

IMF STAFF DISCUSSION NOTE

Corruption: Costs and Mitigating Strategies

Staff Team from the Fiscal Affairs Department and the Legal Department

May 2016

SDN/16/05

INTERNATIONAL MONETARY FUND

Fiscal Affairs and Legal Departments

Corruption: Costs and Mitigating Strategies

Prepared by a Staff Team from the Fiscal Affairs Department and the Legal Department¹

Authorized for distribution by Vitor Gaspar and Sean Hagan

DISCLAIMER: Staff Discussion Notes (SDNs) showcase policy-related analysis and research being developed by IMF staff members and are published to elicit comments and to encourage debate. The views expressed in Staff Discussion Notes are those of the author(s) and do not necessarily represent the views of the IMF, its Executive Board, or IMF management.

JEL Classification Numbers: D73, E02, F33, G18, H5, O4, O19

Keywords: Corruption, Governance, Growth, IMF, Institutions

¹ This SDN was prepared by staff supervised by Sanjeev Gupta (FAD) and Ceda Ogada (LEG), comprising a team led by Bernardin Akitoby (FAD) and including Aiko Mineshima, Anja Baum, Jeff Danforth, Salvatore Dell’Erba, Enrique Flores, Andrew Hodge, and Chawoong Lee; with contributions from Olamide Harrison, Rossen Rozenov, Veronique Salins, and Rene Tapsoba (FAD) and Paul Ashin, Alessandro Gullo, Chady El Khoury, Kyung Kwak, Emmanuel Mathias, Sebastiaan Pompe, and Concha Verdugo Yepes (LEG). The authors thank staff members from other IMF departments, Daniel Kaufmann, Robert Klitgaard, and Paulo Mauro for their very helpful comments and suggestions. They also thank Kyungla Chae, Juan Farah Yacoub, and Jonathan Lee (FAD), and Jonathan Pampolina (LEG) for excellent research assistance; and Patricia Quiros, David Thirkill, and Maria Tramuttola (FAD) for production assistance.

CONTENTS

EXECUTIVE SUMMARY	iii
I. INTRODUCTION	2
II. DEFINITIONS AND MANIFESTATIONS	3
III. THE ECONOMIC AND SOCIAL COSTS OF CORRUPTION	5
IV. CORRUPTION: MITIGATING STRATEGIES	15
V. CONCLUSION	27
BOXES	
1. Suspension of IMF Lending Due to Corruption Concerns—Recent Examples	16
2. Selected Areas of IMF Support for Institution Building	25
FIGURES	
1. Corruption-Growth Nexus	6
2.A Corruption and Tax Revenues	7
2.B Corruption and VAT C-Efficiency	7
3. CPI Inflation and Corruption Perception Index	9
4. Public Investment Efficiency and Corruption Perception Index	10
5. Emerging Market Sovereign Spreads and Corruption Perception Index	11
6.A Corruption and Ease of Starting a Business	12
6.B Corruption and Ease of Importing Goods	12
APPENDICES	
1. Corruption and Tax Revenues	28
2. Evolution of the IMF's Policies on Governance Issues	30
3. Evolution of AML/CFT Policies toward Addressing Corruption	32
APPENDIX TABLE	
1. Regression Results	29
References	34

EXECUTIVE SUMMARY

Addressing corruption has become increasingly urgent. This sense of urgency arises in an environment where growth and employment prospects in many countries remain subdued and a number of high profile corruption cases have fueled moral outrage. It also arises because there is a growing consensus that corruption is macro-critical, as it can seriously undermine inclusive economic growth. The urgency is global in nature since corruption is a problem that affects both developed and developing countries.

This paper focuses on corruption that arises from the abuse of public office for private gain. Although corruption is often understood as being transactional in nature (a bribe being the typical example), it can also be manifested by powerful networks between business and government that effectively result in the privatization of public policy.

Corruption can undermine the state's ability to deliver inclusive economic growth in a number of different areas. When government functions are impaired, it can adversely affect a number of important determinants of economic performance, including macro financial stability, investment, human capital accumulation, and total factor productivity. Moreover, when systemic corruption affects virtually all state functions, distrust of government can become so pervasive that it can lead to violence, civil strife, and conflict, with devastating social and economic implications.

While designing and implementing an anti-corruption strategy requires change on many different levels, the Fund's own experience in assisting member countries suggests that several elements need to be given priority. These include transparency, rule of law, and economic reform policies designed to eliminate excessive regulation. Perhaps most importantly, however, addressing corruption requires effective institutions. While building institutions is a complex and time consuming exercise that involves a number of intangible elements that may seem beyond the reach of government policy, the objective is clear: the development of a competent civil service that takes pride in being independent of both private influence and public interference.

I. INTRODUCTION

In some recent global opinion surveys, corruption has been identified as one of the “most important problems facing the world today.”² Major corruption scandals are currently front-page news around the globe. For example, the recent Panama Papers underscore how opaque corporate vehicles can be used to hide the profits of illicit behavior, including tax evasion, corruption and sanctions evasion.³ At a time of rising inequality in income and wealth, there is moral outrage that the rich and powerful are abusing the system to their own advantage. In several countries, citizens have taken to the streets and are sending a powerful signal to their leaders that they can no longer tolerate corruption. For example, according to press reports, public dissatisfaction with widespread corruption was an important factor that motivated the Arab Spring and the fall of the regime in Ukraine in 2014.

To a varying degree, corruption afflicts economies at all stages of development. Indeed, certain advanced economies score worse on perceptions of corruption than some developing countries.⁴ Corrupt behavior leads to suboptimal economic performance wherever they are present. During times of global growth, this drag on performance may be less noticeable, especially in high-income countries. But when global growth is constrained, as it is now, this cost of corruption garners more attention.

The heightened public attention has led to a renewed emphasis on corruption issues within the international community. For example, at its October 2015 Annual Meetings in Lima, Peru, the IMF hosted a seminar on corruption in the public sector. In its November 2015 communiqué, the G20 emphasized that fighting corruption can support growth and resilience. Moreover, the April 2016 communiqué of the International Monetary and Financial Committee (IMFC) highlighted the importance of global cooperation in combating corruption and improving governance as critical to achieving sustainable and inclusive growth.

In this context, the SDN is staff’s initial step to contribute to the ongoing discussion on corruption by highlighting its macroeconomic relevance and some of the strategies that have been undertaken to combat it. First, based on the literature and country experience, it outlines a framework to explain the economic and social costs of corruption, illustrating how corruption

² 2013 World Independent Network/Gallup International annual survey covering 65 countries. Broadly similar results have been found in other surveys (BBC 2010, and Pew Research Center 2014, which covered between 26 and 34 countries, respectively). The World Economic Forum’s 2016 Global Risks Report ranks “Failure of national government (e.g., failure of rule of law, corruption, political deadlock, etc.)” as the sixth-highest global risk in terms of likelihood.

³ The Panama Papers refer to unprecedented leaked documents on offshore companies set up through the Panamanian law firm Mossack Fonseca.

⁴ Transparency International’s corruption perception index for 2010–14 suggests that although developing countries in general face a worse perception of corruption, the phenomenon is also prevalent in advanced economies, where the bottom 15 percent of economies are ranked lower than the top 15 percent of developing countries.

weakens the state’s capacity to perform its core functions, ultimately undermining potential and inclusive growth. Second, the note highlights experiences and lessons learned from a range of countries, drawing on the IMF’s unique perspective of helping its members design and implement economic reforms, including corruption-mitigating strategies.

This note does not make an assessment of the effectiveness of the Fund’s policy on governance, including corruption. As requested by the IMFC in its April 2016 communiqué this issue will be taken up in the context of a review of the Fund’s 1997 policy on governance, including corruption. Under that policy, the IMF has long taken the position that good governance in the public sector—including the avoidance of corruption—has a positive impact on economic efficiency, macroeconomic stability, and sustainable growth in its member countries (IMF 1997).

The remainder of this note is organized as follows. Section II sets the stage by defining corruption and its manifestations, focusing on the public sector. Section III discusses the economic and social costs of corruption, taking into account as noted above, both the literature and country experience. Section IV discusses the IMF’s experience with corruption and draws some lessons regarding mitigating strategies. Section V concludes.

II. DEFINITIONS AND MANIFESTATIONS

Defining corruption in a comprehensive way is difficult both because corrupt behavior varies and because it is generally concealed from public view. Among the most widely accepted definitions in the literature—and one that will be relied on for the purposes of this note—is “the abuse of public office for private gain.” It is a definition used by a diverse range of public institutions and civil society organizations, including the World Bank and Transparency International. It is also consistent with the provisions of the United Nations Convention against Corruption.⁵

The definition relied on in this note focuses on abuse by public actors. Accordingly, the definition does not cover fraudulent acts perpetrated exclusively by private citizens that do not involve public officials. This exclusion, however, does not mean that private sector behavior is not relevant to a diagnosis of the problem or the formulation of an anti-corruption strategy. While some forms of corruption involve public officials acting on their own (for example, theft and embezzlement), corruption, including most notably bribes, often involves a private sector actor. Accordingly, any effective anti-corruption strategy must entail measures designed to change the behavior not only of public officials but also of the private citizens with whom they interact.

⁵ *Article 19 on abuse of functions* states that “Each State Party shall consider adopting such legislative and other measures as may be necessary to establish as a criminal offence, when committed intentionally, the abuse of functions or position, that is, the performance of or failure to perform an act, in violation of laws, by a public official in the discharge of his or her functions, for the purpose of obtaining an undue advantage for himself or herself or for another person or entity.”

Under this definition, an act can be corrupt even if it does not result in financial gain for the public official. For example, an official contributes to corruption if, as result of political interference, he or she abuses public office. The key determinant is whether the decision is made for reasons other than those identified as relevant by the legal or administrative framework that the public official is responsible for administering. Thus, corruption may arise when an official awards a procurement contract to a company because the company is owned by a family member. It is the influence of these extraneous factors—whether financial or of another nature—that gives rise to the abuse of public office.

Moreover, although corruption is often associated with perverse application of the law, it may also pervert the lawmaking process itself. There may be circumstances in which legislators are so beholden to private interests that their legislative decisions are motivated solely by these interests—rather than the public interest. This represents a classic form of “state capture.” Indeed, it has been noted that in some countries corruption has become so pervasive that it is no longer characterized by specific transactions but by powerful networks between business and government, resulting in the privatization of public policy.

The impact of corruption on the ability of the state to carry out its functions increases as it becomes more systemic and acute. No society is immune to isolated acts of corruption, whether they occur at the “petty” (bureaucratic) or “grand” (political) level. However, in some circumstances corruption is no longer a deviation from the norm, but is manifested in a pattern of behavior so pervasive and ingrained that it becomes the norm. In these situations, the state’s ability to carry out its basic functions—such as raising revenue, supplying public goods and services (including security), regulating markets, and acting as an agent of society’s redistributive goals—can become sufficiently undermined that it is likely to have a significant impact on economic performance.

The corrosive impact of corruption can take various forms. As will be described in the following section, the various ways in which economic performance can be adversely affected depend on the type of state function undermined. Importantly, experience demonstrates that, in the extreme, economies can be adversely affected by the civil strife and domestic conflict that can arise when a society has lost confidence in the government’s ability to discharge its responsibilities in a competent and impartial manner.

III. THE ECONOMIC AND SOCIAL COSTS OF CORRUPTION

The costs of corruption are substantial. Although these costs are hard to measure properly, a sense of the size of this phenomenon can be gauged from bribes paid every year in both developing countries and advanced economies. A recent estimate put the annual cost of bribery alone at about \$1.5 to \$2 trillion (roughly 2 percent of global GDP).⁶ The overall economic and social costs of corruption are likely to be even larger, since bribes constitute only one aspect of the possible forms of corruption.

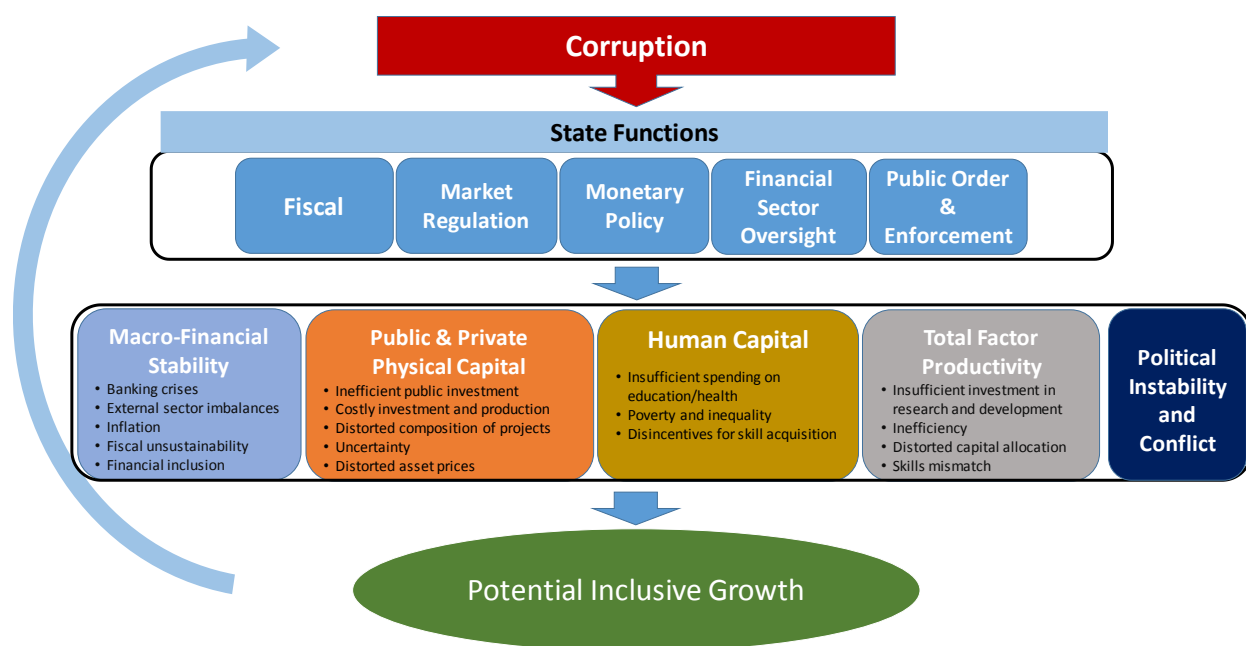
As will be described in this Section, corruption affects inclusive growth, that is, growth whose benefits are widely shared across the population. Empirically it is difficult to establish a direct causal relationship between corruption and growth. However, most studies using perception-based measures of corruption have concluded that it hurts growth through a variety of channels.⁷ Difficulties arise from measurement challenges, such as varied understanding of the term “corruption,” differences between perceived and actual levels of corruption, and problems associated with aggregating various indices.

Corruption has significant negative effects on key channels that affect growth (Figure 1). This is confirmed by ample empirical evidence, as well as IMF staff experience. As noted above, corruption breeds public distrust in government and weakens the state’s capacity to perform its core functions. The more corruption interferes with these functions, the more it distorts policies and their implementation. Depending on its pervasiveness, corruption affects some or all drivers of potential and inclusive growth, such as macro-financial stability, public and private investment, human capital accumulation, and total factor productivity. Low rates of inclusive growth can also lead to increased incidence of corruption, creating a negative feedback loop that can become self-fulfilling and long lasting.

⁶ This estimate for 2015 is an extrapolation by Daniel Kaufmann based on his earlier estimate of \$1.1 trillion in Kaufmann (2005).

⁷ For example, see Mauro (1995, 2004), Dreher and Herzfeld (2005), Blackburn, Bose, and Haque (2006), and Arnone and Iliopoulos (2007). Recent studies using a meta-analysis approach (for example, Ugur and Dasgupta 2011; Campos, Dimova, and Saleh 2010; Ugur 2014) show that corruption has a negative effect on per capita GDP growth, even after controlling for possible biases in the underlying empirical analyses. Ugur and Dasgupta (2011) find that a one-unit improvement in the perceived corruption index can lead to an increase of 0.59 to 0.86 percentage point in the growth rate of per capita GDP, depending on the sample of countries analyzed.

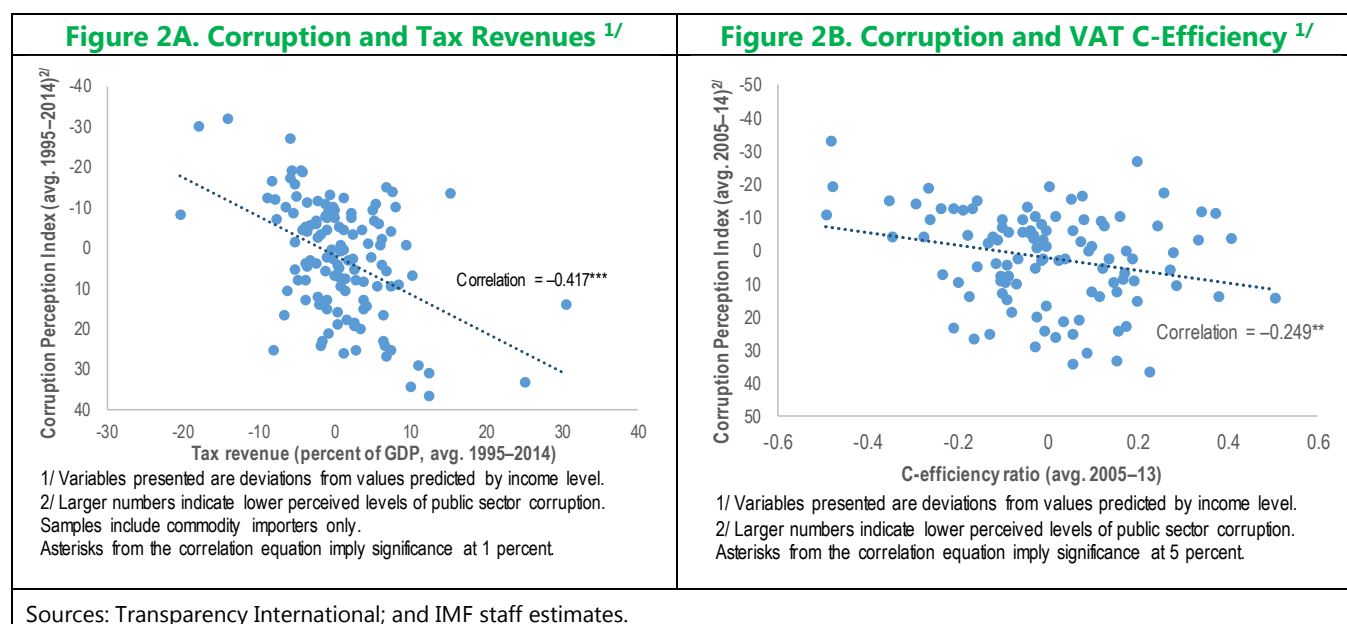
Figure 1. Corruption-Growth Nexus



Corruption affects core government functions, which . . .

. . . **can weaken the state's capacity to tax, leading to lower revenue collection** (Tanzi and Davoodi 2002a; Besley and Persson 2014). Widespread corruption harms the culture of compliance, thereby increasing tax evasion. This is suggested by the negative association between corruption and the collection of tax revenues (Figure 2A) (Aghion and others 2016; IMF 2011a; IMF 2015a). While compliance data are not available for all taxes, it is part of the measure used to gauge the efficiency of the value-added tax (VAT) (the C-efficiency ratio).⁸ Recent data compiled by the IMF for 108 countries show that there is a strong correlation between a low C-efficiency and high corruption (Figure 2B). New econometric analysis reported in Appendix 1 shows that an improvement in corruption perception from the median to the 75th percentile is associated with higher revenues of 0.8 percentage point of GDP.

⁸ The C-efficiency ratio for the VAT compares the actual VAT revenue with the potential revenue when a uniform rate would apply to all consumption. A shortfall of the former (that is, a ratio less than 1) is influenced by both VAT design and compliance.



... **creates disincentives for taxpayers to pay taxes.** When tax exemptions are perceived to be the product of a bribe, the public becomes far less willing to comply with the tax laws, which are perceived as unfair. The Panama Papers bring into focus the scope of global financial secrecy and the potential it creates for tax evasion and other criminal activities. Tax evasion, like corruption, contributes to inequality and to perceptions of unfairness—undermining citizens’ trust in their governments. The distrust in the administration also discourages entrepreneurs from starting new businesses in the formal economy, further eroding the revenue base (Dreher and Herzfeld 2005).

... **reduces the impetus for the state to collect taxes.** In highly corrupted, aid-dependent countries, the incentive to mobilize domestic revenues can be lower, particularly for those taxes considered more efficient, such as the VAT (Benedek and others 2014). Recent IMF research suggests that even conditionality under IMF-supported programs—which generally has a positive impact on revenue performance—becomes ineffective in countries with high corruption (Crivelli and Gupta 2016). In addition, states that fail to raise significant revenue are unable to build institutions that support economic activity, resulting in negative feedback (Besley and Persson 2014). Recent IMF research suggests that once the tax-to-GDP ratio reaches 12¾ percent, real GDP per capita increases sharply (Gaspar, Jaramillo, and Wingender 2016).⁹

... **and undermines spending programs.** This can take many forms, including cost inflation and distorted budget allocation. Weak expenditure controls, off-budget transactions, and lack of oversight were behind recent financial integrity failures in sub-Saharan Africa. The systems

⁹ Gaspar, Jaramillo, and Wingender (2016) explain that despite the threshold effect at a tax-to-GDP ratio of 12¾ percent, countries should strive to remain above the 15 percent level in order to avoid frequent reversals.

compromised by corruption included payroll controls (Ghana), computerized public financial management systems (Malawi), and procedures for defence procurement (Mali). Inflated public procurement costs have been an issue in advanced economies as well. A 2013 study noted that corruption raised the costs of a public project by 13 percent on average in eight European states.¹⁰ Leakages in public spending programs are likely to be severe in military and large-scale public investment, as procurement costs can be easily inflated (Arnone and Iliopoulos 2007).

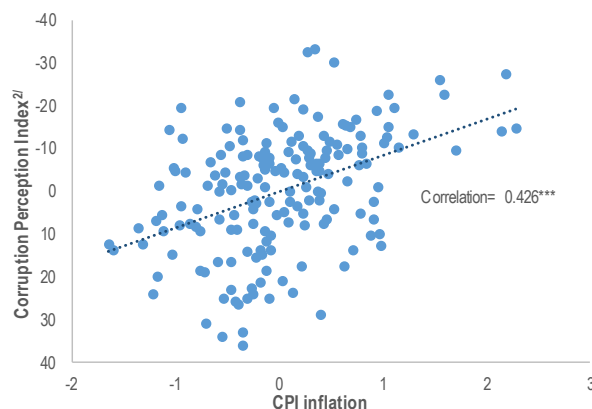
The combined effects of wasteful public spending and lower revenue can result in large fiscal deficits and substantial debt accumulation (Kaufmann 2010; Ivanyina, Mourmouras, and Rangazas 2015). In an environment of high corruption and high public debt, a country can be trapped in a vicious circle of corruption and fiscal profligacy, ultimately leading to a debt crisis (Achury, Koulovatianos, and Tsoukalas 2015). A 2012 Transparency International report on the European Union argues that corruption played a role in the euro area's fiscal and debt crisis, because some countries had serious shortcomings in public sector accountability and deep-rooted problems of inefficiency and malfeasance. Poor tax compliance is viewed as one of the factors behind the ongoing deep fiscal crisis in Greece (IMF 2013).

The influence of corruption on other government functions can . . .

. . . **hinder formulation and implementation of sound monetary policy.** As corruption erodes the state's ability to collect revenue, the government becomes more reliant on seigniorage finance (Blackburn and others 2008). This can lead to fiscal dominance, undermining the independence and credibility of the central bank in conducting monetary policy (Huang and Wei 2006; Cavoli and Wilsom 2015; Ben Ali and Sassi 2016). As a result, inflation tends to be higher in countries with higher corruption (Figure 3).

¹⁰ Seven of the countries are EU member states—France, Hungary, Italy, Netherlands, Poland, Romania, and Spain. The eighth country is Liechtenstein (PwC 2013).

Figure 3. CPI Inflation and Corruption Perception Index ^{1/}
(Average for 1995-2014)



Source: IMF staff estimates, Transparency International

^{1/} Variables presented are deviations from values predicted by income level.

^{2/} Larger numbers indicate lower perceived levels of public sector corruption.

Asterisks from the correlation equation imply significance at 1percent.

. . . discourage financial development and inclusion. Corrupt countries tend to have lower deposits from the public and less credit to the private sector, both of which are associated with financial sector development and inclusion (Detragiache, Gupta, and Tressel 2005). This arises from the fact that a weakened state is unable to address policy distortions that hinder financial development and inclusion.

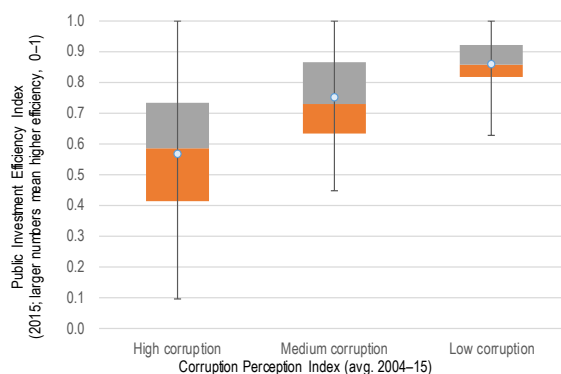
. . . weaken financial oversight and stability. At the same time, corrupt lending practices, weak banking supervision, and regulatory forbearance can threaten the stability of the financial system (Kane and Rice 2000). A rising share of nonperforming assets in the portfolio of the banking sector can diminish its ability to advance credit with a significant impact on growth and poses fiscal risks to the government's budget. Extensive fraud at Afghanistan's Kabul Bank and the Kyrgyz Republic's Asia Universal Bank revealed major institutional weaknesses that damaged the credibility of banking supervision (IMF 2010b; 2011b). Certain forms of regulatory capture in advanced economies, such as an expectation of a future job for a regulator in a regulated firm, may have played a role in the systemic failures of oversight, regulation, and disclosure during the 2008 global financial crisis (Kaufmann 2009). More generally, through high-level bribery and influence peddling, powerful financial companies can bend the regulatory, policy, and legal institutions for their private benefit.

. . . and undermine the recovery of debts or enforcement of claims. Corruption can be a major factor weakening the enforcement of claims and the recovery of debts. It negatively affects payment culture and increases market distrust, reducing access to credit and increasing transaction costs.

Poorly functioning government institutions affect the drivers of potential and inclusive growth by . . .

. . . **increasing the cost and lowering the quality of public investment.** Corruption can distort the selection of public investment projects through bribery, rent seeking and cronyism (Tanzi and Davoodi 2002a). As noted earlier, it can lead to inflated costs due to inadequate procurement processes, resulting in poor investment outcomes. This undermines efforts to reduce infrastructure gaps and boost growth (Del Monte and Papagni 2001). It could also imply inadequate allocations for nonwage expenditure, such as operations and maintenance, thereby affecting the productivity of the existing infrastructure. Countries with higher corruption tend to have relatively lower infrastructure access and quality for a given level of public capital stock (Figure 4).¹¹

Figure 4. Public Investment Efficiency and Corruption Perception Index



Source: IMF staff estimates

Note: The samples are grouped into high, medium and low corruption in equal numbers based on the Corruption Perception Index. The lines show the range of efficiency for each group. The orange and gray boxes are the second and third quartile (from the bottom) of the samples, thus they cover 50 percent of the countries.

. . . **reducing private investment.** High levels of corruption discourage private investment. For example, the bribes necessary to obtain a license act as a tax on a firm's investment decisions. Corruption raises firms' uncertainty¹²—how likely it is to obtain the license by paying the bribe—which can be particularly problematic when seeking to access a foreign market. In fact, corruption has been shown to reduce foreign direct investment, a strong promoter of growth in recipient countries.¹³

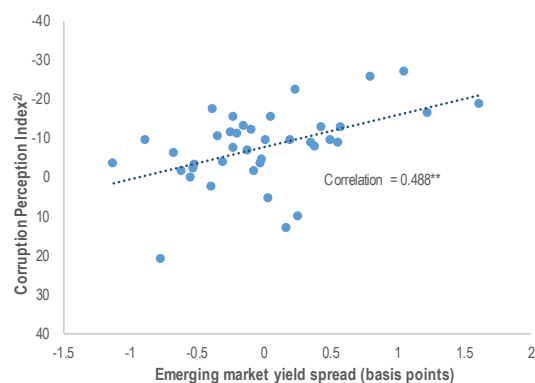
¹¹ The Public Investment Efficiency (PIE) indicator estimates the relationship between the public capital stock and indicators of access to and the quality of infrastructure assets. Countries are given a PIE score of between 0 and 1, based on their vertical distance to the frontier relative to peer best performers. The less efficient the country the greater the distance from the frontier, and the lower its PIE score (IMF 2015c).

¹² Campos, Lien, and Pradhan (1999) show that while high levels of corruption deter investment, the negative effect diminishes with higher corruption certainty.

¹³ See, for example, Wei (2000), Busse and Hefeker (2007), Al-Sadig (2009), Woo and Heo (2009), and Godinez and Liu (2015). High levels of corruption in the recipient country have recently been found to deter investment not only from similarly corrupt countries but also from less corrupt (and by association, more economically advanced) jurisdictions (Zurawicki and Habib 2010).

... **harming countries' access to international credit markets.** Countries with higher levels of perceived corruption tend to have a higher default risk, thereby raising their borrowing costs (Akitoby and Stratmann 2010; Butler, Fauver, and Mortal 2009; Connolly 2007) (Figure 5). For example, evidence of corruption in Petrobras contributed to a series of credit downgrades of Brazil by the three major global credit-rating firms since December 2015.

**Figure 5. Emerging Market Sovereign Spreads and Corruption Perception Index^{1/}
(Average for 1995-2014)**



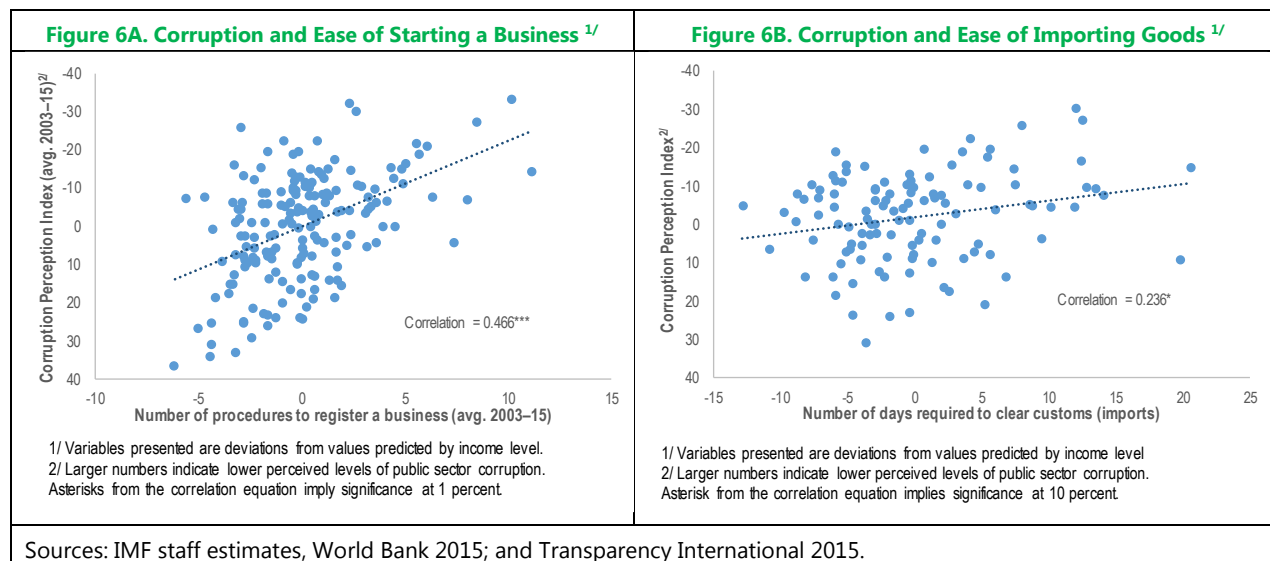
Source: IMF staff estimates, Reuters Datastream

1/ Variables presented are deviations from values predicted by income level.

2/ Larger numbers indicate lower perceived levels of public sector corruption.

Asterisks from the correlation equation imply significance at 5 percent.

... **and stifling productivity and reforms.** Corruption can distort resource allocation from productive to rent-seeking activities, leading managers to focus less on increasing firms' productivity (Baumol 1990; Murphy, Shleifer, and Vishny 1991; Dal Bó and Rossi 2007). It can give an unfair advantage to incumbent firms by acting as a barrier to entry (Campos, Estrin, and Proto 2010). Where corruption flourishes, innovation suffers, and a firm's productivity is harmed (De Rosa, Gooroochurn, and Görg 2010; Paunov 2016). More productive firms will leave the market because of the higher cost of doing business as a result of corruption (Hallward-Driemeir 2009).



Improving government institutions has been an important component of structural reforms recommended by the IMF. Since an overly regulated economy provides opportunities for bribes, there is a strong incentive to delay economic reforms in a highly corrupt environment (Svensson, 2005). Indeed, measures of corruption tend to be highly correlated with indicators that measure the ease of doing business, such as the number of days it takes to start a business or the number of days needed to process imports (Figure 6).¹⁴ The IMF has often advised its members to improve their business climate by focusing, for instance, on reducing the regulatory burden (Brazil, Greece, Hungary) and improving transparency (Ukraine), which are seen as enhancing growth.

Corruption is linked to poor social and environmental outcomes as reflected by . . .

. . . **limited buildup of human capital.** Public spending on education and health is lower in corrupt systems because spending allocations are made partly to allow corrupt officials to generate “commissions” (Mauro 1998).¹⁵ Young people may have weaker incentives to invest in education in corrupt countries if career success depends largely on who you know, rather than on personal merit. These factors suggest a negative relationship between human capital and corruption. In addition, systemic corruption can promote emigration, especially of better-educated people, depriving a country of talent, with adverse implications for long-term growth (IMF 2016).

¹⁴ See Djankov and others (2002), and Madani and Licetti (2010). Alaimo and others (2009) find evidence that in Latin America, the easier it is to comply with regulations, the less likely that a firm will be asked to pay a bribe.

¹⁵ In addition, military spending is susceptible to corruption because of secrecy and a lack of transparency (Gupta, de Mello, and Sharan 2001).

... **poor education and health indicators.** In particular, child mortality rates in countries with high corruption are about one-third higher than in countries with low corruption; infant mortality rates and the share of low-birthweight babies are almost twice as high, and dropout rates are five times as high (Gupta, Davoodi, and Alonso-Terme 2002). This partly reflects less effective public spending on social sectors in countries with more corruption (Rajkumar and Swaroop 2008).

... **inefficiencies in the provision of social services.** Corrupt behavior can distort the allocation of funding within health and education systems. In the mid-1990s, the first public expenditure tracking survey (PETS) in Uganda revealed that during 1991–95 on average only 13 percent of government education grants reached schools (Reinikka and Svensson 2004). More recently, a PETS in Tanzania in 2009 found that about 37 percent of money intended for education was lost (Bold and others 2011). Social sectors are affected not only by leakages, but also by pervasive absenteeism of critical workers. Absenteeism may reflect a corrupt workplace culture that tolerates poor work performance. For instance, in India, a randomized experiment put the rate of teacher absenteeism at 35 percent (Duflo and others 2007). The use of government-funded programs to extend benefits to relatively wealthy population groups or the siphoning of funds from poverty alleviation programs, including generalized subsidies by well-connected individuals, diminishes the impact of social programs on income distribution and poverty (Gupta, Davoodi, and Tiongson 2002).

... **an increased pollution and natural-resource depletion.** Countries with higher corruption tend to have more pollution measured as per capita emissions of sulfur dioxide and carbon dioxide (Cole 2007),¹⁶ which could be explained by weaker environmental regulations that are poorly enforced in corrupt regimes (Pellegrini and Gerlagh 2006; Welsch 2004). In addition, where corruption is prevalent, bribes are used to secure licenses that allow for over-extraction of natural resources, such as through fishing and logging (Shaxson 2008; OECD 2012).

Women tend to be disproportionately affected by corruption. Women tend to spend more time in unpaid labor, such as caring for sick family members or fetching water, and thus feel the impact of corruption on poor service delivery more acutely (UNIFEM 2008; Chêne, Clench, and Fagan 2010). They are also more likely to be affected when bribes take the form of sexual activity or when corruption precipitates illegal practices that affect them more severely, such as human trafficking and prostitution.

¹⁶ Damania, Fredriksson, and List (2003) find theoretical and empirical evidence to suggest that the effect of trade liberalization on environmental policy is contingent on the level of corruption: the greater corruption, the larger the impact of trade liberalization on the environment.

In addition, systemic corruption can . . .

. . . **trigger political instability.**¹⁷ Corruption affects not only the use of state power, but also the application of rules, laws, and regulations and in the extreme begins to shape their formation. This fundamentally undermines trust in government's impartiality. State legitimacy may become so eroded that civil strife and domestic conflict emerge as the main form of domestic politics. In such cases, the classical concept of state ceases to apply. As already observed, public anger at widespread corruption was perceived by many as one of the factors behind the Arab Spring, resulting in violence and serious economic damage in some instances (Vogl 2012). Recent corruption scandals in Brazil and Guatemala illustrate how the investigations regarding the siphoning of public funds can destabilize the political system. This increases uncertainty for economic agents and has a negative impact on investment and consumption decisions.¹⁸

. . . **promote greed and grievances by different segments of society, leading to conflict.**

Governments that reward their supporters by exploiting others can bring to the fore grievances by the affected, weaker groups. Corruption can further fuel economic grievances through its negative impact on social spending and its contribution to inequality (see above). The possibility of political conflict rises with perceptions of inequality (Gurr 1970). By eroding confidence in the rule of law as a conflict resolution mechanism, widespread corruption may encourage citizens to resort to violence. For instance, when elections are rigged or constitutional and judicial processes are corrupted, both the ruling group and the opposition are likely to use violence to defend or assert their position (Le Billon 2003; Atoubi 2007).

. . . **and fuel greed rebellion in countries rich in non-renewable natural resources.**¹⁹ Countries rich in non-renewable natural resources have higher corruption levels than similar countries with fewer resources (Leite and Weidmann 2002). They tend to be more prone to conflicts as a result of competition for the control of resources.

The short-term economic costs of political unrest can be significant, even though there may be positive institutional change in the long term. No country is immune to these economic costs, but each country has its own unique experience with corruption. Even where corrupt behaviors do not rise to the systemic level, they still lead to suboptimal economic performance by affecting many key determinants of economic performance, particularly tax and legal capacity. Institutions form intricate and complex clusters, which evolve slowly over time and shape rules, perceptions and expectations, organizations, norms, and patterns of behavior. All of these affect economic prospects well beyond the direct effects of monetary, fiscal, and financial policies. Systemically corrupt

¹⁷ See for example Chayes (2015), who explores the link between corruption, political instability, security threats, and political violence.

¹⁸ See Alesina and others (1996), Jong-A-Pin (2009), Aisen and Veiga (2013), and Alesina and Perotti (1996).

¹⁹ If greed rebellion turns into civil war, it can generate staggering economic and social costs. By the end of a typical civil war, incomes are on average 15 percent lower than they otherwise would have been, and about 30 percent more people live in absolute poverty (Collier and others 2003, Collier and Hoeffler 2004).

economies can achieve an equilibrium state, but that equilibrium is very likely to be suboptimal—especially from the perspective of inclusive growth. When that equilibrium is disrupted, the immediate economic outcome may be negative. It is therefore incumbent on reformers and those who support them to take advantage of the circumstances to implement strategies to move to less corruption and more stability over the long term.

IV. CORRUPTION: MITIGATING STRATEGIES

Given the demonstrable costs associated with corruption, it is not surprising that much has been written on how to design and implement an effective anti-corruption strategy. While there is a divergence of views in a number of areas, there appears to be a general consensus on several points.

First, an effective strategy requires a holistic and multifaceted approach, albeit one that is appropriately prioritized and sequenced, depending on country-specific circumstances. For example, while it is important to take steps to change the incentive structure, including through a credible threat of prosecution, it is equally important to recognize that the kind of behavioral change required—especially in the case of systemic corruption—must be grounded in a core system of social values.

Second, expectations must be managed according to the implementation horizon of many anti-corruption reforms. While an anti-corruption law can be adopted quickly, it will be credible only if it is enforced by effective institutions, which inevitably require more time to develop. Changing institutions cannot be achieved simply by government regulation—it requires a transformation of existing individual behavior and values, which may be ingrained and long standing. Even so, some countries have made significant progress in addressing corruption in a relatively short time through targeted measures, such as a system for public officials to report their wealth.

Third, reforms of a preventive nature can be equally effective. Some reforms may be focused specifically on addressing existing corruption (for example, establishment of an anti-corruption commission). Yet there are other measures that, while more general in nature, can have a powerful preventive effect—for example, in the area of transparency.

Fourth, there are significant challenges to measuring corruption and the success of anti-corruption strategies. Most of these come down to a number of points widely identified in the literature: the hidden nature of corruption (UNDP 2008),²⁰ which results in definitional variances even in heavily used indices (Hawken and Munck 2009; Heywood and Rose 2014), and consequently a heavy reliance on perceptions (Galtung 2006; Urrea 2007; Apaza 2009).

²⁰ Studies do not agree on what needs to be fixed.

This section seeks to distill a number of lessons from IMF experiences working with its members in this area. The IMF gained these experiences from the application of the 1997 governance policy, described in greater detail in Appendix 2. In many cases, the IMF's involvement has taken the form of specific recommendations made in the context of either its technical assistance to member countries (which is voluntary) or its surveillance of members' economies under Article IV of the IMF's Articles of Agreement (which is mandatory). In a more limited set of cases, the introduction of anti-corruption measures was made a condition for the use of IMF resources; that is, these measures formed part of IMF conditionality. In those cases, corruption had become so acute that the IMF determined that the economic reform program supported by IMF financial resources would not be successful without credible anti-corruption measures (Box 1). The following sections review the IMF's experience in four areas—transparency, enhancing the rule of law, economic reform and regulation, and building institutions. These four strategies can be applied to all the channels identified in the previous section on economic and social costs.

Box 1. Suspension of IMF Lending Due to Corruption Concerns: Recent Examples

The 1997 governance policy provides for suspension of IMF financing because of poor governance, including corruption, if it could have significant macroeconomic implications that threaten successful program implementation or casts doubt on the purposes for which IMF resources are used. Recent cases in which the IMF has suspended lending, in part due to governance and corruption issues, include Ukraine and Malawi.

Ukraine (February 2016): "I am concerned about Ukraine's slow progress in improving governance and fighting corruption, and reducing the influence of vested interests in policymaking. Without a substantial new effort to invigorate governance reforms and fight corruption, it is hard to see how the IMF-supported program can continue and be successful. Ukraine risks a return to the pattern of failed economic policies that has plagued its recent history. It is vital that Ukraine's leadership acts now to put the country back on a promising path of reform." Statement by the Managing Director on Ukraine, Press Release No. 16/50, February 10, 2016, available at <https://www.imf.org/external/np/sec/pr/2016/pr1650.htm>.

Malawi (November 2013): "The policy reforms initiated in May 2012 have produced positive results. However, recent revelations that substantial amounts of public funds have been misappropriated through fraudulent transactions using the government's financial management system, introduced considerable uncertainty to the economic outlook. Aside from the direct loss through theft, external financial assistance to the budget was placed at risk. Development partners became reluctant to disburse funds into government systems they viewed as insecure. With fiscal buffers already weakened by excessive borrowing in the first quarter of FY2013/14, and with an emerging large fiscal gap, the IMF decided to delay completion of the third Extended Credit Facility (ECF) review until the fiscal situation could be clarified and necessary corrective measures put in place." Statement at the Conclusion of an IMF Mission to Malawi, Press Release No. 13/458, November 20, 2013, available at <https://www.imf.org/external/np/sec/pr/2013/pr13458.htm>.

Transparency

Although transparency is a general prerequisite for the proper functioning of the market, it is also a core component of an effective anti-corruption policy. Transparency plays a critical role in ensuring the efficient allocation of resources by allowing the market to evaluate and impose discipline on government policy, and by increasing the political risk of unsustainable policies (Kopits and Craig 1998).

In addition to these important functions, transparency can play a key role in preventing corruption and promoting good governance. By providing the public with access to information relating to government decisions and financial transactions, transparency can effectively deter illicit behavior. Indeed, a number of studies demonstrate a positive correlation between corruption and the lack of public budget transparency. The more transparent the budget in a given country, the less corrupt the country is perceived to be (Renzio and Wehner 2015; Sedmihradská and Haas 2013).²¹

Considerable work has been done in developing best practices with respect to transparency and accountability in key economic areas. The IMF promotes compliance with international standards aimed at enhancing transparency and accountability in twelve policy areas of its core competence. These include data dissemination, fiscal policy, and monetary and financial policy.²² Some of these codes and best practices are particularly powerful deterrents to corrupt practices. The IMF has published eleven fiscal transparency evaluations (FTEs), including on Finland, Ireland, Bolivia, and the Philippines. Some broad themes that emerge from these FTEs include the coverage of institutions, the credibility of budgets, and fiscal risk reporting. For example, public financial activity that takes place outside the budget process (“off budget or extra-budgetary”) can be especially vulnerable to corruption. Consolidating off-budget revenues and expenditures into the budget—as called for by the IMF’s Fiscal Transparency Code—can make a real difference to the integrity of public finances. For instance:

- Based on the IMF’s advice, the Government of Gabon broadened the scope of the budget to incorporate off-budget funds and state-owned enterprises.
- On public financial management more generally, with IMF support, a number of EU member countries (for example, the Baltic states, the Czech Republic, and Poland) have significantly

²¹ Transparency also supports accountability. By reporting on how they are achieving their assigned specific mandates and tasks, public officials and institutions enable oversight mechanisms to be more effective and allow the public to hold them accountable. The credibility achieved from transparency and accountability in turn lead to enhanced public understanding and, it is hoped, support for government policies.

²² Participation in the standards is broad: for instance as of the end of April 2016, 184 countries participated in the data dissemination (110 in the Enhanced General Data Dissemination System (e-GDDS), 64 in the Special Data Dissemination Standard (SDDS), and 10 in SDDS-plus; these are figures as of the end of April 2016, and 93 countries published their results under the Code on Fiscal Transparency. For data dissemination, see the SDDS, e-GDDS, and the SDDS Plus. For fiscal policy transparency, see the Fiscal Transparency Code, part of the IMF’s Fiscal Transparency Initiative. So far, 10 countries (Bolivia, Costa Rica, Finland, Ireland, Mozambique, Peru, Philippines, Portugal, Romania, and Russia) have published the outcome of their Fiscal Transparency Evaluations. For monetary and financial policy transparency, see the Code of Good Practices on Transparency in Monetary and Financial Policies.

improved their corruption perception scores, including, among other things, by strengthening their public financial management systems, which approach international best practices in some or several dimensions.

- The Philippines' transparency perception scores have also improved since the implementation of the recommendations arising from the IMF's Fiscal Transparency Evaluations, including by enhancing the government's fiscal risk statement to incorporate government guarantees, publishing updated reports on tax expenditures, and improving fiscal reporting.
- On enhancing accountability, the IMF has assisted Burundi's and Guinea's supreme audit institutions in improving their oversight of government finances.

Given the experience, priority should be given to greater transparency in extractive industries.

An Organization for Economic Co-operation and Development (OECD) study reveals that, relative to other economic activity, these industries are the greatest contributor to the bribery of foreign government officials (OECD 2014). Not only are the potential size of the "profits" enormous and the complexity of the underlying contractual arrangements complex, but ownership of mineral wealth in many countries is also monopolized by state-owned enterprises with governance structures open to political interference.

For these reasons, the IMF has directed technical assistance to promoting transparency in the extractive industries,

notably by developing the *Guide on Resource Revenue Transparency* and expanding its Fiscal Transparency Code to add a pillar on the sector. The IMF has recently applied the new pillar to Peru and Tanzania as pilot cases. In addition, the multi-stakeholder Extractive Industries Transparency Initiative (EITI) has now been successfully promoting transparency in this difficult sector for 10 years with reports that reconcile company payments with government receipts. A template recently developed by the IMF permits gathering of EITI data in a format consistent with that of the IMF's *Government Finance Statistics Manual 2014*. The EITI now has 51 implementing countries, of which 31 comply with EITI requirements.

The IMF has at times employed conditionality in its lending to introduce targeted disclosure measures.

For example, as part of an IMF-supported program, Indonesia required its government officials to declare their wealth on an annual basis. The system is administered by the Anti-Corruption Commission, which also has enforcement powers. Moreover, excerpts of the reports are publicly accessible, which has become an added incentive for compliance.²³ In Mali, IMF conditionality specifically contained a number of transparency measures designed to address corruption, including the auditing of off-budget transactions (and the publication of these audits), cancellation of contracts that were determined to be tainted by corruption, and more rigorous implementation of budget and procurement rules.

²³ The compliance rate increased from 56 percent (2006) to 85 percent (2009), in part because advancement (and sometimes recruitment) is made dependent on it (World Bank 2013).

The recent revelation of the Panama Papers demonstrates the central role that transparency can play in fighting corruption. The papers revealed the use of companies and trusts to hide the beneficial owners of these assets and mentioned people, including high public officials from countries at all stages of economic development—advanced and emerging market economies as well as low-income countries. Although it has not yet been determined whether the corporate vehicles and other arrangements in question established in Panama and elsewhere held the proceeds of corruption, the opacity of such vehicles (for example, the use of trusts and nominee directors and shareholders) undoubtedly makes it easier for public officials to disguise criminal schemes. Fortunately, through the anti-money-laundering (AML) framework put in place by the Financial Action Task Force (FATF), international standards now require minimum levels of transparency concerning the beneficial owners of such companies and trusts. However, many jurisdictions—not just Panama—have failed to fully implement this standard. One benefit of this recent revelation is that it is likely to put greater pressure on countries to implement reforms in this area.

Enhancing the Rule of Law

Beyond its role in economic growth and societal development, the predictable and effective enforcement of a legal framework is critical for an anti-corruption strategy. A credible threat of criminal prosecution of public officials who engage in corrupt acts and confiscation of their ill-gotten assets can serve as a powerful deterrent. Indeed, experience demonstrates that the prosecution of even a small number of senior officials (“big fish”) sets an example that can transform behavior (Klitgaard 1991). However, in countries where the problem of corruption is particularly acute, the key challenge is that the very institutions charged with enforcing the law—investigative agencies, the police, the public prosecutor, and the judiciary—are themselves corrupt or beholden to powerful interests. They are part of the problem, not the solution. In these circumstances, a number of countries have sought to put in place—sometimes with IMF support—specialized institutions that can prosecute corruption while longer-term reforms of the traditional law enforcement institutions are implemented. In practice, these institutions have typically been retained—even after improvement of the mainline institutions—because of their specialized skills. Examples of jurisdictions that have introduced such institutions include Indonesia, Kenya, Latvia, Lithuania, Queensland and New South Wales (Australia), as well as Ukraine.²⁴

Effective enforcement of the legal framework depends on the probity, integrity, expertise, and independence of those who are charged with running these institutions. For example, one reason for the credibility of Indonesia’s Anti-Corruption Commission—with a track record of high-profile prosecutions—is that, at the outset, it was able to attract members of civil society who had been critical of corrupt practices and had a reputation for integrity, competence, and

²⁴ See OECD (2013). The basic models for these institutions are the Singapore Corrupt Practices Investigation Bureau (established in 1952), and the Hong Kong Independent Commission against Corruption (established in 1974).

independence.²⁵ Moreover, sustained support from civil society and the media for the Commission, working closely with reform elements within the government, did much to maintain that success and credibility.²⁶ While it is still too early to meaningfully assess the anti-corruption bureau established under Ukraine's current IMF-supported program, a major source of contention has been the resistance to allowing civil society experts to play a role in its establishment (IMF 2014a, IMF 2015e).

IMF experience shows that the AML framework is an increasingly important tool for fighting corruption. Because the proceeds of corruption are often laundered in order to avoid detection or confiscation, an effective AML framework can contribute to both prosecuting and deterring corruption. Under international standards, AML frameworks should require heightened scrutiny of financial transactions conducted by “politically exposed persons,” adequate transparency of company ownership, and credible specialized institutions such as financial intelligence units.

An illustration of the effective use of the AML framework is “Operation Malaya” in Spain, where the framework helped identify many companies established to launder the proceeds of corruption. Ultimately, a number of officials, lawyers, and other intermediaries were convicted and approximately €520 million in criminal fines was imposed (FATF 2014). Where such frameworks are weak, as in Ukraine, corrupt leaders can transfer large amounts of ill-gotten funds abroad, including through commercial banks that they control and through offshore corporate vehicles (Government of Ukraine 2014). The IMF is providing assistance to Ukraine to address the risks of laundering the proceeds of corruption.

Concerns regarding de-risking serve as a powerful incentive for countries to put in place credible AML frameworks. Failure to do so may result in a country's financial institutions losing correspondent banking relationships with banks in major financial centers that are concerned about sanctions and fines in their own jurisdiction, if they maintain relationships with banks elsewhere whose standards are lax.²⁷ As described in greater detail in Appendix 3, given the impact that money laundering can have on the financial system, the IMF has devoted considerable resources to support members' efforts to strengthen their regimes in this area, both in design of the legal framework and the enhancement of institutional capacity.

²⁵ The Commission was established in 2002 under an IMF-supported program and continues to operate today. It is highly respected and has successfully indicted a large number of senior officials, including a chief justice, a governor, and 4 deputy governors of the central bank, 8 ministers, and 45 members of parliament, as well as judges, prosecutors, ambassadors, and a number of chief executive officers of public companies. It recently indicted the Speaker of the House (2016). See also OECD (2013), pp. 91–94.

²⁶ That support was general, through social mobilization, but at times it was also specific and concrete: early attempts to starve the anti-corruption court through deliberate and protracted delays in salary payments were overcome by mobilization of funding by civil society.

²⁷ For instance, in the case of the island of Niue, it is reported that major global banks banned transactions with the island in January 2001, after its listing as a non-cooperative jurisdiction by the FATF. When Niue was delisted in 2002 after making improvements in its AML framework, it regained access to the international financial system.

Enforcement should also target the private sector. After all, for every bribe taken by a public official, there is a bribe given. A holistic anti-corruption strategy should therefore include measures directed at the private sector. This two-sided nature of corruption is the goal of the OECD Convention on Combating Bribery of Foreign Public Officials in International Business Transactions of 1999. Consistent with this convention, all OECD members, and a number of non-OECD members, now have laws that criminalize not only bribing domestic public officials but also foreign public officials. Such laws were first adopted in the United States with the 1977 Foreign Corrupt Practices Act. Very large fines, regularly in the hundreds of millions of U.S. dollars, are imposed on companies found to be in violation. More generally, criminal (and sometimes civil) sanctioning mechanisms against corrupt businesses and leaders have increased significantly in recent years.²⁸

Economic Reform

The elimination of excessive regulation can both facilitate economic growth and impede corruption. There is considerable research evidence that market restrictions facilitate rent-seeking activities, particularly when restrictions require government approval based on the exercise of discretion by the official who has the authority to grant approval (Krueger 1974; Ades and Di Tella 1999; Johnson, Kaufmann, and Ziodo-Lobaton 1997). For this reason, the streamlining of regulatory approval (including through the use of technology) can play an important role, at least where the exercise of discretion is not essential. For instance, computerized processing of documents can strengthen integrity significantly in key areas, such as customs services (Crotty 2010).²⁹

The IMF's own experience confirms the important relationship between corruption and excessive regulation. For example, a diagnostic study conducted by the Ukrainian authorities with IMF staff assistance concluded that the complex and unclear legal framework regulating business activity was one of the root causes of corruption, offering public officials the opportunity to extort bribes from businesses and to raid corporate assets under cover of law. Streamlining, simplifying, and clarifying the framework in order to improve efficiency and certainty and reduce corruption and thereby improve the business climate are an important element of the Ukraine's IMF-supported program (Government of Ukraine 2014; IMF 2014a). In a recent report on small island economies, the IMF staff concluded that the liberalization of labor and products markets will reduce transaction costs associated with corruption (Greenidge, McIntyre, and Yun 2016). The same conclusions were

²⁸ Countries are progressively expanding the legal concept of "standing" to permit individual recourse (or recourse by anti-corruption nongovernmental organizations, as in France) against corrupt businesses and individuals, as is illustrated by recent private court cases filed in France against three heads of state to seize their assets in France and in Switzerland and against a Swiss firm for gold smuggling. The private sector can also take a role in shaping the architecture of anti-corruption institutions and cases through public interest litigation.

²⁹ An IMF regional project in the eastern Caribbean promotes a reduction in discretionary and nondiscretionary tax exemptions for tourism investments, which should help curb corruption. As part of the initiative, Grenada has reduced discretion in the granting of tariff concessions and income tax breaks for new investments. Jamaica has eliminated discretionary waivers: the tax exemptions given at the sole discretion of the finance minister. Similarly, in Bolivia, Côte d'Ivoire, and Uruguay, implementation of an automated risk management system in customs is underway, enabling customs officers to select cargo for inspection based on objective data.

reached in a recent report on the Indian economy (Anand and Khera 2016). Similarly, mediocre growth in the Middle East and central Asia was attributable in part to corruption, which, in turn, was rooted in large patronage-ridden state-owned enterprises, complex business regulations and tax codes, and bureaucratic red tape (Mitra and others 2016).

However, as important as the elimination of excessive regulation is to growth and to combating corruption, it can pose its own risks, particularly where the institutional framework is underdeveloped. The transition from a monopolistic to an open market presents particular challenges, particularly where the institutional framework is underdeveloped. For example, the rapid transition of the economies of eastern Europe in the 1990s involved, among other things, a massive sell-off of state-owned assets. The sales generally occurred in an oversight vacuum: the traditional statist controls had effectively disintegrated, but new institutions and regulations had not yet taken full effect and failed to ensure, among other things, full transparency. In this environment, the uncontrolled sale of assets often reconstituted some aspects of the cartels or monopolies of the old statist regimes and, accordingly, the corruption attached to them (Kaufmann and Siegelbaum 1996; Tanzi 1998, 1999). In some countries, these new dominant market players were able to effectively capture state institutions and shape regulations and institutions to protect their interests (Hellman and Kaufmann 2001).³⁰

Building Institutions

As has become clear, the elements of an anti-corruption strategy are only as strong as the institutions that supports them. Institution building supports all three elements discussed above—transparency, rule of law, and effective regulation. A credible threat of prosecution for corrupt acts requires investigative agencies, police, prosecutors, and judges who are not themselves corrupt. Efforts to streamline and automate aspects of the regulatory approval process are important, but there will always be areas in which the exercise of discretion by officials is essential, whether it be by a judge deciding a case or a bank supervisor assessing the soundness of a bank. A key objective is to develop a cadre of competent public officials who are independent of both private influence and political interference—and are proud of this independence. This note does not attempt to distill the considerable body of literature regarding the ingredients necessary to develop effective institutions.³¹ However, taking into account both this literature and the IMF's own experience, the

³⁰ In the 1990s, the process for former Soviet republics or other nonmarket states to transition to open-market economies was not as self-evident as it may now appear in hindsight. There was a strong view that proceeding with privatization even before adequate oversight mechanisms were in place was precisely to prevent corrupt officials from taking advantage of the control vacuum. The aim was to couple rapid privatization with a dispersion of ownership, thus achieving an efficient equilibrium after a turbulent transitional period. In some countries, this approach was successful (Poland).

³¹ Institution building is a rich field of research going back decades. Starting with institution-building theories for newly independent states in the 1960s and 1970s (for example Esman 1966), it moved to building institutions in weak (Somalia), post-conflict (Balkans, Iraq), and in transitional economies (Eastern Europe). The approach before the 1990s was largely process oriented, with an emphasis on restoring and expanding existing institutions and simple technical training. This largely failed: the enhanced institutions retained their previous flaws. Consequently, more recent approaches are results based, with an emphasis on soft skills, aspirational and professional values, and integrity and accountability measures.

following observations can be made.

First, there should be a clear legal framework that establishes the institution, defines its objectives, and gives it the attributes it needs to be effective. While a robust legal framework is not a sufficient condition to ensure the effectiveness of institutions, it is a necessary one. The essential elements of a legal framework include clarity regarding the institution's mandate, which consists of its objectives and functions and its powers to achieve them; clear governance and oversight and an accountability structure; operational and financial autonomy (including adequate funding); eligibility criteria for appointments and clear and transparent rules and procedures for dismissal. The framework should provide legal protection for key institutions (such as central banks, tax authorities, and certain specialized agencies) and their officers and staff from liability for actions taken and for omissions while discharging their duties in good faith and in accordance with the law. The IMF has considerable experience advising members on establishing such legal frameworks, particularly in the context of central banks. Jurisdictions in which legal reforms in these areas have been enacted with IMF advice include Burundi, Macedonia, Tunisia, and Ukraine (on central banking); Serbia (on bank resolution); Moldova (on legal protection of banking supervision); and Rwanda (on both central banking and supervision) (Box 2).

Second, it is important for officials to possess technical expertise. A judge with jurisdiction over a case that involves the reorganization of a business whose debtors and creditors have different interests must adequately understand the domestic insolvency system. An official working on the implementation of a country's AML framework must have the capacity to assess the data received from financial institutions to determine whether there is sufficient evidence to justify referral to the public prosecutor's office. The IMF, along with other international organizations, has been active in providing technical assistance and training in such areas. For instance, in Kuwait, IMF staff assisted in the establishment of the government's financial intelligence unit and development of its strategy and internal tools, including the information technology tools and a manual for employees. IMF staff provided extensive training on financial analysis and international cooperation to the financial intelligence unit management and staff.

Third, the incentives for non-corrupt behavior must be designed and implemented in a balanced manner. While it is important that officials understand that corrupt behavior will be prosecuted, there should also be some tangible benefits associated with professionalism, that is, the use of sticks must be balanced by the availability of carrots. Selective wage increases for high-skilled workers (for example, regulators and revenue administrators) can diminish the incentive to take bribes, and can be part of an anti-corruption strategy. Indeed, in some respects, corruption becomes inevitable when public officials cannot earn a living wage. Research supports the relationship between increases in wages and improvements in corruption-perception indicators, particularly in low-income countries (Van Rijckeghem and Weder 2002). However, any increase in remuneration needs to be transparent and merit based so as not to be perceived merely as an instrument of political patronage. Moreover, studies show that an increase in remuneration will have little effect unless accompanied by clear signals that public officials will lose their job if they are caught

engaging in corrupt acts. The IMF has supported increases in public salaries as part of an anti-corruption approach.

Fourth, when strengthening institutions, the role of leadership should not be underestimated.

Particularly when corruption is acute, leadership—including at the political level—can play a vital role in changing attitudes and behavior. If incoming ministers send a clear no-tolerance signal regarding corruption in their ministries, it can have a real impact. The actions of Indonesia’s minister of finance (2005–10) provide a useful example of how leadership can make a difference: shortly after her appointment she removed the heads of the tax and customs services and replaced the entire customs service of the Port of Jakarta, which sent a powerful signal. These agencies had been perceived to be among the most corrupt in Indonesia. Moreover, when a political leader sets the tone from the top through a modest lifestyle and professional dedication, such behavior can accelerate reform, as was demonstrated by Lee Kuan Yew’s actions in Singapore, which was rife with corruption at the time it gained independence in 1965.

Box 2. Selected Areas of IMF Support for Institution Building

Central Banking: The IMF assists institution building in central banks by providing support to establish clear mandates through design of objectives, functions, and powers; appropriate governance arrangements, with a clear allocation to decision-making bodies of responsibilities pertaining to daily management, policy setting, and oversight; ensuring sound internal controls and providing for checks and balances within and between the various decision-making bodies, supported by rules of conduct and integrity upheld by these bodies; functional, personal, and financial autonomy, ensuring that political bodies do not unduly hamper the execution of the central bank's functions, that central bank officials are autonomous from political and private economic interests, and that the central bank has sufficient financial resources to fulfill its mandate; and explicit and robust *accountability and transparency mechanisms vis-à-vis* the relevant political bodies and the public at large, including through the publication of periodic reports and of audited and certified financial statements prepared according to accepted audit and financial reporting standards. The IMF's safeguards assessment policy has also had a significant impact on strengthening governance and audit and control frameworks of central banks, including through its focus on transparency and effective oversight arrangements. Timely publication of central banks' financial statements prepared and audited in accordance with international standards is the cornerstone of safeguards requirements, and indeed there has been a significant shift toward transparent financial reporting by central banks.

Anti-Money Laundering: The IMF's work in the area of prevention of money laundering covers policy advice, capacity development, and the assessment of compliance with international standards. This work builds and strengthens institutions across a broad spectrum of activities, including financial intelligence, legislative drafting, national strategies, risk assessments, and the supervision and regulation of bank and nonbank entities. The IMF aims to embed financial integrity principles and practices into government ministries and central banks across the globe. Working closely with the Financial Action Task Force and its regional bodies, the IMF promotes adherence to international standards and has achieved significant success in helping countries make a transition from, or avoid, sanctions and the black- and gray-listing process. Recent cases include Latin America, where the presidents of Costa Rica, Paraguay, Peru, and Uruguay endorsed and promoted the national anti-money-laundering strategy developed with the IMF. Similarly, in Ghana, Myanmar, Nepal, and Sudan, the IMF's work directly assisted these countries' movement off the gray list.

Financial Sector Assessment Program (FSAP). On financial sector issues, the Fund adopted the Financial Sector Assessment Program (FSAP) in 1999 to help countries assess vulnerabilities in the financial sector and identify the needs for corrective actions, including on institutional and governance issues.³² Since the adoption of FSAPs, the Fund has conducted numerous FSAP exercises and, more recently, during the 2014 FSAP Review found its experience with FSAP exercises satisfactory.³³ In September 2010, the IMF made it mandatory for 25 jurisdictions with systemically important financial sectors to undergo financial stability assessments under the FSAP every five years.³⁴

Public Financial Management: The IMF provides advice to strengthen fiscal frameworks and budget preparation with the goal of enhancing the role of the budget as the central instrument for allocation of public resources. This work focuses on budget execution and financial management in areas such as accounting and fiscal reporting, treasury management, financial management information systems, and internal control and audit. The IMF also promotes the adoption of good international practices in the development of medium-term fiscal and budget frameworks, fiscal rules, fiscal councils, performance-based budgeting, accrual accounting standards, and fiscal

risk management. In addition, the IMF provides expertise in the organization of ministries of finance, state treasuries, and debt and cash management offices. The IMF sent about 100 technical assistance missions from headquarters to help with public financial management in financial year 2015, in addition to supporting member countries through 9 regional technical assistance centers in Africa, Asia, Latin America, and the Middle East. Examples include Mongolia and El Salvador, where IMF technical assistance has helped improve transparency by developing and publishing medium-term fiscal frameworks, including information on fiscal risks facing the government.

³² For the Financial Sector Assessment Program, see <http://www.imf.org/external/np/fsap/fssa.aspx>

³³ For the 2014 Review of FSAP, see <https://www.imf.org/external/np/sec/pr/2014/pr14447.htm>

³⁴ For the 2010 decision to require mandatory financial stability assessments of countries with systemically important financial sectors, see <https://www.imf.org/external/np/pr/2010/pr10357.htm>

V. CONCLUSION

Drawing on both existing literature and Fund experience, this note finds that, while difficult to measure, corruption can adversely affect potential inclusive growth. By distorting the functions of the state in a number of areas, it may undermine macro-financial stability, public and private investment, human capital accumulation and total factor productivity. When corruption becomes pervasive it should be factored in when assessing economic performance of a country well beyond the direct effects of monetary and fiscal policies. Indeed, when systemic corruption affects virtually all state functions, distrust prevails and social capital erodes. In extreme cases, the state itself dissolves into disorder, civil strife and conflict, with significant and long-lasting social and economic implications.

Based on the Fund's own experience, fighting corruption requires a long term and holistic strategy, albeit one that is appropriately prioritized and sequenced, depending on country circumstances. Corruption is an extraordinarily complex phenomenon and tends to persist over time. An anti-corruption strategy will only be effective when it manages to convince key players that the rules of the game have indeed changed. Among other things, this requires changing incentives, including through a credible threat of prosecution. In addition to enhancing the rule of law, experience demonstrates that increased transparency and economic reforms that eliminates excessive regulation play a major role in this area. While in some cases, the relevant initiatives will be of a general nature, in other cases they may need to be specifically targeted at corrupt activity.

While an economic crisis in a country can act as a catalyst for change, it may not be feasible to eradicate corruption in a crisis-fighting setting. This is because the development of strong institutions—the most important ingredient for a successful anti-corruption strategy—takes time. As in all areas, a key catalyst for institutional change is effective leadership. Accordingly, senior governmental officials can play a critical role in changing norms and expectations, not only through the design and execution of public policy but also through their own personal behavior.

Appendix 1. Corruption and Tax Revenues

This appendix analyzes the relationship between tax revenues and corruption. We revisit the previous study by Imam and Jacobs (2007), using a larger unbalanced sample covering 149 countries over the period 1995–2015. Our baseline equation is the following:

$$y_{it} = \alpha_i + \lambda_t + \beta CPI_{it} + \sum_n^k \theta_k X_{it}^k + \varepsilon_{it}$$

y_{it} is the tax-revenue-to-GDP ratio for a country i at time t . The variable CPI_{it} represents a measure of corruption, the Corruption Perception Index (CPI) from Transparency International. The regressor X_{it}^k represents a set of k control variables, which, following the literature (Baunsgaard and Keen 2010), include the log level of per capita income and its square; the share of agriculture in GDP; openness, measured as the share of trade (imports plus exports) in GDP; and the log of inflation. Finally, α_i and λ_t represent a full set of country and time fixed effects, respectively.

The main results are reported in Table 1.³⁵ Column 1 shows results of the fixed-effects (FE) model. The signs of the coefficients are in line with previous literature, although the coefficients on agriculture and inflation are statistically insignificant. Income per capita shows a nonlinear effect: the relationship between tax revenues and income per capita is concave and reaches a maximum at a level of income per capita of \$9,510. The effect of corruption is statistically significant: it shows that, all else equal, an improvement in a country's corruption perception indicator by one standard deviation (22 points) is associated with a tax revenue increase of 0.88 percentage point of GDP.³⁶

The specification in column 1 is, however, biased for several reasons. First, there likely is an omitted-variable problem from a static specification, related to the persistence of the tax revenue variable. Second, variables like income per capita and corruption are likely to be endogenous and, especially for the corruption variable, also measured with error. We therefore augment equation (1) with a lagged dependent variable. In a panel context, this introduces another source of bias in the estimation, which we correct using a Blundell and Bond (1998) system GMM-estimator. The estimator also allows all variables to be treated as potentially endogenous. For this purpose, and for lack of valid external instruments suitable in a panel setting, we use GMM-type instruments of up to 4 lags. To avoid the problem of over-instrumentation, which is typical in this type of estimation (Roodman 2009), we “collapse” the instruments by using one instrument for each lag depth.

³⁵ Standard errors are corrected for heteroscedasticity and serial correlation at the country level.

³⁶ Results from a first-difference estimation, not reported here, are broadly similar.

The results from the dynamic specification are shown in column 2.³⁷ The coefficients of (1) retain their statistical significance, and the lagged dependent variable is significant. The coefficients on the income variables are lower in magnitude, showing that a maximum level of tax revenues is obtained at a level of per capita income of \$7,568. The coefficient on corruption is similar to the specification in column 1. This result could be attributed to the fact that in system-GMM models, when instruments are weak, the results tend to be biased upward (Bun and Windmeijer 2010). Internal instruments are likely to be weak in a system-GMM estimation (Bazzi and Clemens 2013). The under-identification test is rejected, the Hansen test shows that the instruments are valid, and the AR2 test is also rejected. However, a standard test for weak instruments cannot be rejected.³⁸

To ensure that our results are not driven by a weak-instrument problem, we checked their robustness using a weak-instrument robust inference strategy proposed by Kleibergen (2002). While Moreira (2003) allows dealing with only one endogenous variable, the procedure in Kleibergen (2002) allows dealing with multiple endogenous variables.³⁹ The result shows that, for the level equation, the null hypothesis that corruption has no impact on revenue is rejected, confirming that the results in column 2 are robust to weak instrumentations.⁴⁰ While the robustness of the relationship between corruption and tax revenue is corroborated by the use of alternative econometric methodologies, better measurements of corruption use of finer micro-level data, and better experimental design are needed to more precisely quantify the impact of corruption on tax revenues.

Table 1. Regression Results

VARIABLES	(1)	(2)
	FE	System-GMM
Openness	0.016** (0.008)	0.016*** (0.004)
Agriculture	-0.041 (0.045)	-0.075** (0.037)
Log Inflation	-0.137 (0.116)	-0.122 (0.084)
Log Income	20.665*** (4.106)	6.388** (2.732)
Log Income Squared	-1.083*** (0.238)	-0.422*** (0.148)
Corruption Perception Index	0.044** (0.021)	0.043** (0.020)
Lag Tax Revenues		0.863*** (0.081)
Observations	1,943	1,896
Number of Countries	149	149
Number of Instruments		54
Kleibergen-Paap <i>F</i> Statistic		1.313
Kleibergen-Paap <i>LM</i> Test <i>p</i> -value		0
Hansen Test		28.62
Hansen <i>J</i> -test <i>p</i> -value		0.28
AR2		-1.185
AR2 <i>p</i> -value		0.236

Source: Authors' calculations

Note: The dependent variable is the Tax Revenue-to-GDP ratio. The standard errors are corrected for heteroscedasticity and serial correlation. Column (1) presents results from the Fixed Effect (FE) estimator, and Column (2) presents results from a System-GMM estimator. The null hypothesis under the Kleibergen-Paap *F*-test is that the instruments are weak in the level equation. The null hypothesis under the Kleibergen-Paap *LM* test is that the structural equation is underidentified in the level equation. The null hypothesis of the Hansen test is that the instruments are valid. The null hypothesis of the AR2 statistic is that there is no second order serial correlation in the error term. Standard errors are in parenthesis. * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$.

³⁷ Since the series on corruption from Transparency International was subject to a methodological change in 2012, we have checked for robustness of the results using the Control of Corruption variable from the Worldwide Governance Indicators. The results do not change when using this alternative measure.

³⁸ The Kleibergen-Paap *F*-statistic in the level equation is 1.31, well below the critical values that reject the null hypothesis of weak instruments.

³⁹ See Bazzi and Clemens (2013) and its appendix for a detailed description of the procedure.

⁴⁰ The results are not reported here, but are available upon request.

Appendix 2. Evolution of the IMF's Policies on Governance Issues

A. Emergence of Governance Issues in International Forums in the 1990s

Tackling corruption became an increasing concern in the early 1990s. Many developing countries were increasingly exposed to a globalized environment where sound macroeconomic policies, transparent and accountable public institutions, and protection of property and investors' rights became prerequisites for attracting foreign direct investment. During this time, the United Nations General Assembly, the Organization for Economic Co-operation and Development (OECD), the European Commission (EC), the World Bank, and other international organizations established various policies regarding governance and corruption, including with regard to bribery in international business.⁴¹ Nongovernmental organizations, such as Transparency International (founded in 1993), played a growing role in publicizing the issue of corruption.

B. IMF Involvement in Governance Issues from the Early 1990s to 1997

Even before it adopted a specific policy on governance issues, the IMF had long been involved in this area. The IMF's advice to member countries to eliminate excessive regulation and abolish rent-seeking monopolies, promote fiscal and financial transparency, and enhance economic policymaking capacity contributed to reducing opportunities for corruption and malfeasance. Governance issues were raised in about 25 percent of Board discussions on Article IV consultations between June 1994 and July 1996, but such references were relatively perfunctory except in the case of a few countries that also had IMF-supported programs. Notably, one key early engagement concerned a series of IMF-supported programs for Kenya, which addressed sensitive issues such as fraud.⁴²

In 1997, the IMF adopted a specific policy on its role in governance issues arising in member countries, including corruption.⁴³ Under the policy, IMF involvement in governance issues should be "guided by an assessment of whether poor governance would have significant current or potential impact on macroeconomic performance in the short and medium term, and on the ability of the government to credibly pursue policies aimed at external viability and sustainable growth."

⁴¹ 1996 United Nations General Assembly Declaration Against Corruption and Bribery in International Commercial Transactions; 1997 OECD Convention on Combating Bribery of Foreign Public Officials in International Business Transactions; 1997 EC Communication to the Council and European Parliament on a Union Policy Against Corruption; Remarks of World Bank President James Wolfensohn at the 1996 World Bank-IMF Annual Meetings.

⁴² "Kenya: Ex Post Assessment of Longer-Term Program Engagement," IMF Country Report 08/338, October 2008 (<https://www.imf.org/external/pubs/ft/scr/2008/cr08338.pdf>).

⁴³ The Guidance Note on the Role of the IMF in Governance Issues; see <http://www.imf.org/external/pubs/ft/exrp/govern/govern.pdf>.

These principles have been applied in the IMF's three core activities: technical assistance, surveillance of economic policies of member countries, and the use of IMF resources.

C. Review of the 1997 Governance Policy

A comprehensive Executive Board review of the 1997 policy took place in 2001, which found that the policy remained generally appropriate. No stand-alone Board review of the IMF's policy on governance issues has been held since 2001, but the 2004 review of the IMF's surveillance highlighted the need for systemic coverage of governance issues within the IMF's mandate and called for enhanced and consistent treatment of governance issues in staff reports, enhanced coverage of the supply side of corruption, and enhanced use of material from other sources.⁴⁴ However, in subsequent reviews of the IMF's surveillance, conditionality, and technical assistance, governance issues received limited attention. An Executive Board review of the 1997 policy is envisaged in the coming year.

⁴⁴ IMF 2004a at para 48 and IMF 2004b at para 124.

Appendix 3. Evolution of Anti-Money-Laundering and Combating the Financing of Terrorism Policies toward Addressing Corruption

In 2000, the IMF responded to calls from the international community to expand its work in the anti-money-laundering (AML) area.⁴⁵ At first, the focus was on promoting compliance with international standards. After the events of September 11, 2001, the IMF intensified its AML activities and extended them to include combating the financing of terrorism (CFT). In 2004, the IMF Executive Board made AML/CFT assessments against the Financial Action Task Force standards and AML/CFT capacity development activities a regular part of IMF work.⁴⁶

In 2011, the Executive Board extended the IMF’s work to cover predicate crimes to money laundering, including corruption, and called for work beyond assessments and capacity building through strengthened inclusion of AML/CFT issues in surveillance and lending.⁴⁷ A 2012 staff guidance note provides a framework to deal with cases of money laundering and predicate crimes that are so serious that they threaten domestic stability, balance of payments stability, or the effective operation of the international monetary system.⁴⁸ In 2014, Executive Directors encouraged the IMF staff to integrate financial integrity issues, including corruption, into the context of IMF-supported programs when critical to financing assurances or to achieving program objectives.⁴⁹

AML policy advice has increasingly been included in recent Article IV consultations to support anti-corruption efforts. For the 2014 consultation cycle alone, AML policy advice in support of anticorruption efforts was included in 13 staff reports, spanning advanced, emerging and developing countries.

A growing number of IMF-supported programs include AML conditionality in support of anti-corruption efforts. In Afghanistan, following the Kabul Bank fraud, the focus has been to

⁴⁵ Communiqué of the International Monetary and Financial Committee of the Board of Governors of the International Monetary Fund, September 24, 2000, para 17—see <https://www.imf.org/external/np/cm/2000/092400.htm>; Enhancing Contributions to Combating Money Laundering: Policy Paper—see <http://www.imf.org/external/np/ml/2001/eng/042601.PDF>.

⁴⁶ IMF Executive Board Reviews and Enhanced Efforts for Anti-Money Laundering and Combating the Financing of Terrorism—see <http://www.imf.org/external/np/sec/pn/2004/pn0433.htm>. Verification of compliance with FATF standards is often done in the context of the Fund’s Financial Sector Assessment Program (FSAP), during which countries’ financial regulatory and supervisory frameworks are assessed against the principles for effective supervision, which include the verification of compliance to AML practices.

⁴⁷ IMF Executive Board Reviews Efforts in Anti-Money Laundering and Combating the Financing of Terrorism—see <http://www.imf.org/external/np/sec/pn/2011/pn1174.htm>.

⁴⁸ Anti-Money Laundering and Combating the Financing of Terrorism—Inclusion in Surveillance and Financial Stability Assessments—Guidance Note—see <http://www.imf.org/external/np/pp/eng/2012/121412a.pdf>.

⁴⁹ IMF Executive Board Reviews the Fund’s Strategy for Anti-Money Laundering and Combating the Financing of Terrorism—see <http://www.imf.org/external/np/sec/pr/2014/pr14167.htm>.

strengthen corporate governance requirements for banks, including fit and proper requirements as set by the international AML/CFT standard.⁵⁰ In Malawi, following the “Cashgate” procurement fraud, conditionality was introduced to (1) strengthen the legal framework, including with regard to PEPs; and (2) ensure banking supervisor follow-up on possible breaches of compliance by banks that were revealed by the Cashgate audit report.⁵¹ In Ukraine, AML is a pillar of the anti-corruption strategy, with benchmarks aimed at preventing banks from being misused to launder the proceeds of corruption by ensuring that a legal and regulatory framework is in place, both with regard to domestic PEPs and the criminalization of acts of corruption and the laundering of their proceeds.⁵²

⁵⁰ Islamic Republic of Afghanistan: First Review Under the Extended Credit Facility Arrangement—see <http://www.imf.org/external/pubs/ft/scr/2012/cr12245.pdf>.

⁵¹ Malawi: Fifth and Sixth Reviews Under the Extended Credit Facility Arrangement—see <http://www.imf.org/external/pubs/ft/scr/2015/cr1583.pdf>.

⁵² Ukraine: First Review Under the Stand-By Arrangement—see <http://www.imf.org/external/pubs/ft/scr/2014/cr14263.pdf>.

References

- Achury, Caroline, Christos Koulovatianos, and John D. Tsoukalas. 2015. "Political Economics of External Sovereign Defaults." CFS Working Paper 508, Center for Financial Studies, Frankfurt.
- Ades, Alberto, and Rafael Di Tella. 1999. "Rents, Competition, and Corruption." *American Economic Review* 89 (4).
- Aghion, Philippe, Ufuk Akcigit, Julia Cagé, and William Kerr. 2016. "Taxation, Corruption, and Growth." NBER Working Paper 21928, National Bureau of Economic Research, Cambridge, Massachusetts.
- Aisen, Ari, and Francisco José Veiga. 2013. "How Does Political Instability Affect Economic Growth?" *European Journal of Political Economy* 29: 151–67.
- Akitoby, Bernardin, and Thomas Stratmann. 2010. "The Value of Institutions for Financial Markets: Evidence from Emerging Markets." *Review of World Economics* 146 (4): 781–97.
- Alaimo, Verónica, Pablo Fajnzylber, J. Luis Guasch, J. Humberto López, and Ana María Oviedo. 2009. "Behind the Investment Climate: Back to Basics—Determinants of Corruption." In, "Does the Investment Climate Matter? Microeconomic Foundations of Growth in Latin America, edited by Pablo Fajnzylber, J. Luis Guasch, and J. Humberto López. Washington: World Bank, 139–78.
- Alesina, Alberto, Sule Ozler, Nouriel Roubini, and Phillip Swagel. 1996. "Political Instability and Economic Growth." *Journal of Economic Growth* 1 (2): 189–211.
- Alesina, Alberto, and Roberto Perotti. 1996. "Income Distribution, Political Instability and Investment." *European Economic Review* 40: 1203–28.
- Al-Sadig, Ali. 2009. "The Effects of Corruption on FDI Inflows." *Cato Journal* 29 (2): 267–94.
- Anand, Rahul, and Purva Khera. 2016. "Macroeconomic Impact of Product and Labor Market Reforms on Informality and Unemployment in India." IMF Working Paper 16/47, International Monetary Fund, Washington.
- Apaza, Carmen R. 2009. "Measuring Governance and Corruption through the Worldwide Governance Indicators: Critiques, Responses, and Ongoing Scholarly Discussion." *PS: Political Science & Politics* 42 (01): 139.
- Arnone, Marco, and Eleni Iliopoulos. 2007. *The Cost of Corruption: Economic, Institutional and Social Effects*, Milan: Vita e Pensiero.

- Atuobi, Samuel Mondays. 2007. *Corruption and State Instability in West Africa: An Examination of Policy Options*. KAIPTC Occasional Paper 21. Accra: Kofi Annan International Peacekeeping Training Center.
- Bastida, Francisco, and Bernardino Benito. 2007. "Central Government Budget Practices and Transparency: An International Comparison." *Public Administration* 85 (3): 667–716.
- Baumol, William J. 1990. "Entrepreneurship: Productive, Unproductive, and Destructive." *Journal of Political Economy* 98 (5, Part 1): 893–921.
- Baunsgaard, Thomas, and Michael Keen. 2010. "Tax Revenue and (or?) Trade Liberalization." *Journal of Public Economics* 94 (9–10): 563–77.
- Bazzi, Samuel, and Michael A. Clemens. 2013. "Blunt Instruments: Avoiding Common Pitfalls in Identifying the Causes of Economic Growth." *American Economic Journal: Macroeconomics* 5 (2): 152–86.
- BBC World Service. 2010. "BBC World Speaks Poll," conducted by GlobeScan.
- Becker, Gary and Georg Stigler. (1974). "Law enforcement, malfeasance and compensation of enforcers." *Journal of Legal Studies* 3: 1-19.
- Bellver, Ana, and Daniel Kaufmann. 2005. "Transparency: Initial Empirics and Policy Applications." World Bank Policy Research Working Paper, Washington.
- Ben Ali, Mohamed Sami, and Seifallah Sassi. 2016. "The Corruption-Inflation Nexus: Evidence from Developed and Developing Countries." *B.E. Journal of Macroeconomics* 16 (1).
- Benedek Dora, Ernesto Crivelli, Sanjeev Gupta, and Priscilla Muthoora. 2014. "Foreign Aid and Revenue: Still a Crowding-Out Effect?" *FinanzArchiv: Public Finance Analysis* 70 (1): 67–96.
- Besley, Timothy, and Torsten Persson. 2014. "Why Do Developing Countries Tax So Little?" *Journal of Economic Perspectives* 28 (4): 99–120.
- Blackburn, Keith, Niloy Bose, and M. Emranul Haque. 2006. "The Incidence and Persistence of Corruption in Economic Development." *Journal of Economic Dynamics and Control* 30 (12): 2447–67.
- Blackburn, Keith, Kyriakos C. Neanidis, and M. Emranul Haque. 2008. "Corruption, Seigniorage and Growth: Theory and Evidence." CESifo Working Paper Series 2354, Center for Economic Studies, Munich.
- Blundell, Richard, and Stephen Bond. 1998. "Initial Conditions and Moment Restrictions in Dynamic Panel Data Models." *Journal of Econometric* 87(1): 115-143.

- Bold, Tessa, Jakob Svensson, Bernard Gauthier, Ottar Maestad, and Waly Wane. 2011. "Service Delivery Indicators: Pilot in Education and Health Care in Africa." CMI Report R 2011: 8, Chr. Michelsen Institute, Bergen, Norway.
- Bun, Maurice J. G., and Frank Windmeijer. 2010. "The Weak Instrument Problem of the System GMM Estimator in Dynamic Panel Data Models." *Econometrics Journal* 13 (1): 95–126.
- Busse, Matthias, and Carsten Hefeker. 2007. "Political Risk, Institutions and Foreign Direct Investment." *European Journal of Political Economy* 23 (2): 397–415.
- Butler, Alexander W., and Larry Fauver. 2006. "Institutional Environment and Sovereign Credit Ratings." *Financial Management* 35 (3): 53–79.
- . 2006, and Sandra Mortal. 2009. "Corruption, Political Connections, and Municipal Finance." *Review of Financial Studies* 22 (7): 2873–905.
- Campos, Nauro F., Ralitzia D. Dimova, and Ahmad Saleh. 2010. "Whither Corruption? A Quantitative Survey of the Literature on Corruption and Growth." IZA Discussion Paper 5334, Institute for the Study of Labor, Bonn, Germany.
- Campos, Nauro, Saul Estrin, and Eugenio Proto. 2010. "Corruption as a Barrier to Entry: Theory and Evidence." CEPR Discussion Paper 8061, Centre for Economic Policy Research, London.
- Campos, J. Edgardo, Donald Lien, and Sanjay Pradhan. 1999. "The Impact of Corruption on Investment: Predictability Matters." *World Development* 27 (6): 1059–67.
- Cavoli, Tony, and John K. Wilson. 2015. "Corruption, Central Bank (in)dependence and Optimal Monetary Policy in a Simple Model." *Journal of Policy Modeling* 37 (3): 501–9.
- Chayes, Sarah. 2015. *Thieves of State: Why Corruption Threatens Global Security*. New York: W.W. Norton.
- Chen, Feng. 2000. "Crises, Managerial Corruption, and Labour Protests in China." *China Journal* 44: 41–63.
- Chêne, M., B. Clench, and C. Fagan. 2010. "Corruption and Gender in Service Delivery: The Unequal Impacts." Transparency International Working Paper 02/2010, Berlin.
- Cole, Matthew A. 2007. "Corruption, Income, and the Environment: An Empirical Analysis." *Ecological Economics* 62 (3): 637–47.
- Collier, Paul, V. L. Elliott, Håvard Hegre, Anke Hoeffler, Marta Reynal-Querol, and Nicholas Sambanis. 2003. "Breaking the Conflict Trap: Civil War and Development Policy." World Bank Policy Research Report, Washington.
- Collier, Paul, and Anke Hoeffler. 2004. "Greed and Grievance in Civil War." *Oxford Economic Papers* 56 (4): 563–95.

- Connolly, Michael. 2007. "Measuring the Effect of Corruption on Sovereign Bond Ratings." *Journal of Economic Policy Reform* 10 (4): 309–23.
- Crivelli, Ernesto, and Sanjeev Gupta. 2016. "Does Conditionality in IMF-Supported Programs Promote Revenue Reform?" *International Tax and Public Finance* 23 (3): 550–79.
- Crotty, John. 2010. "Practical Measures to Promote Integrity in Customs Administration." <http://www.8iacc.org/papers/crotty.html>.
- Dal Bó, Ernesto, and Martín A. Rossi. 2007. "Corruption and Inefficiency: Theory and Evidence from Electric Utilities." *Journal of Public Economics* 91 (5–6): 939–62.
- Damania, Richard, Per G. Fredriksson, and John A. List. 2003. "Trade Liberalization, Corruption, and Environmental Policy Formation: Theory and Evidence." *Journal of Environmental Economics and Management* 46: 490–512.
- Del Monte, Alfredo, and Erasmo Papagni. 2001. "Public Expenditure, Corruption, and Economic Growth: The Case of Italy." *European Journal of Political Economy* 17 (1): 1–16.
- de Renzio, Paolo, and Joachim Wehner. 2015. *The Impacts of Fiscal Openness: A Review of the Evidence*. Global Initiative for Fiscal Transparency and the International Budget Partnership.
- De Rosa, Donato, Nishaal Gooroochurn, and Holger Görg. 2010. "Corruption and Productivity: Firm-Level Evidence from the BEEPS Survey," World Bank Policy Research Working Paper Series. Washington.
- Detragiache, Enrica, Poonam Gupta, and Thierry Tresselt. 2005. "Finance in Lower-Income Countries: An Empirical Exploration." IMF Working Paper 05/167, International Monetary Fund, Washington.
- Djankov, Simeon, Rafael La Porta, Florencio Lopez-de-Silanes, and Andrei Shleifer. 2002. "The Regulation of Entry." *Quarterly Journal of Economics* 117 (1): 1–37.
- Dreher, Axel, and Thomas Herzfeld. 2005. "The Economic Costs of Corruption: A Survey and New Evidence." *SSRN Electronic Journal*.
- Duflo, Esther, Rema Hanna, and Stephen P. Ryan. 2012. "Incentives Work: Getting Teachers to Come to School." *American Economic Review* 102 (4): 1241–78.
- Duflo, Esther and Abhijit V. Banerjee. 2007. "The Economic Lives of the Poor." *Journal of Economic Perspectives* 21 (1): 141.
- Esman, M.J. and F.C. Bruhns. 1966. "Institution-building in National Development: An Approach to Induced Social Change in Transitional Societies," *Comparative Theories of Social Change*: 323.
- Financial Action Task Force (FATF). 2014. *FATF Annual Report 2013–2014*. Paris.

- Galtung, Fredrik. 2006. "Measuring the Immeasurable: Boundaries and Functions of (Macro) Corruption Indices," in *Measuring Corruption*, edited by Fredrik Galtung, Arthur Shacklock, Carmel Connors, and Charles Sampford. Burlington, Vermont: Ashgate.
- Gaspar, Vitor, Laura Jaramillo, and Philippe Wingender. Forthcoming, "Tax Capacity and Growth: Is There a Tipping Point?" IMF Working Paper, International Monetary Fund, Washington.
- Godinez, José R., and Ling Liu. 2015. "Corruption Distance and FDI Flows into Latin America." *International Business Review* 24 (1): 33–42.
- Government of Ukraine. 2014. "Report on Diagnostic Study of Governance Issues Pertaining to Corruption, the Business Climate, and the Effectiveness of the Judiciary."
- Greenidge, Kevin, Meredith Arnold McIntyre, and Hanlei Yun. 2016. "Structural Reform and Growth: What Really Matters? Evidence from the Caribbean" IMF Working Paper 16/82, International Monetary Fund, Washington.
- Gupta, Sanjeev, Hamid Davoodi, and Rosa Alonso-Terme. 2002. "Does Corruption Affect Income Inequality and Poverty?" *Economics of Governance* 3: 23–45.
- Gupta, Sanjeev, Hamid Davoodi, and Erwin Tiongson. 2002. "Corruption and the Provision of Health Care and Education Services." in *Governance, Corruption, and Economic Performance*, edited by George T. Abed and Sanjeev Gupta. Washington: International Monetary Fund.
- Gupta, Sanjeev, Luiz de Mello, and Raju Sharan. 2001. "Corruption and Military Spending." *European Journal of Political Economy* 17 (4): 749–77.
- Gurr, Ted. 1970. *Why Men Rebel*. Princeton, New Jersey: Princeton: University Press.
- Hallward-Driemeir, Mary. 2009. "Who Survives? The Impact of Corruption, Competition, and Property Rights across Firms," World Bank Policy Research Working Paper 5084, World Bank, Washington.
- Hawken, Angela, and Gerardo Munck. 2009. "Do You Know Your Data? Measurement Validity in Corruption Research," Working Paper, School of Public Policy, Pepperdine University, Malibu, California.
- Hellman, Joel, and Daniel Kaufmann. 2001. "Confronting the Challenge of State Capture in Transition Economies," *Finance and Development*, September.
- Heywood, Paul M., and Jonathan Rose. 2014. "'Close but No Cigar': The Measurement of Corruption." *Journal of Public Policy* 34 (03): 507–29.
- Huang, Haizhou, and Shang-Jin Wei. 2006. "Monetary Policies for Developing Countries: The Role of Institutional Quality," *Journal of International Economics* 70 (1): 239–52.

- Imam, Patrick, and Davina F. Jacobs. 2007. "Effect of Corruption of Tax Revenues in the Middle East," IMF Working Paper 07/270, International Monetary Fund, Washington.
- International Monetary Fund (IMF). 1997. "The Role of the Fund in Governance Issues—Guidance Note." Selected Decisions and Selected Documents of the IMF, Thirty Seventh Issue, Washington.
- . 2004a. "Biennial review of the Implementation of the Fund's Surveillance and of the 1977 Surveillance Decision - Overview (July 2, 2004)." Washington.
- . 2004b. Biennial review of the Implementation of the Fund's Surveillance and of the 1977 Surveillance Decision - Content of Surveillance (July 2, 2004)." Washington.
- . 2007. "Iraq: Request for Stand-By Arrangement and Cancellation of Current Arrangement—Staff Report; Staff Supplement; Press Release on the Executive Board Discussion; and Statement by the Executive Director for Iraq." Washington.
- . 2009. "Republic of Tajikistan—Staff Report for the 2009 Article IV Consultation, Final Review under the Staff-Monitored Program, and Request for a Three-Year Arrangement under the Poverty Reduction and Growth Facility." Washington.
- . 2010a. "Tajikistan: First and Second Reviews under the Three-Year Arrangement under the Extended Credit Facility, Request for Waiver of Performance Criteria, and Request for Augmentation of the Arrangement—Staff Report; Staff Statement; Press Release on the Executive Board Discussion; and Statement by the Executive Director for Tajikistan." Washington.
- . 2010b. "Kyrgyz Republic: Request for Disbursement under the Rapid Credit Facility—Staff Report; Staff Statement; Press Release on the Executive Board Discussion; and Statement by the Executive Director for Kyrgyz Republic." Washington.
- . 2011a. "Revenue Mobilization in Developing Countries." IMF Policy Paper, Washington.
- . 2011b. "Islamic Republic of Afghanistan: 2011 Article IV Consultation and Request for a Three-Year Arrangement Under the Extended Credit Facility—Staff Report; Staff Supplement-A Joint World Bank/IMF Debt Sustainability Analysis; Staff Statement; Public Information Notice and Press Release on the Executive Board Discussion; and Statement by the Executive Director for Islamic Republic of Afghanistan." Washington,
- . 2013. "Greece: Selected Issues." IMF Country Report 13/155, Washington.
- . 2014a. "Ukraine: First Review under the Stand-By Arrangement, Requests for Waivers of Nonobservance and Applicability of Performance Criteria, and a Request for Rephrasing of the Arrangement—Staff Report." IMF Country Report 14/263, Washington.

- . 2014b. "Republic of Moldova: 2014 Article IV Consultation and First Post-Program Monitoring Discussions—Staff Report; Press Release; and Statement by the Executive Director for the Republic of Moldova." Washington.
- . 2015a. "Current Challenges in Revenue Mobilization: Improving Tax Compliance." IMF Policy Paper, Washington.
- . 2015c. "Making Public Investment More Efficient." IMF Policy Paper (Washington.).
- . Forthcoming. "Should They Stay or Should They Go—Emigration and its Economic Impact on Eastern Europe." IMF Staff Discussion Note, International Monetary Fund, (forthcoming) Washington.
- Ivanyna, Maksym, Alex Mourmouras, and Peter Rangazas. 2015. "Corruption, Public Debt, and Economic Growth." Unpublished.
- Johnson, Simon, Daniel Kaufmann, and Pablo Zoido-Lobaton. 1999. "Corruption, Public Finances, and the Unofficial Economy." Policy Research Working Paper WPS 2169, World Bank, Washington.
- Jong-A-Pin, Richard. 2009. "On the Measurement of Political Instability and Its Impact on Economic Growth." *European Journal of Political Economy* 25 (1): 15–29.
- Kane, Edward J., and Tara Rice. 2000. "Bank Runs and Banking Policies: Lessons for African Policymakers." NBER Working Paper 8003, National Bureau of Economic Research, Cambridge, Massachusetts.
- Kaufmann, Daniel. 2005. "Myths and Realities of Governance and Corruption." MPRA Paper 8089, Munich.
- . 2009. "Corruption and the Global Financial Crisis." *Forbes*, January 27.
- . 2010. "Can Corruption Adversely Affect Public Finances in Industrialized Countries?" Brookings Institution, Washington,.
- . and Paul Siegelbaum. 1996. "Privatization and Corruption in Transition Economies." *Journal of International Affairs* 50 (2).
- Kleibergen, Frank. 2002. "Pivotal Statistics for Testing Structural Parameters in Instrumental Variables Regression." *Econometrica* 70 (5): 1781–803.
- Klitgaard, Robert. 2009. *Controlling Corruption*, (Berkeley: of California Press).
- Kopits, George, and Jon Craig. 1998. *Transparency in Government Operations*, IMF Occasional Paper 150. (Washington: International Monetary Fund).
- Krueger, Anne O. 1974. "The Political Economy of the Rent-Seeking Society," *American Economic*

- Review* 64 (3): 291–303.
- Le Billon, Philippe. 2003. "Buying Peace or Fueling War: The Role of Corruption in Armed Conflicts." *Journal of International Development* 15 (4): 413–26.
- Leite, Carlos, and Jens Weidmann. 2002. "Does Mother Nature Corrupt? Natural Resources Corruption, and Economic Growth," in *Governance, Corruption, and Economic Performance*, edited by George T. Abed and Sanjeev Gupta. Washington: International Monetary Fund.
- Madani, Dorsati, and Martha Licetti. 2010. "Business Regulation, Reform and Corruption." PREM Notes 155," World Bank, Washington.
- Mauro, Paolo. 1995. "Corruption and Growth." *Quarterly Journal of Economics* 110 (3): 681–712.
- . 1998. "Corruption and the Composition of Government Expenditure." *Journal of Public Economics* 69 (2): 263–79.
- . 2004. "The Persistence of Corruption and Slow Economic Growth." *IMF Staff Papers* 51 (1).
- Mitra, Pritha, Amr Hosny, Gohar Minasyan, Mark Fischer, and Gohar Abajyan. 2016. "Avoiding the New Mediocre: Raising Long-Term Growth in the Middle East and Central Asia." IMF Departmental Paper 16/1. International Monetary Fund, Washington.
- Moreira, Marcelo J. 2003. "A Conditional Likelihood Ratio Test for Structural Models," *Econometrica* 71(4): 1027-1048.
- Murphy, Kevin, Andrei Shleifer, and Robert Vishny. 1991. "The Allocation of Talent: Implication for Growth." *Quarterly Journal of Economics* 106 (No. 2): 503.
- Organisation for Economic Co-operation and Development (OECD). 2012. "Illegal Trade in Environmentally Sensitive Goods," OECD Trade Policy Studies Paper, Paris.
- . 2013. *Specialised Anti-Corruption Institutions: Review of Models; Anti-Corruption Network for Eastern Europe and Central Asia*. 2nd ed., Paris.
- . 2014. *OECD Foreign Bribery Report: An Analysis of the Crime of Bribery of Foreign Public Officials*. Paris.
- Paunov, Caroline. 2016. "Corruption's Asymmetric Impacts on Firm Innovation." *Journal of Development Economics* 118: 216–31.
- Pellegrini, Lorenzo, and Reyer Gerlagh. 2006. "Corruption, Democracy, and Environmental Policy: An Empirical Contribution to the Debate." *Journal of Environment and Development* 15 (3): 332–54.
- Pew Research Center. 2014. <http://www.pewglobal.org/2014/11/06/crime-and-corruption-top-problems-in-emerging-and-developing-countries/>

- Pivovarsky, Alexander. 2001. "How Does Privatization Work? Ownership Concentration and Enterprise Performance in Ukraine," IMF Working Paper 01/42, International Monetary Fund, Washington.
- PwC. 2013. "Identifying and Reducing Corruption in Public Procurement in the EU." PwC Coopers and ECORYS, Brussels.
- Rajkumar, Andrew Sunil, and Vinaya Swaroop. 2008. "Public Spending and Outcomes: Does Governance Matter?" *Journal of Development Economics* 86 (1): 96–111.
- Reinikka, Ritva, and Jakob Svensson. 2004. "Local Capture: Evidence from a Central Government Transfer Program in Uganda." *Quarterly Journal of Economics* 119 (2): 679–705.
- Roodman, David. 2009. "A Note on the Theme of Too Many Instruments." *Oxford Bulletin of Economics and Statistics* 71 (1): 135–58.
- Rose-Ackerman, Susan, and Bonnie J. Palifka. 2016. "Corruption and Government. Causes, Consequences and Reform." Cambridge University Press, New York.
- Sedmíhradská, Lucie, and Jakub Haas. 2013. "Budget Transparency and Fiscal Performance: Do Open Budgets Matter?" *Acta VŠFS* 7(2): 109–22.
- Shaxson, Nicholas. 2008. *Poisoned Wells: The Dirty Politics of African Oil*. New York: Palgrave Macmillan.
- Svensson, Jakob. 2005. "Eight Questions about Corruption." *Journal of Economic Perspectives* 19 (3): 19–42.
- Tanzi, Vito. 1998. "Corruption around the World: Causes, Consequences, Scope, and Cures." *IMF Staff Papers* 45 (4): 559–94.
- . 1999. "The Quality of the Public Sector." Presented, presented at the IMF Conference on Second Generation Reforms, October 19.
- . and Hamid Davoodi. 2002a. "Corruption, Public Investment, and Growth." In *Governance, Corruption, and Economic Performance*, edited by George T. Abed and Sanjeev Gupta. Washington: International Monetary Fund.
- . 2016. "What Is Corruption?" <http://www.transparency.org/what-is-corruption>. Accessed March 29.
- Ugur, Mehmet. 2014. "Corruption's Direct Effects on Per-Capita Income Growth: A Meta-Analysis." *Journal of Economic Surveys* 28 (3): 472–90.
- . and Nandini Dasgupta. 2011. *Evidence on the Economic Growth Impacts of Corruption in Low-Income Countries and Beyond*. EPPI-Centre Report 1914, Social Science Research Unit, Institute of Education, University of London.

- United Nations Development Fund for Women (UNIFEM). 2008. "Who Answers to Women? Gender and Accountability." *Progress of the World's Women 2008/2009 Report*, New York.
- United Nations Development Programme (UNDP). 2008. "A Users' Guide to Measuring Corruption." UNDP Report, Oslo (.).
- United Nations Office on Drugs and Crime (UNODC) Global Program against Corruption. 2002. *Anti-Corruption Tool Kit*, CICIP-15(1).
- Urra, Francisco-Javier. 2007. "Assessing Corruption: An Analytical Review of Corruption Measurement and Its Problems: Perception, Error and Utility." Edmund A. Walsh School of Foreign Service Georgetown University, Washington.
- Van Rijckeghem, Caroline, and Beatrice Weder. 2002. "Bureaucratic Corruption and the Rate of Temptation: Do Wages in Civil Service Affect Corruption and by How Much?" in *Governance, Corruption, and Economic Performance*, edited by George T. Abed and Sanjeev Gupta. Washington: International Monetary Fund.
- Vogl, Frank. 2012. *Waging War on Corruption: Inside the Movement Fighting the Abuse of Power*. Lanham, Maryland: Rowman and Littlefield.
- Wei, Shang-Jin. 2000. "How Taxing Is Corruption on International Investors?" *Review of Economics and Statistics* 82 (1): 1–11.
- Welsch, Heinz. 2004. "Corruption, Growth, and the Environment: A Cross-Country Analysis." *Environment and Development Economics* 9 (5): 663–93.
- World Independent Network/Gallup International Association. 2013. "WIN/Gallup International End of Year Survey 2013."
- Woo, Jung-Yeop, and Uk Heo. 2009. "Corruption and Foreign Direct Investment Attractiveness in Asia." *Asian Politics and Policy* 1 (2): 223–38.
- . 2013. "Income and Asset Disclosure: Case Study Illustrations." Report 77462, Washington.
- Zurawicki, Leon, and Mohsin Habib. 2010. "Corruption and Foreign Direct Investment: What Have We Learned?" *International Business and Economics Research Journal* 9 (7): 1–9.