruption* and a rise in *Systemic Corruption*. This finding is in line with general corruption literature, as it suggests that in order to curb rent seeking corruption, a country needs to strengthen its legal systems. While the strengthening of legal systems does appear to reduce rent seeking corruption, it also results in a slight increase of systemic corruption, which may suggest that by focusing on an area of anti-corruption policy, the government may actually be creating higher levels of systemic corruption: reallocating resources that have been traditionally used for other funding activities (e.g., socioeconomic activities) towards other activities (e.g., citizens may need to find alternative ways to help themselves). *Government Cohesion* is shown to be statistically significant in the systemic models but not in the rent seeking model. Countries with a strong legislative arm and government cohesion could efficiently pass public policy and as such, the public no longer needs to resort to bribery to access public services. Therefore, we can see that as *Government Cohesion* increases and starts to align with party goals, we not only have a reduction in *Rent Seeking Corruption* but also *Systemic Corruption*.

The duality of *Socioeconomic Conditions* may indicate that as socioeconomic factors improve, a shift from rent seeking towards systemic corruption is observed. As the population becomes more affluent, they no longer need to conduct rent seeking corruption activities, but if government efficiency does not improve, citizens may need to engage in systemic corruption to bypass inefficient services; a finding that is consistent with prior literature.

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Table 1. Estimates of Systemic (S) and Rent Seeking (RS) Corruption with MLMV

Latent variables	(1)	(2)	(3)	(4)
MLMV	S	S	RS	RS
Causes				
Foreign Pressure			**−0.15****	−0.06
			(0.06)	(0.06)
Law and Order	**0.18*****	**0.18*****	**−0.31*****	**−0.29*****
	(0.04)	**(0.03)**	**(0.05)**	**(0.04)**
Gov Stability	**0.45*****	**0.40*****		
	(0.12)	**(0.12)**		
Bureaucratic Qual	**0.65*****	**0.60*****		
	(0.03)	**(0.03)**		
Gov Cohesion	**−0.25*****	**−0.23****	−0.008	0.02
	(0.08)	**(0.09)**	(0.05)	(0.05)
Legislative Strength	−0.05	−0.004		
	(0.08)	(0.08)		
Repatriation			−0.06	**−0.14****
			(0.05)	**(0.06)**
Internal Conflict			**−0.34*****	**−0.42*****
			(0.06)	**(0.05)**
Indicators				
ICRG Corruption	**0.34*****		**−0.30*****	
	(0.03)		**(0.04)**	
TI Corruption		**0.79*****		**−0.77*****
		(0.03)		**(0.04)**
Inflation	**−0.27*****	**−0.33*****	**0.34*****	**0.39*****
	(0.04)	**(0.04)**	**(0.04)**	**(0.04)**
FDI	**0.69*****	**0.67*****	**−0.64*****	**−0.63*****
	(0.03)	**(0.04)**	**(0.03)**	**(0.03)**
Education	**0.81*****	**0.84*****	**−0.74*****	**−0.77*****
	(0.02)	**(0.02)**	**(0.03)**	**(0.03)**
Homicides			**0.57*****	**0.64*****
			(0.05)	**(0.04)**
Cement			**−0.51*****	**−0.52*****
			(0.04)	**(0.04)**
Unemployment			**−0.88*****	**−0.77*****
			(0.02)	**(0.03)**
GDP	**0.83*****	**0.86*****		
	(0.02)	**(0.01)**		

(*Continued*)

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Table 1. (*Continued.*)

Latent variables	(1)	(2)	(3)	(4)
MLMV	S	S	RS	RS
Democratic Accountability	**0.59*** **	**0.55*** **		
	(0.03)	**(0.03)**		
Socioeconomic Conditions	**0.55*** **	**0.55*** **	**−0.62*** **	**−0.59*** **
	(0.03)	**(0.03)**	**(0.04)**	**(0.04)**
Observation	936	936	936	936
Chi^2	731.56	577.63	1086.24	1,003.71
R^2	0.68	0.62	0.46	0.50
RMSEA	0.134	0.118	0.144	0.139

Notes: S, Systemic Corruption; RS, Rent Seeking Corruption; OIM Standard Errors in parentheses; *, **, *** denote 10%, 5% and 1% level of significance respectively.
The bold is showing where the results are statistically significant.

Table 2. Robustness of the Duality Observed

Core Duality Variables	Dem. Account. as Cause	Dem. Account. removed	Gov. Stab + Bureau. Qual. + Gov. Cohesion + Legis. Strength removed	Gov. Stab + Bureau. Qual. + Gov. Cohesion + Legis. Strength as Indicators
Law & Order	YES	YES	YES	YES
Inflation	YES	YES	YES	YES
Education	YES	YES	YES	YES
FDI	YES	YES	YES	YES
Socioeconomic	YES	YES	YES	YES
Conditions				

Notes: YES: Duality between systemic and rent seeking corruption observed. Latent variables MLMV. In line with Table 1 all the coefficients of the variables reported in Table 2 are statistically significant at the 1% level.

The decrease in inflation coupled with the rise in systemic corruption may demonstrate the effects of bribes on businesses. As bribing government officials becomes commonplace, business may choose to engage in systemic corruption rather than retreating underground (Al-Marhubi, 2000). This would result in a stabilisation or decrease in inflation as there is no longer a reliance on inflationary tax. In regions with under-developed financial markets, corruption has been shown to decrease revenue, leading to an increase in public spending. This has inflationary consequences on the economy and leads to a depression of investment (Al-Marhubi, 2000; Blackburn and Powell, 2011). This is demonstrated in our RS models where rising inflation is coupled with decreasing FDI within the region.

We also find that as *FDI* rises, systemic corruption also rises within Latin America, which is confirmed through current literature finding that government failings will encourage the use of bribes by firms attempting to win contracts, as they attempt to bypass bureaucratic slowness. We see *FDI* reduce within all rent seeking models, as it has been hypothesised that higher illegal activity deters *FDI*. It could also be hypothesised that violent lobbying and the presence of cartels deters public and private investment.

Previous literature has shown that as the education level of the population rises, corruption generally reduces (Cheung and Chan, 2008). While a decrease in *Rent Seeking Corruption* is not surprising, we see that *Systemic Corruption* rise as *Education* rises within Latin America. This finding could

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suggest that as the population achieves higher levels of formal education, they discover more efficient ways to bypass government failings when accessing services such as healthcare, welfare, and housing. The duality of education may suggest that there is a certain level of acceptable corruption within Latin America's culture.

As part of the analysis, we checked the robustness of the observed duality. Our robustness tests focused on systemic corruption, as previous literature has demonstrated that the variables used within our model could be either a cause or an indicator of ill functioning bureaucracy. First, we provide results where democratic accountability is used as a causal variable and then we remove the variable from the model. Next, we removed the governance variables of government accountability, bureaucratic quality, government cohesion and legislative strength from the model while finally adding them as indicators. Throughout these adjustments the duality observed for *Law & Order*, *Inflation*, *Education*, *FDI*, and *Socioeconomic Conditions* remained robust. In all systemic corruption specifications, those factors showed the opposite coefficient compared to the rent seeking specifications while remaining statistically significant at the 1% level. Thus, the results provide strong evidence of corruption's duality.

6. Conclusions

The current theoretical approaches to corruption offer differing results on how corruption effects a region. Recent literature has shown that there are issues within the interpretation of corruption and its policy implications. Our empirical analysis provides estimates of two types of corruption inferred from observable variables and explores the duality of corruption through SEM with a single latent variable. Our findings reveal evidence of two types of corruption within Latin America, one linked to greed and private gain, and another linked to government failings and inefficient public services.

The framework developed in this paper opens the door for future research to investigate corruption not as a singular edifice, but as a set of opposing behaviours. Based on our findings in Latin America, future studies could empirically test the possibility of duality within different regions such as Africa or Eastern Europe (e.g., during the transition period). If further studies are to be successful in proving potential insights on duality – and for further studies on corruption in general – scholars could consider the definition of, and the processes and causes that could lead to corruption within individual nations rather than taking a broad approach to measuring corruption.

As suggested by Hirschman, whenever one is describing opportunities for economic development, *local knowledge* can provide important insights in the micro-foundation of corruption. Understanding abilities that are hidden, or badly utilised – Hirschman (1958) advises looking for 'pressures' and 'inducement mechanisms' (p. 6) – may help to better harness the creative components of activity and entrepreneurship that often find their way into the informal sector.

Our study has several limitations and data seems to be an inherent issue when assessing corruption; thus, to truly assess the impact of corruption, one needs to look at the phenomena from a local, or less aggregated level, similar to the approach de Soto (1989, 2000) took in his studies. While data was taken from reputable sources, errors in recording and bias within the perceptions cannot be excluded. A promising empirical avenue would go beyond perceptions of corruption by directly measuring experiences with corrupt practices. For example, Seligson (2002) measured survey data respondents' experiences with corruption in four Latin American countries (e.g., stopped by a police officer and being asked to pay a bribe; being asked to pay an illegal fee to expedite a transaction at the municipal government, etc.). To take full advantage of such experiential data would require that such surveys would be conducted on regular basis across a large number of countries.

Moreover, data manipulation happens more frequently in countries with lower governance quality (Chan *et al.*, 2019). The MIMIC model is an expectational tool to hypothesise the effect of an unobserved latent variable using standard econometric methods. Corruption itself is a challenging construct, so the model's predictive power provides a new avenue of econometric analysis that has been used within the literature (Chen *et al.*, 2018; Cooray and Schneider, 2018; Dreher *et al.*, 2007;

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Frey and Weck-Hannemann, 1984). These papers have successfully used MIMIC to assess different aspects of corruption and the shadow economy through the use of latent variables where data has become unreliable.

It is important to consider different approaches when assessing corruption. For example, seeking insight on variables from disciplines such as anthropology allows corruption to be analysed from the point of view of the people concerned (Torsello and Venard, 2016). While the World Bank considers corruption to be a major challenge to combating extreme poverty and a hindrance to a country's development, their current policy position tends to focus on a relatively singular view of corruption in the public sector which may affect the success of their agenda. Our findings suggest the need to further think about the dual nature of corruption when designing anti-corruption policies. As shown by our results, depending on the variable assessed, it may have a positive or negative effect on corruption. Increasing the quality of education and socioeconomic conditions within a country is shown to reduce rent seeking corruption but may lead to an increase in systemic corruption if government services are not increased at the same ratio. As part of the Sustainable Development Goals, NGOs need to carefully assess how concerned they are with reducing rent seeking activities associated with corruption given that such practices hinder economic development in the long run, or whether they should focus on the low-level systemic corruption that allows citizens to access services otherwise smothered in inefficiency.

References

Ades, A. and R. DiTella (1999), 'Rents, Competition and Corruption', *American Economic Review*, **89**(4): 982–993.

Aidt, T. S. (2009), 'Corruption, Institutions, and Economic Development', *Oxford Review of Economic Policy*, **25**(2): 271–291. doi: 10.1093/oxrep/grp012.

Aidt, T. S. (2016), 'Rent Seeking and the Economics of Corruption', *Constitutional Political Economy*, **27**(2): 142–157. doi: 10.1007/s10602-016-9215-9.

Al-Marhubi, F. A. (2000), 'Corruption and inflation', *Economics Letters*, **66**(2): 199–202.

Ali, M. S. B. and S. Sassi (2016), 'The Corruption-Inflation Nexus: Evidence From Developed and Developing countries', *B.E. Journal of Macroeconomics*, **16**(1): 125–144.

Andriani, L. and R. Luca Bruno (2021), 'Introduction to the Special Issue on Institutions and Culture in Economic contexts', *Journal of Institutional Economics*, **18**(1): 1–14.

Ang, Y. (2020), *China's Gilded Age: The Paradox of Economic Boom and Vast Corruption*, Cambridge: Cambridge University Press. doi: 10.1017/9781108778350

Arnold, J. R. (2012), 'Political Awareness, Corruption Perceptions and Democratic Accountability in Latin America', *Acta Politica*, **47**(1): 67–90.

Bhuiyan, S. (2022), 'The Pandora Papers Opens up Pandora's Box: Integrity in Crisis', *Public Integrity*, doi: 10.1080/10999922.2022.2035945.

Blackburn, K. and J. Powell (2011), 'Corruption, Inflation and Growth', *Economics Letters*, **113**(3): 225–227.

Bracking, S. (2007), 'Political Development and Corruption: Why 'Right Here, Right Now!'?', in Sarah Bracking (ed.) *Corruption and Development: The Anti-Corruption Campaigns* (1st edn), London, N1 9XW UK: Palgrave Macmillan London, pp. 3–26.

Brunetti, A. and B. Weder (2003), 'A Free Press is bad News for Corruption', *Journal of Public Economics*, **87**(7–8): 1801–1824.

Brunetti, A., G. Kisunko and B. Weder (1998), ''Credibility of Rules and Economic Growth: Evidence From A Worldwide Survey of the Private Sector;', *The World Bank Economic Review*, **12**(3): 353–384.

Buehn, A. and F. Schneider (2012), 'Corruption and the Shadow Economy: Like Oil and Vinegar, Like Water and Fire?', *International Tax and Public Finance*, **19**(1): 172–194.

Chan, H. F., B. S. Frey, A. Skali and B. Torgler (2019), 'Political entrenchment and GDP misreporting', CESifo Working Paper No. 7653.

Charap, M. J. and C. Harm (1999), 'Institutionalized Corruption and the Kleptocratic State. International Monetary Fund', in C. Menard (ed.), *Institutions, Contracts and Organizations*, **99/91** vols, Edward Elgar, pp. 188–208.

Chen, H., F. Schneider and Q. Sun (2018), Size, Determinants and Consequences of Corruption in China's Provinces: The Mimic Approach, CESifo Working Papers 7175, July 2018, Munich, Germany. https://www.cesifo.org/DocDL/cesifo1_wp7175.pdf.

Cheung, H. Y. and A. H. W. Chan (2008), 'Corruption Across Countries: Impacts From Education and Cultural Dimensions', *The Social Science Journal*, **45**(2): 233–239.

Coase, R. (1988), 'Blackmail', *Virginia Law Review*, **74**: 655–676.

https://doi.org/10.1017/S1744137422000467 Published online by Cambridge University Press

Cooray, A. and F. Schneider (2018), 'Does Corruption Throw Sand Into or Grease the Wheels of Financial Sector Development?', *Public Choice*, **177**: 111–133.
Cotte Poveda, A. and J. Martinez Carvajal (2019), 'Economic Development, Political Violence and Socio-Political Instability in Colombia: An Econometric Analysis Using Panel Data', *European Research Studies Journal*, **22**(1): 237–253.
Cotte Poveda, A., J. E. Martínez Carvajal and N. Ronderos Pulido (2019), ''Relations Between Economic Development, Violence and Corruption: A Nonparametric Approach with DEA and Data panel', *Heliyon*, **5**(4).
Cuervo-Cazurra, A. (2008), 'Better the Devil you Don't Know: Types of Corruption and FDI in Transition Economies', *Journal of International Management*, **14**(1): 12–27.
Dell'Anno, R. and O. H. Solomon (2008), 'Shadow Economy and Unemployment Rate in USA: Is There A Structural Relationship? An Empirical Analysis', *Applied Economics*, **40**(19): 2537–2555.
de Soto, H. (1989), *The Other Path: The Invisible Revolution in the Third World*, New York: Harper & Row.
de Soto, H. (2000), *The Mystery of Capital: Why Capitalism Triumphs in the West and Fails Everywhere Else*, New York: Basic Books.
Dix, S., K. Hussmann and G. Walton (2012), 'Risks of corruption to state legitimacy and stability in fragile situations', U4 Issue, May 2012, No 3., U4 Anti-Corruption Resource Centre.
Dreher, A., C. Kotsogiannis and S. McCorriston (2007), 'Corruption Around the World: Evidence From A Structural Model', *Journal of Comparative Economics*, **35**(3): 443–466.
Duggan, M. and S. D. Levitt (2002), ''Winning Isn't Everything: Corruption in Sumo Wrestling'', *American Economic Review*, **92**(5): 1594–1605.
Feldman, I. (2018), 'Care and Suspicion: Corruption as Definition in Humanitarian relations', *Current Anthropology*, **59**(18): 160–S170.
Fisman, R. and E. Miguel (2008), *Economic Gangsters: Corruption, Violence and the Poverty of Nations*, Princeton, Oxford: Princeton University Press.
Frey, B. and H. Weck-Hannemann (1984), 'The Hidden Economy as an 'Unobserved Variable', *European Economic Review*, **26**(1–2): 33–53.
Gertler, P. J. (1988), 'A Latent Variable Model of Quality Determination', *Journal of Business and Economic Statistics*, **6**(1): 97–107.
Goldberger, A. S. (1972), 'Structural Equation Methods in the Social Sciences', *Econometrica*, **40**(6): 979–1001.
Gupta, S., H. Davoodi and R. Alonso-Terme (2002), 'Does Corruption Affect Income Inequality and Poverty?', *Economics of Governance*, **3**(1): 23–45.
Hillman, A. L. (2013), 'Rent seeking', in M. Reksulak, L. Razzolini and W. F. F. I. Shughart (eds.), *The Elgar Companion to Public Choice* (2nd ed.), Cheltenham: Edward Elgar, pp. 307–330.
Hirschman, A. O. (1958), *The Strategy of Economic Development*, New Haven: Yale University Press.
Hodgson, G. M. and S. Jiang (2007), 'The Economics of Corruption and the Corruption of Economics: An Institutionalist Perspective', *Journal of Economic Issues*, **41**(4): 1043–1061.
Howell, L. D. (2011), International Country Risk Guide Methodology. Retrieved July 17, 2020, from https://www.prsgroup.com/wpcontent/uploads/2012/11/icrgmethodology.pdf.
Huang, C. J. (2016), 'Is Corruption bad for Economic Growth? Evidence From Asia-Pacific countries', *North American Journal of Economics and Finance*, **35**: 247–256.
Huntington, S. P. (1968), *Political Order in Changing Societies*, New Haven: Yale Univerisity Press.
Inglehart, R. and M. Carballo (1997), 'Does Latin America Exist? (And is There A Confucian Culture?): A Global Analysis of Cross-Cultural Differences', *PS: Political Science & Politics*, **30**(1): 34–47.
Ivanov, K. (2007), 'The Limits of A Global Campaign Against Corruption', in Sarah Bracking (ed.), *Corruption and Development: The Anti-Corruption Campaigns* (1st edn), New York, NY: Palgrave MacMillan, pp. 28–46.
Joreskog, K. and A. Goldberger (1975), 'Estimation of A Model with Multiple Indicators and Multiple Causes of A Single Latent Variable', *Journal of the American Statistical Association*, **70**(351): 631–639.
Joreskog, K. and D. Sorbom (1996), *LISREL 8: User's Reference Guide*, Chicago, IL: SSI Scientific Software International.
Justesen, M. K. and C. Bjørnskov (2014), 'Exploiting the Poor: Bureaucratic Corruption and Poverty in Africa', *World Development*, **58**: 106–115.
Kaasa, A. and L. Andriani (2021), 'Determinants of Institutional Trust: The Role of Cultural Context', *Journal of Institutional Economics*, **18**(1): 1–21, doi: 10.1017/S1744137421000199.
Kaufmann, D. and P. C. Vicente (2011), 'Legal Corruption', *Economics and Politics*, **23**(2): 195–219.
Lambsdorff, J. G. (2002a), 'Making Corrupt Deals: Contracting in the Shadow of the Law', *Journal of Economic Behavior and Organization*, **48**(3): 221–241.
Lambsdorff, J. G. (2002b), 'Corruption and Rent Seeking', *Public Choice*, **113**(1–2): 97–125.
Lambsdorff, J. G. (2003), 'How Corruption Affects Productivity', *Kyklos*, **56**(4): 457–474.
Leff, N. H. (1964), 'Economic Development Through Bureaucratic Corruption', *The American Behavioral Scientist*, **8**(3): 337–341.
Lessing, B. (2012), The Logic of Violence in Criminal War: Cartel-State Conflict in Mexico, Colombia, and Brazil, PhD thesis in Political Science, University of California, Berkeley, Retrieved from https://escholarship.org/uc/item/03m9r44h.

Leys, C. (1965), 'What is the problem about corruption?' Journal of Modern African Studies,3, 215–230. Reprint in A.J. Heidenheimer, M. Johnston and V.T. LeVine (eds.), Political corruption: A handbook, 51–66, 1989. Oxford: Transaction Books.
Lui, F. (1985), 'An Equilibrium Queuing Model of Bribery', *Journal of Political Economy*, **93**(4): 760–781.
Mauro, P. (1995), 'Corruption and Growth', *Quarterly Journal of Economics*, **110**(3): 681–712.
Meon, P. G. and K. Sekkat (2005), 'Does Corruption Sand or Grease the Wheels of Economic Growth?', *Public Choice*, **122** (1): 69–97.
Mugarura, N. (2017), 'The War Against Corruption Is A Lost Cause Without Robust Measures to Repatriate Stolen Assets to Countries of Origin', *Journal of Anti-Corruption Law*, **1**(1): 53–69.
Muir, S. and A. Gupta (2018), 'Rethinking the Anthropology of Corruption: An introduction to Supplement 18', *Current Anthropology*, **59**(S18): 4–15.
Neapolitan, J. L. (1999), 'A Comparative Analysis of Nations with low and High Levels of Violent crime', *Journal of Criminal Justice*, **27**(3): 259–274.
Nur-tegin, K. and K. Jakee (2019), 'Does Corruption Grease or Sand the Wheels of Development? New Results Based on Disaggregated data', *Quarterly Review of Economics and Finance*, **75**: 1–12.
O'Donovan, J., H. F. Wagner and S. Zeume (2019), 'The Value of Offshore Secrets: Evidence From the Panama Papers', *The Review of Financial Studies*, **32**(11): 4117–4155. doi: 10.1093/rfs/hhz017.
Rose-Ackerman, S. (1999a), *Corruption and Government: Causes, Consequences and Reform*, Cambridge, UK: Cambridge University Press.
Rose-Ackerman, S. (2010), 'The Institutional Economics of Corruption', in G. de Graaf, P. von Maravić and P. Wagenaar (eds.), *The Good Cause: Theoretical Perspectives on Corruption* (1st edn), Opladen, Germany: Verlag Barbara Budrich, pp. 47–63. http://www.jstor.org/stable/j.ctvbj7k5p.8.
Rose, A. K. and M. M. Spiegel (2012), 'Cross-country Causes and Consequences of the 2008 Crisis: Early Warning', *Japan and the World Economy*, **24**(1): 1–16.
Saha, S. and K. Sen (2021), 'The Corruption–Growth Relationship: Does the Political Regime Matter?', *Journal of Institutional Economics*, **17**(2): 243–266.
Seligson, M. A. (2002), 'The Impact of Corruption on Regime Legitimacy: A Comparative Study of Four Latin American Countries', *Journal of Politics*, **64**(2): 408–433.
Shen, C. and J. B. Williamson (2005), 'Corruption, Democracy, Economic Freedom, and State Strength: A Cross-National Analysis', *International Journal of Comparative Sociology*, **46**(4): 327–345.
Simoes, A. (2020), Observatory of Economic Complexity. Retrieved January 23, 2020, from Cement website https://oec.world/en/.
Smart, A. (1993), 'Gifts, Bribes, and Guanxi: A Reconsideration of Bourdieu's Social Capital', *Cultural Anthropology*, **8**(3): 388–408.
Tanzi, V. (2000), P*olicies, Institutions and the Dark Side of Economics*, Edward Elgar.
Torgler, B. (2005), 'Tax Morale in Latin America', *Public Choice*, **122**(1–2): 133–157.
Torsello, D. and B. Venard (2016), 'The Anthropology of Corruption', *Journal of Management Inquiry*, **25**(1): 34–54.
Transparency International (2020), What is Corruption? Retrieved January 23, 2020, from https://www.transparency.org/what-is-corruption.
Truex, R. (2011), 'Corruption, Attitudes, and Education: Survey Evidence From Nepal', *World Development*, **39**(7): 1133–1142.
Wedeman, A. (2012), *Double Paradox: Rapid Growth and Rising Corruption in China* (1st ed.), Cornell University Press. http://www.jstor.org/stable/10.7591/j.ctt7zdcv.
World Bank. (2018), Combating Corruption. Retrieved January 23, 2020, from World Bank Breif website https://www.worldbank.org/en/topic/governance/brief/anti-corruption.
World Bank. (2020a), GDP per capita (current US$). Retrieved July 14, 2020, from World Bank Data website https://data.worldbank.org/indicator/NY.GDP.PCAP.CD.
World Bank. (2020b), Inflation, GDO deflator (annual %). Retrieved August 14, 2020, from The World Bank Open Data website https://data.worldbank.org/indicator/NY.GDP.DEFL.KD.ZG.
World Bank. (2020c), Foreign direct investment, net inflows (BoP, current $US). Retrieved January 23, 2020, from The World Bank Open Data website https://data.worldbank.org/indicator/BX.KLT.DINV.CD.WD.
World Bank. (2020d), School enrollment, gender parity index. Retrieved from The World Bank Open Data website https://data.worldbank.org/indicator/SE.ENR.PRIM.FM.ZS.
World Bank. (2020e), Intentional Homicides (per 100,000 people). Retrieved from The World Bank Open Data website https://data.worldbank.org/indicator/VC.IHR.PSRC.P5.
Yadav, V. (2012), 'Legislative Institutions and Corruption in Developing Country Democracies', *Comparative Political Studies*, **45**(8): 1027–1058.
Zhu, J. and D. Zhang (2017), 'Does Corruption Hinder Private Businesses? Leadership Stability and Predictable Corruption in China', *Governance*, **30**(3): 343–363. doi: 10.1111/gove.12220.

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