

AN ESSAY
DRAWN FROM

AFRICA

DEVELOPMENT
INDICATORS

2010

Silent and lethal

How quiet corruption
undermines Africa's
development efforts



THE WORLD BANK

AFRICA

DEVELOPMENT

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Foreword

“Sunlight is the best disinfectant,” Associate Justice of the United States Supreme Court Louis Brandeis said in 1914, referring to the benefits of openness and transparency in tackling corruption in the public sector. Today, thanks to the efforts of Transparency International and other organizations, there is considerable “sunlight” on well known types of corruption—public officials demanding and taking bribes for privileged access to contracts or exemptions from regulations. On average, Africa scores poorly on these indicators, with some exceptions—Botswana, Cape Verde, and Mauritius have consistently done well, and Liberia has made great strides.

This year’s Africa Development Indicators essay sheds light on a different type of corruption—what the authors call “quiet corruption”—when public servants fail to deliver services or inputs that have been paid for by the government. The most prominent examples are absentee teachers in public schools and absentee doctors in primary clinics. Others include drugs being stolen from public clinics and sold in the private market as well as subsidized fertilizer being diluted before it reaches farmers.

Not only is quiet corruption pervasive and widespread in Africa, but—as the essay points out—it hurts the poor

disproportionately. Worse still, it can have long-term consequences. Denied an education because of absentee teachers, children suffer in adulthood with low cognitive skills and weak health. The absence of drugs and doctors means unwanted deaths from malaria and other diseases. Receiving diluted fertilizer that fails to produce results, farmers choose not to use any fertilizer, leaving them in low-productivity agriculture.

Quiet corruption does not make the headlines the way bribery scandals do. It has yet to be picked up by Transparency International and other global indexes of corruption. Tackling quiet corruption is at least as difficult as tackling grand corruption. It will require a combination of strong and committed leadership, policies and institutions at the sectoral level, and—most important—increased accountability and participation by citizens, the demand side of good governance. By highlighting quiet corruption in this year’s Africa Development Indicators—itsself a tool for Africans to hold their governments accountable—we hope that the essay will do for quiet corruption what Justice Brandeis intended with his famous aphorism.

Obiageli K. Ezekwesili
Vice President, Africa Region

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Executive summary

Silent and lethal: How quiet corruption undermines Africa’s development efforts

The corruption that often captures newspaper headlines and provokes worldwide public disapproval is dominated by loud “big-time corruption,” notably administrative and political corruption at the highest government levels. In response to this notoriety, the bulk of anti-corruption measures have been tailored to address this type of corruption. However, recent examinations of the level and quality of service delivery in developing countries, including the *World Development Report 2004*, have highlighted the need to expand the scope of the standard definition of corruption—the abuse of public office for private gain. While acknowledging the importance of big-time corruption in reducing funding for service delivery, recent research has devoted increasing attention to identifying corrupt practices downstream at the frontline of public service provision.

Following this literature, this essay introduces the term “quiet corruption” to indicate various types of malpractice of frontline providers (teachers, doctors, inspectors, and other government representatives) that do not involve monetary exchange. These behaviors include both potentially observable deviations, such as absenteeism, but also hard to observe deviations from expected conduct, such as a lower level of effort than expected or the deliberate bending of rules for personal advantage. For example, recent findings indicate that primary school teachers in a number of African countries are not in school 15 to 25 percent of the time (absenteeism), but, in addition, a considerable fraction of those in school are not found teaching (low effort). Frontline provider deviations from expected behavior that meet these requirements broaden the scope of corruption.

With this broader definition in mind, the familiar form of big-time corruption is just the “tip of the iceberg”; the quiet corruption, that is the less frequently observed deviations from expected conduct, is below the surface. In addition to capturing the notion that quiet corruption is not as visible, the iceberg analogy provides two additional insights. First, quiet corruption occurs across a much wider set of transactions directly affecting a large number of beneficiaries. Quiet corruption is present in a large share of health-provider–patient or teacher–pupil interactions, for example. Second, quiet corruption very often has deep long-term consequences on households, farms, and firms. The widespread prevalence of big-time and quiet corruption in Africa significantly undermines the impact of investments to meet the Millennium Development Goals (MDGs). In the parlance of this essay, the iceberg of corruption is sinking considerable efforts to improve the well-being of Africa’s citizens, particularly the poor who rely predominantly on publicly provided services.

It is important to raise awareness of the profile of quiet corruption because this malpractice has non-negligible long-term consequences. This essay elaborates both the direct consequences, such as the limitation of the productivity potential of households, firms, and farms, and the indirect consequences, such as distrust of public institutions and the notion that frontline provider malpractice is inevitable and omnipresent. As an example of direct consequences, we might think how poor service delivery caused by absenteeism or low effort on the job might hamper a child’s development, with potential permanent effects on adult educational attainment, cognitive skills, and underlying health. As an indirect effect we

might think of the withdrawal of children from school because of beliefs about the low quality of education, which shifts the allocation of time and resources away from human capital formation toward home production or labor market participation.

This essay further shows how quiet corruption manifests itself differently according to the nature of service delivery. It focuses on four key sectors (education, health care, agriculture, and the private sector) whose progress and success are crucial for poverty eradication and more generally achieving the MDGs. In presenting examples and outlining the long-term consequences of quiet corruption in these sectors, this essay contends that one of the main reasons Africa is lagging behind is the poor service delivery that is a consequence of quiet corruption.

The good news is that quiet corruption can be tackled. Whenever a government's determination to deal with quiet corruption has increased, for example, by increasing the availability of information on finances, inputs and expected outputs, then measurable improvements in service delivery have been possible. Although there is no "one size fits all" recommendation that applies to every sector, this essay advocates the need for strong and highly motivated leadership in the fight against corruption, commitment

and capacity of the national anti-corruption units to pursue operationally effective responses at the *sector level*, and adequate policies and institutions. An equally important second pillar is increasing transparency in policy formulation and implementation that empowers citizens to raise the accountability of service providers—bolstering the "demand side" for good governance. Finally, successful implementation of anti-corruption reforms also requires that the preferences and interests of all those involved be aligned with achieving the objectives of the reform. This often involves better working conditions.

Given the complexity of the task, the fight against quiet corruption requires tailoring policies to country circumstances, recognizing that priorities and responses may vary depending on different country conditions. This essay outlines a research agenda to identify interventions to address quiet corruption. Experimenting with various ways to empower beneficiaries and continuing the ongoing efforts to tackle big-time corruption will go a long way toward this goal. Indeed, although combating loud and visible forms of corruption is necessary, fighting quiet corruption is critical if governments want to reduce poverty and promote sustainable growth.

Silent and lethal: How quiet corruption undermines Africa's development

Corruption captures newspaper headlines and provokes public disapproval. In addition, the abuse of public office for private gain—the most common definition of corruption—has attracted increasing attention by scholars and policy makers interested in economic development. Specifically, corruption and poor governance help explain why increased funding allocations, such as those aimed at meeting the United Nations Millennium Development Goals (MDGs), have not necessarily translated into improvements in human development indicators, particularly in Africa.¹ Despite considerable funding increases, the region is largely lagging behind in meeting the MDG of reducing child mortality (the number of children dying before age 5 per 1,000 live births). Substantial increases in gross enrollment in primary education in recent years have not been matched by improvements in learning outcomes. Africa's private investment rate is still around 15 percent, much lower than in most developing countries. Agricultural productivity is not increasing fast enough; the yield per hectare is still less than half that in other developing regions. Cutting across all these problems is Africa's fundamental problem, namely weak governance and associated corruption.²

Until recently, the debate about corruption and development³ has been dominated by the identification and measurement of “big-time corruption” (de Sardan 1999), notably administrative and political corruption at the highest levels of government.⁴ This focus has produced measures of governance weakness and corruption suitable for cross-country comparisons of political corruption. But these measures are not reliable when it comes to measuring less visible forms of corruption, such as those faced by common citizens as they interact with health and

education providers, agriculture extension services, drug inspectors, and the police (see Razafindrakoto and Roubaud 2006).

World Development Report 2004 (World Bank 2003), which examined service delivery, recasts the problem of corruption from a different perspective. While acknowledging the importance of big-time corruption in reducing funding for service delivery, *World Development Report 2004* and subsequent research have devoted increasing attention to analyzing corrupt practices downstream, at the frontline of public service provision (Reinnika and Svensson 2006). This new focus has produced two results. First, it has enabled the identification of malpractice involving small monetary transactions, generally referred to as “petty corruption” (de Sardan 1999), for example, under-the-table payments for services received (Transparency International 2005, 2006) or bribes to tax collectors and low ranking public officials. Second, the concept of corruption has been gradually extended to practices that do not necessarily involve monetary transactions, such as teacher absenteeism (Patrinos and Kagia 2007). Furthermore, new survey tools, such as the Public Expenditure Tracking Survey (PETS) and Quantitative Service Delivery Survey (QSDS), have enabled researchers to track resources and monitor the attendance of frontline providers. These research and survey results have improved the understanding of a broad range of misconduct and contributed to reshaping the policy debate about corruption.

Following the recent findings on frontline provider misconduct, this essay focuses on behaviors that are difficult to observe and quantify, but whose impact on service delivery and regulation has adverse long-term effects on households. We introduce

the term “quiet corruption” to indicate various types of malpractice of frontline providers (teachers, doctors, inspectors, and other government officials at the front lines of service provision) that do not involve monetary exchange. These behaviors include not only potentially observable deviations, such as absenteeism, but also hard to observe deviations from expected conduct, such as a lower level of effort than expected or the deliberate bending of rules for personal advantage. For example, education service delivery requires teachers to be present in school as well as to deliver classroom instruction required by the curriculum. Similarly, a building inspector can turn up to inspect the structural integrity of a new shopping mall but choose to exert little effort in executing the task.

Quiet corruption, as opposed to corruption that involves an exchange of

money—either political level thefts or small but frequent bribes—is less salient or “noisy,” and consequently less likely to attract public attention. Despite its low visibility, quiet corruption is ubiquitous. And it is associated with harmful long-term consequences, particularly for the poor who are more exposed to adverse shocks and more reliant on government services to satisfy their most basic needs.

Two examples illustrate the magnitude of the consequences of quiet corruption. First, among the reasons for low fertilizer usage among African farmers is the poor quality of fertilizers on the market. Despite the capability of manufacturers to produce good fertilizers, poor controls at the producer and wholesaler levels resulted in 43 percent of the analyzed fertilizers sold in West Africa in the 1990s lacking the expected nutrients, meaning that they were basically ineffective (IDFC 1995). It is likely that poor farmers’ experiences with low-quality fertilizers discourage fertilizer adoption.

Second, a survey of malaria fatalities in rural Tanzania reported that nearly four out of five children who died of malaria sought medical attention from modern health facilities (de Savigny et al. 2008). A range of manifestations of quiet corruption, including the absence of diagnostic equipment, drug pilfering, provider absenteeism, and very low levels of diagnostic effort, all contributed to this dire statistic (Das and Leonard 2009).

The concept of quiet corruption is captured in Figure 1. The familiar forms of corruption—both big time and petty—are just the “tip of the iceberg”; the less frequently observed deviation from expected conduct is quiet corruption. In addition to capturing the notion that quiet corruption is not very visible, the iceberg analogy provides two additional insights. First, quiet corruption occurs across a much wider set of transactions affecting a large number of beneficiaries directly. Quiet corruption is arguably present in a large share of doctor–patient or teacher–pupil interactions, for example. Second, quiet corruption plausibly has deep long-term consequences on households, farms, and firms. Comparing the long-term consequences of different forms of corruption is a hazardous undertaking. In addition

Figure 1 Big-time and petty corruption are the “tip of the iceberg”



to being affected by the same country level characteristics, all three forms of corruption are related. The quiet corruption of low-level officials may very well have been “justified” in their minds by the misbehavior of their superiors involved in big-time corruption. Likewise, by reducing available resources and compromising the monitoring and enforcement of conduct, big-time corruption encourages low-level civil servants to engage in opportunistic behavior. An instance of teacher absence could be the result of a poor working environment occasioned by big-time corruption or other factors beyond the teacher’s and education managers’ control. However, it can also be categorized as quiet corruption—the abuse of public office by the teacher. The long-term consequences of this and other instances of absence compound the effects of both big-time and quiet corruption.

Corruption is embedded in the political economy of Africa. A number of studies describe the interaction between various forms of corruption and how it is intrinsically linked to the way power is exercised.⁵ In particular, when a social unit is highly diverse ethnically⁶—as is the case in many post-independence African countries—there is likely to be suspicion and division among members, making the process of agreeing to rules for governance extremely difficult. In this context, small groups (elites) that are highly homogeneous are more likely to prevail and impose rules that bias the system in their favor. The enforcement of these biased rules requires either coercion or “additional resources” to ensure the cooperation of members of other groups who will try to avoid such biased rules.

In many African states, the coercion option is not feasible because state power is limited. In contrast, the option to purchase the cooperation of other groups tends to be the most viable. Ruling elites in regimes with limited legitimacy thus regard corruption purely in terms of its political functionality as a source of patronage resources to maintain and strengthen the system of political power.⁷ The more these elites are able to privatize state resources, the more they can distribute favors and create a base of consensus for their privileged position. Thus a strategy to control the state creates

an environment conducive to misconduct by frontline service providers.

The scheme of insiders profiting from biased rules in the system is mirrored in society. Police exert their influence to extract benefits from the disorganized mass of road users; doctors do not show up in public facilities and instead provide services privately; teachers do not show up in classes since they have a second job and their impunity is guaranteed by their superiors in exchange for other favors, and so forth. It follows that corruption becomes an unavoidable element of daily life for many citizens and it diffuses throughout the economy; more big-time corruption begets corruption at the frontlines of service delivery, which in turn supports big-time corruption, creating formidable challenges to governance and accountability interventions.

For a number of key public services, the cumulative nature of human development implies that poor service delivery experienced during the early stages of life can have long-term consequences. The direct long-term effects of quiet corruption begin with poor service delivery during early childhood, which is then amplified by subsequent poor service provision throughout childhood. For example, a mother who is a victim of quiet corruption—poor quality antenatal care—might give birth to an underweight child, who will likely suffer a series of health setbacks during childhood that potentially magnify the immediate effects of the poor antenatal care. This amplification process is also driven by families’ increasingly negative expectations of service delivery systems, leading to even fewer health service visits and the use of poorer quality alternatives. In the African context, alternative health services are often nonexistent, of low quality, or too costly for the typical household. The family’s decision to exit the system leads to a worsening of the public sector and can ultimately result in the collapse of service delivery.⁸ For example, as McPake et al. (2000) document, the poor quality of health care services in Uganda created a downward spiral of underutilization of public health facilities. Lower demand for services led to even lower staff attendance and to shorter opening hours of health care facilities.

Considering the pervasiveness of corruption and that the different types are

intertwined with the functioning of political and social systems in many developing countries, it is clear that focusing only on the monetary forms of corruption misses the majority of solutions. Hence, this essay attempts to provide a framework to understand the implications of the entire “iceberg” of misconduct that shapes the level and quality of services and regulation in developing countries. The essay outlines evidence of quiet corruption and discusses both direct and indirect long-term consequences on households, businesses, and farms.

The framework in Figure 2 describes the mechanisms through which quiet corruption affects delivery of frontline services, such as medical treatment or in-classroom instruction, and the provision of business regulations, such as trading licenses. The three arrows linking quiet corruption and service delivery represent “pathways of influence.” These are denoted as (1) low effort due to absenteeism, (2) low effort on the job, and (3) resource leakage.

Low effort due to absenteeism refers to frontline provider behaviors that restrict the amount of time they are available. Absenteeism implies that providers work less time at the public facility than contracted for, with little or no repercussions on their earnings. The second arrow takes into account the extent to which frontline providers shirk their duties while on the job. Finally, the third arrow refers to providers’ involvement in the leakage of key inputs, such as drugs and medicines, in the case of health-care workers, or books and other instructional materials in the case of teachers.

Despite the difficulties in observing attendance and job effort, the lack of transparency and accountability, and the weaknesses of monitoring and enforcement inherent in public service organizations in developing countries, this essay argues that quiet corruption is likely to be equally insidious as big-time corruption. The right-hand portion of Figure 2 illustrates the linkage between poor service delivery today and the direct and indirect long-term consequences of big-time corruption and quiet corruption. Because of its nature, quiet corruption can affect incentives and distort the allocation of resources at the individual, household, firm, and farm levels.

While these long-term consequences are very hard to quantify because of the absence of data that trace out the effects of contemporaneous misconduct on future outcomes and because of the multiplicity of other factors that may contribute to them, combining evidence from both developed and developing countries provides a sense of the magnitude of resulting damage to development. The long-term consequences are divided into direct consequences, such as the limitation of the productivity potential of households, firms, and farms, and indirect consequences, such as distrust of public institutions and the notion that corruption is inevitable and omnipresent. These two components are explained in more detail below.

One direct effect of quiet corruption is the loss of production as a result of the lower quality of inputs. For example, research on corruption in the health-care sector rarely documents how the effect of poor service delivery that might hamper a child’s development has permanent effects on adult educational attainment, cognitive skills, and underlying health. The absenteeism of doctors or nurses, for example, might contribute to the non-detection of iron deficiency (Ramakrishnan et al. 1999) or deficiency of other micronutrients in a pregnant mother’s diet. The lack of timely intervention affects the development of the fetus and stunts the child’s full growth. The consequences of this poor health treatment may manifest during adolescence and adulthood and could affect the individual’s productivity (Barker et al. 1995; Smith 2009).

An indirect effect of quiet corruption operates through changing the beliefs and expectations of service beneficiaries. As a result of this transformation, agents may decide to allocate their time in more remunerative activities in the short run at the expense of capital accumulation and investment in activities that produce larger gains only in the long run. A typical case is the non-investment in the human capital of children because of beliefs about the low quality of education, which shifts the allocation of time and resources away from education toward home production or labor market participation. Another example, as mentioned above, is the lack of adoption of fertilizers and other productive

inputs by farmers who have had bad prior experiences.

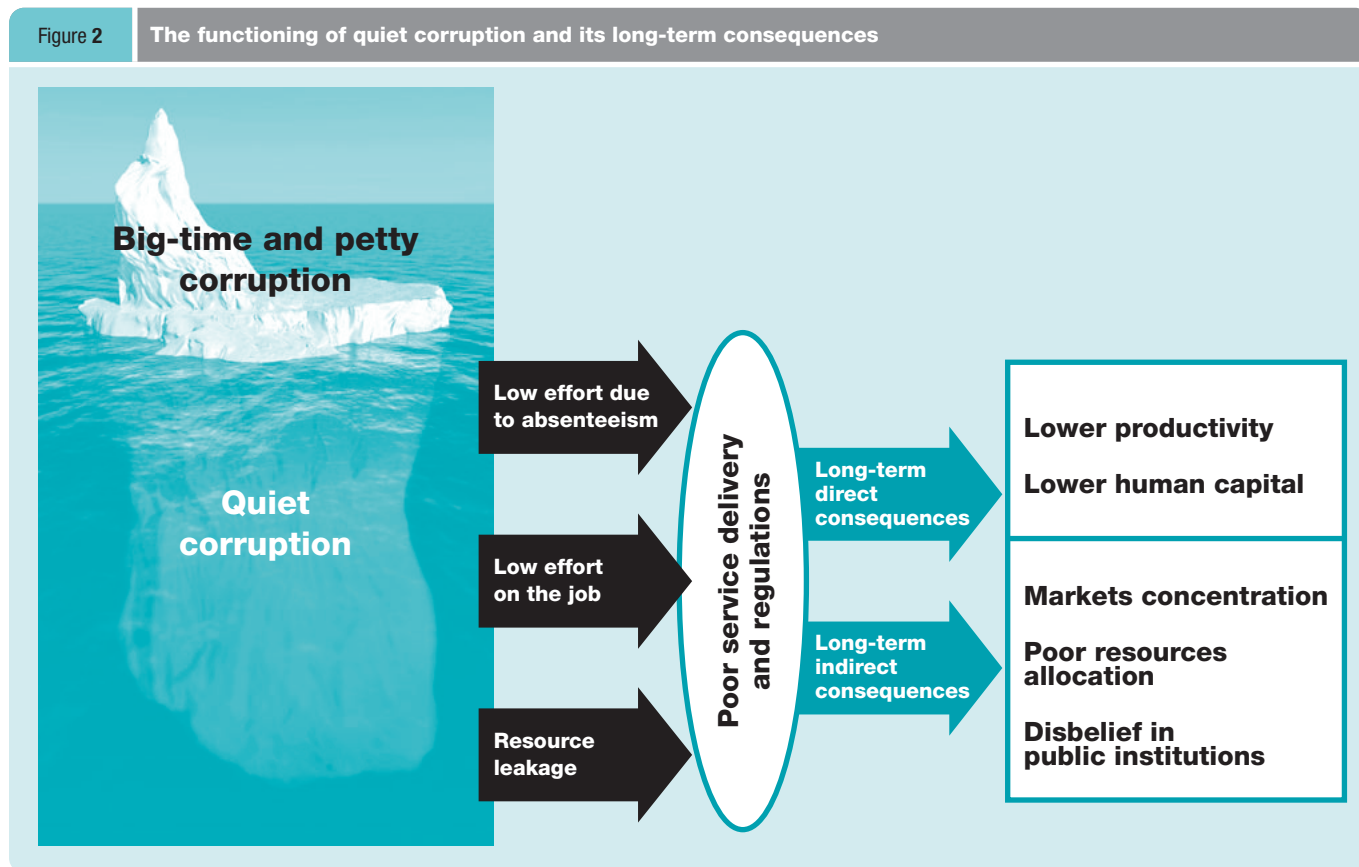
Finally, the notion that corruption is generally ubiquitous and inevitable implies that it is an “accumulating process”: the more corrupt the system, the more it produces a downward spiral of malpractice (de Sardan 1999). Within a corrupt environment, people adjust their strategies accordingly and contribute to the general acceptance of the phenomenon, thus making it routine. If professional standards are substituted with a pure “fend for yourself” attitude at every level (Lindelov, Serneels, and Lemma 2005), the system falls into a vicious cycle in which every misconduct is tolerated and the structure of incentives becomes biased against those who adhere to the standards.

Some sectors are more vulnerable to quiet corruption than others; the main determinants are the level of transparency and accountability in the sector, the asymmetry of information, and the discretion and monopoly power of service providers, all of which create incentives for misconduct. The manifestation will also differ from rural to urban areas and will depend on the

socioeconomic characteristics and political power of the main clientele. The implication is that reform strategies should differ depending on the nature of service. There will be differences across countries as well, in accord with the levels of accountability and transparency and the systems of monitoring, enforceability of rules and procedures, and punishment of corruption. As a consequence, there is no recipe on how to prevent and fight quiet corruption that is valid for all sectors and countries. The aim of this essay is not to arrive at specific recommendations but rather to stimulate debate around this critical development topic, expecting that it will increase interest and efforts that are much needed to combat quiet corruption.

While quiet corruption is indeed present in all sectors, the next sections present evidence and discuss the consequences of quiet corruption in education, health, the private sector, and agriculture. This selection is based on the importance of these sectors for Africa’s development as well as the existing evidence on quiet corruption. For each sector, the presence of quiet corruption in the typology presented in Figure 2

Figure 2 The functioning of quiet corruption and its long-term consequences



is documented. Furthermore, and to the extent possible, the direct and indirect long-term consequences for economic agents are presented.

Education

The education sector prepares youth for productive engagement in the social, political, and economic realms as adults. In Africa education accounts for a large fraction of government expenditure, with a large share of public resources accruing to teachers. Teacher remuneration accounts for nearly three-quarters of recurrent expenditure in education in developing countries (Bruns, Mingat, and Rakatomalala 2003). Quiet corruption in education, therefore, is not only costly in terms of the direct loss of considerable scarce public resources, but more importantly in terms of its long-term consequences for the human capital base. Given the long term consequences of adults with lower skills and poor attitude, quiet corruption in education undermines the serious efforts being invested in the eradication of poverty and improvement in the competitiveness of African economies (World Bank 2009).

This section presents three different forms of quiet corruption that have been identified in the literature. First, the issue of frontline provider capture of the education system: teachers modify the rules and influence the allocation of education budgets. Second, evidence for low levels of teacher effort in the form of attendance and effort on the job is discussed. Finally, evidence of the extent of the leakage of non-salary cash flows and instructional materials in the education sector is presented. Short-term impacts of each of these forms of quiet corruption are linked to long-term effects through the cumulative nature of skills acquisition and evidence from cohort studies in developed countries.

Identifying quiet corruption in education, as in any other sector, is not straightforward. Much of the evidence presented below does not unambiguously categorize any observed deviation from expected behavior as quiet corruption. For example, it is difficult to establish the extent to which teacher absenteeism or low levels of school inspection reflect either a poor working environment or the abuse of public office.

For purposes of this essay, the frequency of documented deviations represents an upper bound of the prevalence of quiet corruption. Following the framework of Figure 2, the long-term consequences are divided into direct and indirect effects.

Teacher capture

A considerable body of evidence documents the capture of service delivery systems by key actors in the service delivery chain (Mizala and Romaguera 2004 and others). “Capture” refers to a situation in which key actors are able to alter the rules, such as the conditions of service or the allocation of expenditure in the sector, to their advantage and to the detriment of service beneficiaries and the society at large. In the case of the education system, teachers are a key group of actors that have exerted considerable influence over both the allocation of resources within the system, but more importantly, the rules that define their conditions of service. Much of this power is exercised as a result of the influence wielded by teacher unions or through the direct involvement of current or retired teachers in local and national politics.

This “teacher power” could represent an important constraint on the extent to which levels of learning can be improved in developing countries. Two examples demonstrate the effects of teacher capture on the learning levels of pupils. In 1998, the Bolivian government introduced a policy to ascertain the quality of teachers through a “teaching sufficiency examination.” Participation in the test was voluntary and teachers who passed the exams received a wage increase relative to the traditional wage scale. In addition, head teachers had to pass this test in order to continue in their role as principals. The first round of implementation revealed very low levels of teacher quality: 60 percent of the teachers who participated failed the test and only a very small fraction received a wage increase. The teacher union rejected the results of the test, claiming that the invitation to participate and the assignment of grades were problematic. A series of demonstrations and hunger strikes calling for the elimination of the examinations followed. The government capitulated and in the second year of implementation more than 18,500 teachers received wage increases.

The policy was discontinued and replaced by a range of largely non-performance-based incentives (Mizala and Romaguera 2004).

A 2007 proposal by the ministry of education in Uganda to improve management at the school level through performance contracts with head teachers met a similar fate. In the proposed contracts, head teachers would sign an agreement with the local government outlining a series of goals to be met over a two-year period. Failure to meet these goals could lead to demotions or transfers. Even though the policy explicitly stipulated that head teachers would be the main architects of the performance targets, the teacher union successfully opposed the policy on the basis that the penalties included in the contracts were excessive and unfair.

Other rules that are subverted for teacher benefit include the implicit or explicit sanctioning of additional instruction outside regular school hours. The legitimacy of this practice in a number of countries is particularly pernicious when public teachers selectively cover material during regular school hours and other material during their private tutoring sessions (Jayachandran 2008; Dang and Rogers 2008). The extent to which this extracurricular instruction might be occurring is suggested by the high and increasing prevalence of extra tuition, which is shown in Table 1 using data from the Southern and Eastern Africa Consortium for Monitoring Educational Quality (SACMEQ). While these data are generated from pupil reports that are unreliable for establishing the existence or level of extra tuition fees, they suggest a considerable degree of discrimination: households that cannot afford extra lessons receive less and/or lower quality instruction than is stipulated by the curriculum.

Low levels of teacher effort

Teacher effort is an important input into learning (Park and Hannum 2002; Hanushek, Kain, and Rivkin 2005). Perhaps the most important form of quiet corruption in education is the low levels of teacher effort that arise from teacher absence and low effort while in school. Evidence on the extent of teacher absence has improved greatly over the last decade. Early evidence comes from head-teacher or teacher self-reports of the

Table 1 Percentage of grade 6 students receiving extra lessons

Country	Percentage of grade 6 students receiving extra lessons	
	SACMEQ I 1995	SACMEQ II 2000
Mauritius	77.5	86.6
Kenya	68.6	87.7
Zanzibar	46.1	55.9
Zambia	44.8	55.1
Namibia	34.7	44.7
Malawi	22.1	79.7
Total	49.0	68.3

Source: Paviot, Heinsohn, and Korkman (2008).

duration of absence during a given time period (usually 1–4 weeks). For example, an important UNICEF multi-country survey of 14 developing countries conducted in 1995 and reported in Postlethwaite (1998) reports high levels of head-teacher reported absenteeism. Among the African countries, Tanzania, Uganda, and Zambia were the worst performers. More than half the teachers in Tanzania and Uganda were absent at least one day in the previous week and about a quarter of teachers were absent for two or more days. In Zambia, a quarter of teachers were absent for two or more days. Using a similar methodology, Das et al. (2004) report an average absence duration of two days per month in Zambian primary schools in 2002.

Concerns about the quality of head-teacher or teacher reports of absenteeism have motivated the use of *direct observation* of teacher attendance (Table 2).⁹ In this approach, which relies on unannounced visits, a teacher is reported as being absent if he or she cannot be found by the enumeration team at a time that he or she is scheduled to be in school. This methodology has been widely used in western Kenya and a large multi-country study that included Uganda (Chaudhury et al. 2006). Kremer et al. (2004) report that 20 percent of teachers in rural western Kenyan primary schools could not be found during school hours. In Uganda, two waves of surveys using this methodology found teacher absence rates of 27 percent in 2002 and 20 percent in 2007.¹⁰

The above studies document considerably higher levels of absence among head teachers and other senior teachers.¹² Whether

Table 2 Estimates of teacher absenteeism

Country	% teachers absent (direct observation)	Days absent per month (teacher self report)
Uganda (2003) ^a	27	
Uganda (2007) ^b	20	
Kenya (2003) ^c	20	
Zambia (2007) ^d	20	
Burkina Faso (1995–8) ^e		2.2
Cameroon (1995–8) ^e		1.8
Cote d'Ivoire (1995–8) ^e		1.3
Madagascar (1995–8) ^e		2.5
Senegal (1995–8) ^e		4.7
Zambia (2002) ^f		2.0

Sources: a. Chaudhury et al. (2006); b. Habyarimana (2007); c. Glewwe, Kremer, and Moulin (2009)¹¹; d. Halsey, Rogers, and Vegas (2009); e. Postlethwaite (1998); f. Das et al. (2004).

this represents low effort is difficult to say because a range of duties may draw principals away from school (to attend meetings or request or collect resources). Taking the example of Uganda, head teachers were twice as likely to be absent as regular teachers (Habyarimana 2007). In addition, assuming that the reported reasons for absence are credible, only half of the absences are officially sanctioned. Perhaps even more consequential is evidence from the multi-country study that documents higher regular teacher absence when the head teacher is absent. Chaudhury et al. (2006) also collected information about the likelihood that teachers were warned or fired for absence. The results from India are indicative of the low levels of sanctions: only one teacher in 3,000 schools had been fired for absence despite high absenteeism rates. The level and quality of instruction provided by teachers is not only a function of their training and attendance patterns, but also of their behavior while in school. Measuring the effort level of teachers in school and the extent to which it qualifies as quiet corruption is challenging. Indeed, a number of studies have tried to quantify this effect with limited success. Some studies rely on adding up the number of class hours using the school's timetable. For example, Postlethwaite (1998) reports that students in his developing country sample received only about 80 percent of the total timetable-derived annual instruction time as those in

developed countries. While this measure indicates lower levels of instruction, it assumes that teacher attendance patterns and in-class effort and quality are similar across developed and developing countries. Higher levels of teacher attendance and the use of substitute teachers in developed countries further deepen the instruction time gap between developed and developing countries.

Additional evidence from direct observation studies suggests that in-class behavior of teachers differs from their developed country colleagues. While there are problems of interpretation,¹³ direct observation surveys suggest that even among those teachers who are found present in school, in-class effort is low. For instance in western Kenya, Glewwe, Kremer, and Moulin (2009) document that 12 percent of teachers were found to be outside the classroom when they should have been teaching. An even higher fraction is estimated in Uganda where nearly one-third of teachers found were not in the classroom during learning periods (Habyarimana 2007).

Teacher influence and capture could explain much of the low levels of teacher effort documented. For example, the multi-country study finds that teacher absence is not concentrated among a few "ghost" teachers, but rather is driven by the behavior of a large share of teachers. Punishment of poor attendance or tardiness on the job is very rare. In many cases, warning letters or reports of teacher misconduct do not trigger any sanctions.

Leakage of resources

Schools combine instructional materials and teacher and pupil interaction to produce cognitive skills. This essay documents the leakage of two key inputs: instructional materials and school inspection. A teacher with few or no instructional materials will find it harder to impart the necessary skills to her charges. In addition, school inspection ensures that the right pedagogical strategies are being implemented and instructional materials are well deployed.¹⁴

The clearest example of the extent of leakage of instructional resources comes from two PETS surveys in Uganda in the 1990s. The first study revealed that an average of only 13 percent of the resources

intended for schools were reaching them. Poor information flows about the size of the capitation grant and the timing of resource flows provided local education authorities with the cover to divert these resources. These findings motivated a government-led intervention to increase the transparency of grants disbursement. In addition to prosecuting offenders, the newspaper and radio campaign led to large increases in school level funding (Reinnika and Svensson 2005).

In the Zambia PETS of 2002, Das et al. (2004) found that resources meant for renovation were more likely to go to schools in the middle of the wealth distribution, which suggests a degree of collusion between head teachers of middle-tier schools and local education authorities. Other PETS carried out in Africa all point to considerable leakages in non-salary funding (Gauthier 2006).

Finally, the quality of instruction and pace of learning is supposed to be monitored by a variety of standards officials who typically work in the local education authority. Regular inspection provides crucial information about challenges and successes that can be used to generate improvements in service delivery.¹⁵ While low levels of school inspection can be the result of a poor working environment in which willing officials lack the means to conduct their duties, the *prima facie* evidence is examined as an upper bound of the extent of deviations from norms. It is important to bear in mind that countries have different norms of inspection frequency that determine the extent to which observed rates of inspection differ from stipulated rates. This essay instead presents evidence from a number of sources that simply report the fraction of schools that have been visited by an inspector in the year since the survey. Postlethwaite (1998) suggests that in Madagascar, Togo, Uganda, and Tanzania, more than 70 percent of students were in schools that had not been inspected in the previous year. More recent evidence from a number of surveys (Uganda Unit Cost Study and PETS in Zambia and elsewhere) suggest similarly low levels of inspection.

Long-term consequences for education

While it is difficult to attribute all of the deviations above to misbehavior, establishing

the consequences of these deviations is straightforward. The acquisition of skills and competencies is a cumulative process: cognitive achievement today defines how much a child will learn tomorrow. Therefore, quiet corruption today that leads to contemporaneous lower levels of learning has long-term effects. Some of these long-term effects operate through decisions that households make. For example a household might decide that a child who is not learning very much could be better utilized to look after cows. Evidence of this cumulative learning process comes from cohort studies in developed countries that demonstrate the strong correlation between cognitive skills while young and competencies and earnings in adult life (for example, Case and Paxson 2008). For each of the three forms of quiet corruption in education identified above: teacher capture, low effort, and leakage of resources, there is evidence of a negative impact on learning. These short-term impacts translate into long-term consequences through the cumulative nature of skills acquisition and the dynamic decisions of households. In short, quiet corruption has arguably grave consequences for the future competencies of Africa's youth.

Households make dynamic decisions about whether to enroll/continue a child in school and how much to invest in time and resources based on complementary inputs provided by teachers and schools, and particularly, based on perceptions of the child's learning. Each of the three forms of quiet corruption impinges on household decisions and consequently on the competencies and attainment of children. Teacher instruction time is a crucial input in the production of competencies and skills that are crucial in a wide range of market and non-market activities. And the level and quality of teacher instruction time is affected by all three forms of quiet corruption.

The capture of the education system affects attainment and long-run skills acquisition in several ways. First, as the examples above demonstrate, capture supports lower levels of teacher quality and managerial effort at the school level. While evidence of the link between teacher quality and learning outcomes is thin, a study in Israel found that teacher training is associated with learning gains (Angrist and Lavy 2001).

Second, to varying degrees, capture supports deeper levels of quiet corruption: low levels of teacher effort, leakage of instructional materials, and lower levels of inspection.

The effects of teacher absence, leakage of instructional materials, or lower monitoring of learning are well documented. For instance, using data from Zambian primary schools, Das and others (2007) found that an increase in absence duration of one day per month reduces test scores by about 4–8 percent of the average annual gains in English and mathematics. In addition, Kremer, Miguel, and Thornton (2004) found that test score gains in response to a girls' scholarship program in western Kenya are in part the result of increases in teacher attendance of nearly 6 percentage points. Duflo, Hanna, and Ryan (2008) showed test score gains of 0.2 standard deviations that corresponded to a halving of teacher absence in non-formal schools in India.

Several studies document the positive link between more resources and short-term learning gains in Africa. Using the results of a newspaper campaign that increased the amount of funding reaching schools in Uganda, Bjorkman (2006) reported gains in national test scores attributable to the increase in capitation grant flows. In addition, evidence from Zambia suggests that increases in unanticipated funding increase the test scores of grade 6 pupils (Das et al. 2004). Evidence from western Kenya suggests that the randomized provision of textbooks increased learning only for the best students (Glewwe, Kremer, and Moulin 2009). In contrast, a recent study in Brazil showed that higher levels of resource leakage at the municipality level are associated with lower learning gains of pupils (Ferraz, Finan, and Moreira 2009).

While test score outcomes are typically measured for 10- to 14-year-old students, the deleterious effects of quiet corruption extend throughout a child's adolescent and adult life. Two particular channels amplify the long-term consequences. First, low levels of learning occasioned by quiet corruption produce a poor learning environment in the next year that leads to further teacher and student absenteeism. This dynamic is reinforced by the links between student and teacher effort documented by Kremer et al.

(2004), leading to even lower learning gains. Second, as mentioned earlier, households make human capital investment decisions on the basis of current and expected learning achievements. A child who is struggling in a school system characterized by quiet corruption is more likely to drop out or be removed from school, leading to permanently low levels of skills and competencies. Evidence from long-term cohort studies (Case, Lubotsky, and Paxson 2002) confirm the long-lasting nature of the adverse effects of learning deficiencies at an early age on productivity in later years and complete the link between quiet corruption and direct long-term consequences.

Health

As in the education sector, quiet corruption in the health care sector is widespread in Africa. However, as in the other sectors discussed in this essay, it is generally very difficult to ascertain the intent and therefore culpability of providers. In laying out the evidence for each of these behaviors in health care and their attendant consequences, we advise the reader to keep this caveat in mind.

Low levels of provider effort

As in the education sector, the quality and level of health services depend on the quality of providers, the frequency of attendance, and effort levels while at work. Evidence on quality and effort levels is only just beginning to emerge and is briefly discussed below. On the other hand, evidence on health provider attendance is considerable and suggests a very discouraging situation. Differences in measurement methodology notwithstanding, reports of health provider absence are very high. PETS in Mozambique and Chad (Gauthier 2006) document a rate of absenteeism in public facilities of around 20 percent. A direct observation survey in Uganda recorded a rate of 37 percent in the first round (2002) that went down 4 percentage points in the second survey in 2003. Bucking this trend is Cameroon, where estimated absence rate is only 5.6 percent.

In another survey based on direct questions to African, Asian, and Latin American physicians who had obtained a master's of public health degree in Europe between 1976 and 1996 (Macq and Van Lerberghe 2000),

doctors comprised the category most absent among health care personnel, declaring only 73 percent of their time serving the public, that is, in their official job capacity. The rest of the time was divided between a second job, generally in the private health care sector, or in teaching or other activities often unrelated to the core activity. This is likely a conservative estimate, because respondents have incentives to underreport the effective time spent in other activities.

A study undertaken in Uganda between 1994 and 1997 involving health workers, community members, and the Health Unit Management Committee documents an environment where so-called “coping strategies,” activities not directly related to the job position, are predominant (McPake et al. 2000).¹⁶ Health workers, besides openly admitting to extra-legal user fees for services and selling drugs, also declare that their greatest source of income is agriculture, thus implicitly acknowledging a high rate of absenteeism. A comparison of working hours declared with observed working durations over the course of a month reveal a striking gap: effective hours worked are in most cases one-third or less than what is declared. This is consistent with very low utilization of these facilities, which are open for only two to three hours in the morning.

Absenteeism thus gives way to a vicious cycle of low service utilization by the public, which then further reinforces the poor attendance of health workers.¹⁷ For example, Banerjee, Deaton, and Duflo (2004) found that in Rajasthan, India, over the course of 18 months, nurses, who were assigned to staff the clinic on a regular basis, were only to be found in the facilities 12 percent of the time. The record of absences, and therefore closure of facilities, followed no pattern, meaning that patients’ likelihood of finding a provider was unpredictable, thereby discouraging patients from using the facilities or keeping appointments.

In addition to high absence rates of health-care workers, a number of studies suggest that quality and effort on the job is very low. Using direct clinic observation and vignettes, Das and Hammer (2005) and Leonard and Masatu (2005) provide a sense of the magnitude of the problems of low quality and effort in health care.¹⁸ Drawing

on studies carried out in India, Indonesia, Mexico, Paraguay, and Tanzania, estimates of doctor competence and practice paint a disturbing picture. Restricting the focus to the evidence from Tanzania, Leonard and Masatu (2007) found that health provider competence is considerably poorer in rural areas. However, more appropriate to our definition of quiet corruption, the gap between what providers know and what they do, that is, provider effort, is particularly worse in government facilities.

Leakage of resources

Estimating the degree of resource leakage in health care is very challenging. In many countries, governments do not state how much they have allocated for various health care inputs, depriving the analysts of a benchmark against which to assess receipts.

However, for some resources, leakage can be measured as the difference between stipulated resource flows (typically non-salary budgetary resources) and actual amounts received. Leakage amounts in this category vary from about 38 percent in Kenya to 99 percent in Chad (Table 3). While the differences do not singularly represent leakage close to the frontline of service delivery, the magnitude of the leakage gives a sense of the size and importance of this form of quiet corruption.

In addition to leakage of non-salary cash flows, the leakage of health goods is pervasive. A qualitative survey of 50 health workers in Mozambique and Cape Verde concluded that this practice is widespread, particularly among doctors (Ferrinho et al. 2004). The study also documents an “institutionalization” of this phenomenon: Mozambican health workers report the existence of informal contracts between private clinics

Table 3 Leakage of resources in health care

Country (year)	% of cash/in-kind resources leaked	Resource category
Kenya (2004)	38	Non-salary budget
Tanzania (1999)	41	Non-salary budget
Uganda (2000)	70	Drugs and supplies
Ghana (2000)	80	Non-salary budget
Chad (2004)	99	Non-salary budget

Source: Gauthier (2006).

and public hospitals to ensure a steady supply of certain medicines. Results from a survey of 90 Mozambican health care workers corroborate the findings above (Schwallbach et al. 2000).

Weak regulation of drugs

Quiet corruption in the regulation of pharmaceuticals is rampant and deadly. The efficacy of medication is dependent on the careful regulation of standards in the production, distribution, and prescription of pharmaceuticals. Inadequate or weakly implemented quality controls can lead to distribution of poor quality and often counterfeited drugs, which result in severe health consequences including death of the consumers. Cohen et al. (2007) document the existence of several areas where quiet corruption along the value chain from production to consumption of pharmaceuticals compromises long-term health.

This high vulnerability to corruption derives from the specific features of the health sector. Information between consumer and producer is highly asymmetric. The typical consumer cannot verify in advance the quality of the medication and has to rely on information provided either by the pharmaceutical producer or the health-care provider. Second, the consumer's inability to verify quality necessitates government regulation. The great latitude in regulating pharmaceutical quality is sometimes abused by regulators, either directly as a result of low effort or indirectly through inducements by drug producers or distributors.

For example, pharmaceutical companies should follow specific protocols defined by the World Health Organization in the production and distribution of medication.¹⁹ Failure to comply with mandated procedures for handling raw materials and storing, packaging, and labeling products compromises the quality of the product. Low effort or capture of the regulatory authority implies that these regulations are weakly or selectively enforced, which results in the selling of substandard and sometimes harmful products.

A number of examples highlight the costs of weak regulatory systems. In 1995 in Haiti, 89 people died after using Paracetamol (acetaminophen) cough syrup prepared with diethylene glycol, a toxic chemical used

in antifreeze (Cohen et al. 2007). Another study in South Asia (Newton et al. 2001) reported that 38 percent of the anti-malarial, artesunate-based products sold on the market contained a lower-than-standard quantity of active ingredient, drastically reducing their efficacy. Akunyili (2005) found that during the 1990s, Nigeria was flooded with counterfeit drugs that, according to some studies, accounted for more than 50 percent of drugs sold in drugstores. While specific statistics are not available on deaths or serious illnesses caused by fake medicines, anecdotal evidence suggests a connection between drug efficacy and number of fatalities. A further consequence of weak regulation was the total ban of Nigerian-made pharmaceuticals imposed by neighboring countries.

Long-term consequences for health care

Even if drugs are stolen and do not reach facilities, they may be reaching the target population through different channels. Although the distribution may be inequitable due to pricing out particular population segments and could possibly be less effective because medicines are dispensed by non-trained personnel, this outcome does not necessarily imply a dramatic worsening of health conditions in the population. We sidestep this issue by elucidating the link between quiet corruption and contemporaneous and long-term health outcomes and the long-lasting beliefs of health service users.

While there are few micro-level studies that demonstrate a causal link between quiet corruption in health care and poor health outcomes, a number of cross-country regressions suggest a strong relationship. To establish the link between quiet corruption and long-term consequences, a useful starting point is research that has estimated the long-run consequences of malaria eradication (Cutler et al. 2007), famine, and low birth weight on long-term labor market consequences (Almond et al. 2006), and cohort studies in the United Kingdom and United States that examined the effects of low birth weight on cognitive skills and long-term wellbeing—the so-called Barker hypothesis (Barker et al. 1995; Barker 1998).

Cross-country research has demonstrated a negative association between country-level measures of corruption and health

care indicators. To the extent that country-level corruption is linked to quiet corruption through the “mirror effect” described in the introduction, these results potentially reflect the effects of quiet corruption. Gupta, Davoodi, and Tiongson (2000) showed that corruption indicators are positively associated with child and infant mortality, the likelihood of an attended birth, immunization coverage, and low birth weight. Closer to one of the forms of quiet corruption defined above, Rajkumar and Swaroop (2008) found that the effectiveness of public health spending in reducing child mortality depends crucially on the perception of higher government integrity. Wagstaff and Claeson (2004), replicating a Filmer, Hammer, and Pritchett (2000) study using more recent data, found that public spending reduces under-five child mortality only where governance is good, as measured by the World Bank’s Country Policy and Institutional Assessment (CPIA) score. This study specifically explored the implications of additional spending for reaching the MDGs, and concludes that more spending in medium and low CPIA countries would not reduce child mortality and that per-capita income growth offers a better investment if mortality declines are the objective.

Micro evidence is more specific, enabling a richer description of how quiet corruption in health translates into poor service delivery and documentation of some of the direct and indirect long-term consequences listed in Figure 2. Indirect evidence of the link between service utilization and health outcomes comes from a study in Uganda that estimated the effect of banning user fees on utilization and morbidity (Deininger and Mpuga 2004). In addition to direct effects on service utilization, quiet corruption alters the beliefs of households about the efficacy of treatments obtained in public facilities. Such beliefs reinforce lower service utilization in preference for traditional, sometimes life-threatening, interventions.

Given the importance of physical and cognitive development during a child’s gestation and early years, quiet corruption that affects the utilization of key inputs such as prenatal and post-natal care, immunization, and the treatment of infant and child infections is likely to have far-reaching, long-term

consequences. Two recent pieces of evidence confirm the link between contemporaneous quiet corruption and birth outcomes. Goldstein et al. (2009) found that absence of a nurse responsible for pre- and post-HIV-test counseling has a great impact on whether prenatal care patients in Kenya are tested for HIV. In addition, they found that women who are not tested and counseled are more likely to give birth without a professional attendant, less likely to receive preventive mother-to-child transmission medication, and less likely to breastfeed their babies.²⁰ They concluded that reducing absenteeism in public health facilities could reduce vertical transmission of HIV by 0.5–1.5 infections per 1000 live births.

The second piece of evidence comes from an intervention inspired by *World Development Report 2004* (World Bank 2003). Bjorkman and Svensson (2007) document the results of a report card intervention in Uganda in which beneficiaries were provided with information on the performance of their public facility in relation to regional and national standards. The impact of the report card was stunning. It raised both the level of health service utilization and provider attendance and, consequently, reduced infant mortality by one-third, increasing birth weight, and improving other health outcomes.

The link between these two pieces of evidence and long-term consequences is drawn from cohort studies primarily in developed countries that document long-term consequences of low birth weight and short stature during early childhood with long-term cognitive and health outcomes. Height at age three, which is a function of nutrition and health during infancy, affects cognitive skills in adulthood (Case, Lubotsky, and Paxson 2002). Other studies, such as Almond, Chay, and Lee (2005), demonstrate a link between mothers’ health during gestation and long-term health and labor market outcomes of the children (for a review of these and other studies, see Smith (2009). Assuming that the same mechanisms operating in these developed countries also apply to developing countries, quiet corruption in health care that particularly affects early childhood outcomes has large and long-lasting effects on the competitiveness of an economy and the well-being of its citizens.

Private Sector and Agriculture

This section describes the long-term consequences of quiet corruption in the private sector and agriculture, areas with a high potential to contribute to economic growth and poverty reduction in Africa. While the prevalence of informal payments for services is widely documented for the private sector, evidence for quiet corruption in both the private sector and agriculture is sparse. Although enterprises are the immediate victims of corruption, our contention is that they do not always bear the ultimate burden because they can often pass on any increased costs to consumers.²¹

A growing body of evidence on the prevalence of quiet corruption in the private sector draws from recent surveys of firms in developing countries. Both the firms' experience of *actual* petty corruption and their *perception* of corruption as an impediment to firm operations were elicited on the survey. While these two sets of questions shed light on the extent and severity of petty corruption, the prevalence of quiet corruption has been difficult to document. However, a careful examination of the survey data is indicative of the contours of quiet corruption.

Table 4 shows results for five corruption indicators for the sub-Saharan African countries surveyed. The first four indicators report the likelihood that firms make any informal payments to obtain licenses, contracts, or other services. The last indicator measures the extent to which corruption is a major or severe constraint to the firms' operations. There is considerable variation in the extent to which firms expect to make informal payments. For example, the share of firms in Cape Verde, Mauritius, and Namibia expected to make informal payments is considerably lower than that of the Organisation for Economic Co-operation and Development (OECD) country average (Investment Climate Assessment 2009). Nevertheless, a large percentage of firms expect that they will make informal payments to obtain government services and contracts. In nearly half the countries (16 of 35), more than 50 percent of firms reported an expectation of having to make informal payments to "get things done." In particular, in Burkina Faso, Cameroon, Democratic Republic of Congo, Guinea, and Kenya, nearly four out of every

five firms expected to make informal payments to obtain government services.

While many of these payments tend to be small, their high frequency makes them a considerable cost for firms. For example, Svensson (2003) reported that among Ugandan firms that paid bribes, the average amount of informal payments was equivalent to US \$8,280 (a median US \$1,820), corresponding to nearly 8 percent of the firms' total costs (1 percent at the median).

In the last column in Table 4, a large fraction of firms report that corruption is a major impediment to firm operations and growth. While it is hard to say how much of the firms' expectations of having to make informal payments are captured by this measure or the extent to which other business environment factors are more important constraints, this category likely incorporates forms of quiet corruption. The last row (Spearman Correlation) reports the results of the comparison between the corruption measures. The Spearman index²² reveals a positive correlation between incidence measures and the perceived one. Yet, none of the associations is statistically significant, which suggests that the rankings reflect distinct impediments.

The discrepancy between perceived corruption and incidence of corruption has attracted a great deal of attention from scholars and policy makers.²³ Quiet corruption may help explain the divide. As noted by Herrera, Lijane, and Rodriguez, (2008), perceived corruption partially captures the invisible element, notably the uncertainty stemming from engaging in corrupt transactions. For firms paying bribes, corruption has an immediate cost in the form of illegal payments—petty corruption—but also an additional cost represented by the capriciousness of interaction with public institutions.

Although corruption can be seen as a "tax" and might still allow companies to operate normally (Shleifer and Vishny 1993), the critical difference between a normal tax and the "corruption tax" is their predictability. In the first case, firms know the level and frequency of payments. In the case of corruption tax, capture by decentralized regulatory officials with considerable discretion engenders uncertainty about the level

Table 4 Incidence of corruption and perceived corruption in sub-Saharan Africa countries

	Incidence of corruption				Perceived corruption
	% of firms expected to pay informal payment to public officials (to get things done)	% of firms expected to give gifts to get an operating license	% of firms expected to give gifts in meetings with tax officials	% of firms expected to give gifts to secure a government contract	% of firms identifying corruption as a major constraint
Angola (2006)	46.8	10.08	14.84	38.45	36.06
Benin (2004)	57.65	41.25	21.21	75.43	83.85
Botswana (2006)	27.62	3.29	4.47	22.92	22.58
Burkina Faso (2006)	86.96	0	19.51	80.77	53.96
Burundi (2006)	56.46	40.26	22.63	44.36	19.72
Cameroon (2006)	77.6	50.81	65.43	85.23	52.05
Cape Verde (2006)	5.63	0	10.42	14.08	16.33
Congo, Dem. Rep. (2006)	83.79	66.25	64.42	80.54	20.02
Congo, Rep. (2009)	49.21	42.79	37.1	75.18	65.02
Côte d'Ivoire (2009)	30.64	31.8	13.62	32.34	74.99
Ethiopia (2006)	12.42	2.7	4.35	11.8	23.08
Gabon (2009)	26.09	0	22.81	26.61	41.35
Gambia, the (2006)	52.42	23.42	13.56	50.3	9.78
Ghana (2007)	38.77	22.6	18.08	61.23	9.86
Guinea (2006)	84.75	51.87	57.34	74.58	47.66
Guinea-Bissau (2006)	62.72	15.33	22.7	48.41	44.01
Kenya (2007)	79.22	28.75	32.25	71.2	38.35
Lesotho (2009)	13.96	3.34	9.2	26.37	46.71
Liberia (2009)	55.22	49.63	54.42	51.59	31.19
Madagascar (2009)	19.2	18.6	6.79	14.13	42.71
Malawi (2006)	35.65	4.92	15.33	12.26	46.84
Mali (2007)	28.88	24.04	31.08	80.35	15.7
Mauritania (2006)	82.12	33.23	48.23	76.16	17.1
Mauritius (2009)	1.59	0	0.28	8.81	50.72
Mozambique (2007)	14.84	6.87	9.79	31.65	25.36
Namibia (2006)	11.36	0	2.6	8.08	19.14
Niger (2006)	69.7	8.33	17.05	80	58.54
Nigeria (2007)	40.9	40.29	22.85	44.57	24.7
Rwanda (2006)	19.96	4.58	4.9	14.37	4.35
Senegal (2007)	18.12	21.09	18.66	36.32	23.84
Sierra Leone (2009)	18.8	8.71	8.58	33.85	36.87
South Africa (2007)	15.09	0	3.13	33.2	16.87
Tanzania (2006)	49.47	20.05	14.7	42.69	19.73
Uganda (2006)	51.7	12.86	14.53	46.43	23.57
Zambia (2007)	14.33	2.61	4.89	27.39	12.08
Spearman Correlation Index with perceived corruption	0.28	0.15	0.23	0.18	

Source of raw data: www.enterprisesurveys.org. The higher the percentage, the higher the incidence of and perceived corruption. No Spearman coefficient is statistically significant.

and frequency of informal payments. For example, an uncertain number of interactions with the revenue authority or electricity provider might be required to continue

operations. By introducing uncertainty into the cost of regulatory and other publicly provided inputs, the capture of regulatory and other services increases the gap between

actual and perceived corruption. The reported gap between perceived and actual corruption could be even larger, given that the existing firms are those that are relatively successful in operating in a corrupt environment. As a result of these selective concerns, Hausmann and Velasco (2005) questioned the reliability of firm-based perceptions of corruption. They note that a more telling indicator is the underlying industrial structure, because responses to quiet corruption in the private sector include a higher degree of informalization and a high market concentration of formal firms.

Weak regulation of agricultural inputs

Another example of the capture of the regulatory function of government that has grave consequences for reducing poverty and increasing economic growth is the market for fertilizers. As with the market for pharmaceuticals, asymmetric information between producers and farmers necessitates public regulation. National standards agencies are supposed to ensure that fertilizer sold on the

market meets the required chemical composition consistent with extension recommendations and that packages sold are of the right weight. However, even in developed countries, where strict laws protect consumers from adulteration, the verification of fraud is a serious problem. This is because it is often not easy to trace back at which step of the production or sale the adulteration occurs. To address this problem, a common strategy of the national agencies (such as the U.S. Department of Agriculture) is to require some form of certification of dealers and to conduct spot checks through accredited laboratories.

Unfortunately, for many countries in sub-Saharan Africa, exercising this type of control might be out of reach. Many lack qualified laboratories, skilled staff, and technical tools for conducting even simple surveys. Furthermore, the modalities of product commercialization represent an obstacle for the controls; for example, while in developed countries, fertilizers are sold in bags, in Africa, in part due to the high cost, retail sellers

Box 1

Quiet corruption in a port authority in Nigeria

The Lagos port in Nigeria represents an interesting case of a poorly regulated business environment that gives way to quiet corruption episodes. In 2006, the reform of the Lagos port was praised as one of the best in sub-Saharan Africa in the last decade. Within a few months of operation under private ownership, productivity had risen at the container terminals. Chronic delays for berthing space had nearly vanished, leading shipping lines to reduce their congestion surcharge. However, the benefits of this reform did not last long. In February 2009, the Nigerian Ports Authority (NPA) announced a temporary but immediate suspension of ship entry to enable terminals to clear “alarming” backlogs. In addition, for vessels already heading into Lagos, the NPA considered diverting them elsewhere.

How could the situation deteriorate from the post-reform high to this point in less than three years? Raballand and Mjekiqi (2009) attribute it to a customs circular. On June 12, 2008, Customs management issued a circular (Customs Circular No. 026/2008) to disallow the clearance of goods that featured discrepancies such as lack of appropriate import clearance documents and false declaration. This circular, in fact, modified the behavior of some importers/customs brokers; priority clearance in favor of goods that were easily cleared was given, while the others were abandoned in the port. After the publication of this circular, the amount of uncleared and abandoned cargo started to grow and congestion increased.

There are two possible situations that explain cargo abandonment. Importers of prohibited goods or those with other related

offences may abandon goods in the port, wait for “their” goods to be auctioned, and then bypass the import regulation to get their goods at a relatively low price. In the second scenario, an importer makes a false declaration including an undervaluation of declared goods and decides when caught to abandon the consignment in order to obtain the goods through auction, which, in any case, is cheaper than full payment of import duties with penalty fees for false declaration and incidental port charges. In both cases, the importer needs to be sure that during the auction process, his cargo will be assigned to him and not to another, which is where collusion with the Port Authority plays an important role. The result of the auction has to be known in advance; otherwise the importer would not abandon the cargo.

These cases present all the characteristics of quiet corruption. In an environment where regulations provide several loopholes, reckless businessmen with the connivance of public authorities manage to avoid clearance costs or to import prohibited goods. However, the mechanism used, abandonment of cargo that is recovered later via a public auction, has consequences, less visible in the short run, that go beyond the direct revenue loss of clearance evasion. As the Nigerian case shows, the long-run effect is the port congestion and delays in clearance that completely eliminated the benefits of the 2006 reform with obvious consequences on the competitiveness of Nigerian producers.

usually open the bags and sell small amounts (about 1–2 kg). This exposes the products to various forms of adulteration, such as addition of sand or substitution of cheaper and unsuitable fertilizer that consumers cannot easily detect. In addition, a particular type of fertilizer adulteration is the addition of heavy metals; varying amounts of arsenic, cadmium, chromium, lead, and nickel have been found in fertilizer materials in sub-Saharan Africa. These contaminants are difficult to detect but can cause serious harm if they get into the food chain.

Although there is little evidence of fertilizer adulteration in sub-Saharan Africa, there is empirical support for nutrient deficiencies in sold fertilizers. A survey of wholesalers by the International Fertilizer Development Center (IFDC 1995) on fertilizer quality in West Africa found that, of the 80 fertilizers analyzed, 43 percent lacked the appropriate nutrients. Of the 685 bags sampled, only 58 percent were within a negligible range of the indicated weight. In addition, 20 percent of the bags sampled did not have information on the type and concentration of nutrients. Furthermore, in only 7 percent of the cases did the labels contain the complete address of the responsible party. To compound the farmers' problem, the IFDC report suggests that frequent cases of deliberate adulteration occur at the retail level where sellers can easily add deleterious or harmful ingredients to increase the weight and sell underweight items or even completely misbranded products.

Episodes of mislabeled fertilizers sold at retail level were documented in Mali during the 1990s, when the country started to import low-cost, but poor quality, stocks from Nigeria (Morris et al. 2007) and more recently in Zimbabwe (Djurfeldt et al. 2005). A recent survey on fertilizers in Kenya (GDS 2005) shows that adulteration and sales of counterfeit products are isolated events. Nonetheless, among the products sold on the market, the survey documents a wide fluctuation in the nitrogen and phosphorus concentration, often not reported on the labels. Furthermore, about 3 to 5 percent of fertilizers are deliberately mislabeled in order to sell inferior quality fertilizers.

On the basis of anecdotal evidence and a more recent analysis conducted by the

IFDC (2007) in sub-Saharan Africa, the situation doesn't seem to have improved substantially. A survey conducted in 2007 (IFDC 2007) documents the share of samples of poor-quality fertilizer sold in 10 African countries. Column 3 of Table 5 shows the percentage of fertilizers not satisfying quality standards. As the table illustrates, a considerable share of widely used fertilizers, such as NPK or urea, are of insufficient quality: they either show a high moisture or low nutrient content or simply are wrongly labeled. For typical African farmers, the cost of fertilizer and improved seeds accounts for a large share of their resources. At best, the use of defective inputs does not have any effect on yields, and at worst it degrades the soil. Voortmann (2009) documents that there are even cases of poor application that cause declining yields.

Similar lax regulation has been reported for other key inputs such as improved seeds. In this regard, survey evidence is non-existent and anecdotes from experts and other actors are the only window to misconduct in this area. For example, the lack of control enabled a dishonest company in Zimbabwe to buy sorghum grain from a late maturing variety and sell the same as an early maturing variety. The use of the late maturing variety did not provide any grain unless the season was unusually long and completely jeopardized the harvest of many farmers.

While there is no reliable empirical evidence, misconduct that undermines the quality/suitability of agricultural inputs likely has important implications for agricultural productivity. Some recent empirical evidence is suggestive. Initial randomized

Table 5 The prevalence of substandard fertilizers in West Africa

Product	Total samples	Deficient samples	Percentage
Urea	50	4	8
Ammonium sulphate	7	2	28.6
Calcium ammonium nitrate (CAN)	9	3	33.3
Triple super phosphate (TSP)	4	0	0
Muriate of potash (MOP)	2	0	0
Diammonium phosphates (DAP)	19	1	5.3
Nitrogen phosphorus potassium (NPK)	54	19	35.2
Total	145	29	20

Note: One sample of ammonium nitrate is excluded.
Source: IFDC (2007).

experiments to measure the impact of fertilizer and improved seeds on yields of maize in Western Kenya found no impact as a result of defective seed or fertilizer. The most recent results of randomized evaluations in the same area, which show that higher than suggested levels of fertilizer use are the most cost-effective, could possibly reflect ineffective enforcement of standards (Duflo, Kremer, and Robinson 2008).

Long-term consequences for the private sector and agriculture

Quiet corruption modifies the structure of incentives for entrepreneurs and farmers to conduct business, which permanently alters their current and future investment decisions. Moreover, as discussed below, the negative effects go beyond the single performance of individual entrepreneurs or farmers. In the case of firms, quiet corruption acts as an additional fixed cost that pushes many companies out of the market or to the informal sector, leaving the most lucrative activities to a few large firms that are well connected with public authorities.²⁴ A recent paper on Paraguay illustrates the effects of capture of the regulatory function of government

by producers. Auriol, Flauchelm, and Straub (2009) showed that, in sectors producing goods for more corrupt public institutions, the formal sector is dominated by a few large firms. These big formal players recoup the additional costs resulting from bribery by marking up prices and passing these costs on to consumers. Furthermore, thanks to their network of relationships with politicians, these big firms are able to obtain favorable access to inputs such as credit (Khwaja and Mian 2005; Li et al. 2008) or obtain a system of regulations biased against new entrants that de facto preserves their dominant position, or both. Hence, the long-run indirect consequences of quiet corruption are a less dynamic economy in which consumers face higher prices.

Evidence for the impact of corruption on increasing the degree of informalization of markets comes from the most recent Investment Climate Assessment data (2006–2009) (World Bank 2009).²⁵ In the latest round of interviews, entrepreneurs were asked to report the existence of informal competitors in their markets by responding yes or no to the question, “Does this establishment compete against unregistered or informal

Box 2 Quiet corruption in public utilities

In state-owned utilities providing power, telephone, and water services, quiet corruption takes a variety of forms including over-manning, undercollection of bills, and distribution losses. Recent estimates suggest that these forms of quiet corruption cost Africa some US \$5.7 billion a year on aggregate, or just short of 1 percent of GDP (Foster and Briceno-Garmendia 2009).

Over-manning takes place when state-owned enterprises retain more employees than is strictly necessary to discharge their functions, often because of political pressure to provide jobs for members of certain interest groups. Over-manning is found to be particularly material in the case of state-owned telephone incumbents, which amount to US \$1.5 billion a year, or 0.2 percent of GDP. These enterprises have on average only 94 connections per employee, compared to developing-country benchmarks of 420 connections per employee, an over-employment ratio of 600 percent.

Undercollection of bills is a result of lack of effort on the part of revenue collection officers or their petty corruption in collusion with consumers and is most frequently due to non-payment of bills by government departments. This problem is prevalent in power and water utilities, where non-payment can be found across the income spectrum and carries an overall cost of US \$2.4 billion a year, or 0.4 percent of GDP.

Distribution losses take place when utilities fail to adequately maintain distribution networks and, in addition, tolerate clandestine connections, which amount to theft of scarce energy and water resources. African power utilities typically lose 23 percent of their energy in distribution losses. Similarly, African water utilities typically lose 35 percent of their water in distribution losses, nearly twice the 20 percent benchmark. These losses amount to US \$1.8 billion a year, or 0.3 percent of GDP.

Table Distribution losses, undercollection, and over-manning costs as a percentage of GDP in sub-Saharan Africa’s energy, information and communications technologies (ICT), and water and sanitation services (WSS) sectors

	Energy	ICT	WSS	Total
Distribution losses	0.2	—	0.1	0.3
Undercollection	0.3	—	0.1	0.4
Over-manning	0.0	0.2	0.0	0.2
Total	0.5	0.2	0.2	0.9

Source: Foster and Briceno-Garmendia (2009).

firms?” Table 6 presents the association between the degree of informalization of the market with perceived and experienced corruption. To improve comparisons, the sample is disaggregated by manufacturing and nonmanufacturing status and by the number of regular employees. A negative correlation indicates that as corruption increases, so does the degree of informalization (informalization is a yes/no question; yes= 0 and no=1)).

Table 6 shows that informalization is correlated with both perceived and experienced corruption, suggesting that corruption effectively acts as an entry barrier: many firms unable to afford extra costs are forced to remain in the informal market. This barrier applies in particular to firms with fewer than 35 employees and the retail and services sectors where rates of informality are higher.

While there is evidence of market concentration in Africa, only a few cases document the effect of corruption on market structure.²⁶ Fafchamps (2004) finds that a small group of well-connected traders captures the most lucrative markets, leaving the remainder to small, inefficient firms that are unable to scale up and challenge these traders’ dominant position. In addition, the social network these big firms create plays an important role by limiting competition from outsiders. Ramachandran, Shah, and Tata (2007) are more direct in describing this capture as a “capacity of lobbying”; although generally less efficient, these large, formal firms are better connected, thus protecting their high profit margins by resisting external competition. It follows that, although African markets were broadly liberalized in the 1980s and 1990s, a few enterprises with high market share were able to retain their market power by investing resources in their relationships with the government. Thus quiet corruption acts as a constraint on the competitiveness of African manufacturing and the growth and poverty reduction benefits of private-sector development.

In addition to reinforcing a non-dynamic private sector, quiet corruption in the transport sector further diminishes the prospects of African manufacturing. This is shown by Teravaninthorn and Raballand (2008), who constructed a dataset of transport costs and

Table 6 Correlation between perceived market informalization and incidence of perceived corruption

	% of firms expected to give gifts in meetings with tax officials	% of firms identifying corruption as a major constraint
Total	-0.1011**	-0.1256**
Manufacturing	-0.0955**	-0.0935**
Non-manufacturing	-0.1100**	-0.1319**
No. of employees: 1–6	-0.1368**	-0.0822**
No. of employees: 7–9	-0.0894**	-0.1937**
No. of employees: 10–15	-0.1060**	-0.2136**
No. of employees: 16–35	-0.1354**	-0.1412**
No. of employees: over 35	-0.1079**	-0.0291

**Significant at 5%
Source of raw data: ICA (2009).

prices covering 11 routes and 7 countries.²⁷ Their analysis showed that prices in the main corridors in Africa were higher than in other regions. Furthermore, most of these prices were not supported by the underlying structure of costs, since the transport sector is labor-intensive and wages in Africa are relatively low. For example, in 2007, in China, the average transport price was 5 US cents per ton-kilometer, while in Africa in the Durban-Lusaka corridor it was 6 cents, 8 cents for the Mombasa-Kampala route, and 11 cents for the Douala-Ndjaména corridor. Given that the underlying costs of providing these services are not higher than in China, the only plausible explanation for the price differences is market power. Teravaninthorn and Raballand specifically considered the cost of corruption and found two crucial results. The “corruption tax” in the form of levies that policemen and custom officials charge is significant in West Africa. Such costs account for about 20 to 27 percent of variable operating costs in some corridors, although this “tax” is almost insignificant in Eastern and Southern Africa (1 percent). Yet, this is only the visible part of corruption, the measurable component. Much more important is the untraceable part represented by the extra costs transport companies face when dealing with allocation of freight. It goes without saying that often these “extra costs” are not charged in exchange for any service but are explicitly imposed to create an entry barrier to potential competitors. Insiders, often well connected with the ruling regimes, thus compensate for these costs by imposing very high markups on prices and

enjoy all the benefits of a monopoly. This ultimately enables truckers and freight forwarders to pass on much of these additional costs to final users.

While empirical evidence of the transport case of quiet corruption described above is difficult to find, a striking example of transport market reform in Rwanda after 1994 sheds light on the potential gains that arise from thoroughly addressing the problems quiet corruption can generate. After a radical reform of the transport sector that eliminated entry barriers to the transport market, prices declined by more than 30 percent in nominal terms and almost 75 percent in real terms. This result can be largely attributed to elimination of quiet corruption in the transport sector, since no major investment in infrastructure was carried out during this period in Rwanda.

As with the health care and education sectors, more investment in the transport sector does not necessarily mean that service conditions improve. In fact, the case of transport reform in Rwanda clearly reveals that seriously addressing the effect of quiet corruption, that is the cartelized market structure of the trucking industry, might induce effective gains that eclipse any other potential benefit arising from a pure increase in expenditures. Teravaninthorn and Rabalband (2008) noted that, although the condition of African roads is worse than those in other parts of the world, an investment in their improvement is not necessarily bound to succeed in transport price reduction.

Moving on to the long-term effects of quiet corruption on farmers' investment decisions, two main triggers can be identified. In the first case, farmers indirectly pay the cost of the corruption tax that emanates from other sectors. As explained earlier, markets in Africa are generally not competitive and the market of agricultural inputs is not an exception. To the contrary, these products are often imported (Svensson 2003), which leads to even higher informal payments. The high prices of fertilizer force the minority of farmers that purchase fertilizer to use it in rather small doses.

As pointed out earlier, lax regulation of fertilizer quality compounds the affordability problem and often leads to a negligible impact on yields; poor quality fertilizers

may even damage crops. Hence, in the long run, farmers that find no increase in yields or find decreases may be driven to reduce or even completely avoid using fertilizers, turning to a low-input type of agriculture. This type of agriculture, as widely documented in literature, is bound to produce low yield and is more exposed to natural shocks.

Final remarks

It is becoming widely accepted that improving service delivery to the poor is both a widespread political demand and central to the realization of the MDGs. Improving governance is integral to achieving these goals. Where transparency and accountability mechanisms are weak or lacking, poor people are often marginalized and development outcomes suffer. This essay attempts to unveil the iceberg that threatens to sink Africa's efforts to improve well being and growth by documenting a broadened scope of corruption beyond the behaviors recently brought to light by innovative survey tools and inspired by *World Development Report 2004*. As discussed, some of these behaviors are not readily observed or are difficult to measure, but their long-term consequences are often severe and cannot be ignored by policy makers, citizens, international institutions, and donor organizations.

This essay outlined a framework to understand the nature and impact of quiet corruption, which captures the implicit and less tangible forms of corruption. The quiet corruption approach embraces the recognition that government spending on social services alone is not sufficient to understand the quantity and quality of public services or the determinants of public service delivery performance. This approach looks at issues that are complementary to the more visible forms of corruption and have broad implications for strategies and policies that focus on results.

Examples of the existence and consequences of quiet corruption—such as the case of low teacher instruction time that leads to poor competencies and ends with the decision of households to disenroll a child—highlighted how quiet corruption can lead to substantial long-term impacts on poverty. The good news is that quiet corruption can be tackled. The report card

example from Uganda—in which beneficiaries were provided with information from the second generation of corruption indicators on the performance of their public health facility in relation to regional and national standards and its impacts on the level of health service utilization and provider attendance—confirms this.

Progress in service delivery has been possible because of the increasing determination of governments to deal with corruption, as well as the increasing availability of information on finances, inputs, outputs, pricing, and oversight of public service provision by civil society, which are being used to generate information on performance and to track absenteeism, leakage of funds, and informal user fees. The way forward, however, will require the development of a third generation of indicators—ones that measure quality of services and the performance of service providers. A recent intervention to improve education services in Uttar Pradesh highlights the features that new projects and programs need to incorporate (Banerjee et al. 2008). By teaching households with very little schooling to identify children who are struggling in school, the intervention empowered households to evaluate service quality.

As quiet corruption manifests differently in each economic sector, there is no “one size fits all” recommendation that applies to each and every sector. But vital to fighting quiet corruption at large are strong and highly motivated leadership, commitment of the national anticorruption units to pursue

operationally effective responses at the sector level, and good policies and institutions. Equally important is more transparency and increasing accountability and participation by citizens, the “demand side” for good governance. Success will also require the establishment of strategies for addressing weaknesses in existing governance capacity and accountability in the delivery of services. Strengthening enforcement and administrative control, management of public finance, government decentralization, systematic dissemination of information about projects and budgets, and investments in human capital are also essential. Successful implementation of anticorruption reforms will also require that the preferences of all those involved be aligned with achieving the objectives or goals of the reform. This often involves better working conditions.

Of course, given the complexity of the task, the fight against quiet corruption requires tailoring policies to country circumstances, recognizing that priorities and responses may vary depending on the different country conditions. This essay outlines a research agenda to identify interventions to address quiet corruption. Experimenting with various ways to empower beneficiaries and continuing the ongoing efforts to tackle big-time corruption will go a long way toward this goal. Indeed, although combating loud corruption is necessary, fighting quiet corruption is critical if governments want to reduce poverty and promote sustainable growth.

Notes

1. See, for example, Rajkumar and Swaroop (2008) and Amin, Das, and Goldstein (2009).
2. Gupta, Davoodi, and Tiongson (2000) show that corruption is associated with higher levels of infant mortality and school dropout and lower birth weight.
3. Early evidence of negative association between political corruption and development comes from Mauro (1995) and Kaufmann and Wei (1999). For the negative relationship between corruption and the capacity to attract foreign direct investments, see Wei (2000). Tanzi (1998) reviews some of the evidence and finds support that corruption is associated with lower government revenue receipts and also alters the composition of public spending away from productive sectors. Other evidence comes from Baldacci et al. (2004) and Gupta et al. (2000). A recent strand of literature has extended this analysis to examine the extent to which these relationships are affected by institutional quality or the level of corruption (Meon and Sekkat 2005; Mendez and Sepulveda 2006; Aidt 2009).
4. See Scott (1972) for a broad overview of the various forms of political corruption.
5. Harsch (1993); Wunsch (2000).
6. See Olson (1965).
7. See Harsch (1993).
8. See Hirshmann (1970) in this regard.
9. Recent Annual School Censuses use a similar head-teacher reported measure of absence.
10. The 2002 data come from Chaudhury et al. (2006), while the 2007 estimate is from Habyarimana (2007).
11. Two districts in western Kenya.
12. This result suggests that low teacher remuneration is not a major determinant of teacher absence. In fact, the evidence on the relationship between performance pay and teacher absence is quite mixed. Duflo, Hanna, and Ryan (2008) find a positive effect on attendance of a pay-for-inputs performance contract in non-formal schools in India. On the contrary, Glewwe, Kremer, Moulin, and Zitzewitz (2004) and Muralidharan and Sundaraman (2006) do not find evidence of a teacher attendance response to output-based performance pay.
13. Since direct observation requires enumerators to physically establish attendance, the presence of an outsider in a school could be driving some of these "in-school effort" measures and therefore casting some doubt over the validity of these estimates. In addition, they could be affected by the fact that different pedagogical styles entail different levels of direct teacher-pupil interaction.
14. PETS have some important limitations in only being able to define leakage unambiguously for funding flows with clear rules, such as teacher salaries or capitation grants. Given that some important resource flows in some education systems are not rule-based, it is difficult to accurately characterize the extent of leakage.
15. There is evidence of an association between the frequency of inspection and the level of teacher absenteeism (see Chaudhury 2006).
16. The Health Unit Management Committees were established with the objective of overseeing the management of the public health facility. It consists of public health providers together with members of the community.
17. Evidence of the perception of absenteeism in particular in Latin America corroborates these findings. Surveys of hospital nurses' perceptions of the frequency of chronic absenteeism among doctors reported rates of 98 percent in Costa Rica, 30 percent in Nicaragua, 38 percent in Colombia (Giedion, Morales, and Acosta 2001) and 24–31 percent across public and social security hospitals

in Argentina (Schargrodsky, Mera, and Weinschelbaum 2001).

18. Vignettes are hypothetical cases presented to doctors in order to estimate doctor quality. Doctor questions, diagnostics, and prescriptions are compared to expert panels or existing protocols.
19. The so-defined "good manufacturing practice."
20. WHO guidelines on breastfeeding have been relaxed to accommodate the poor availability or suitability of formula.
21. The ability to pass on corruption-related costs to consumers is subject to, among other factors, the demand conditions and market structure.
22. Spearman's rank correlation coefficient is used to analyze the correspondence between the ranking defined by incidence of corruption measures and the ranking obtained by the perceived corruption measure. A positive but insignificant rank correlation suggests that, although higher magnitudes in one indicator occur along with higher magnitudes in the other indicator, the two rankings reflect distinct sources of impediments.
23. In this regard it is worth mentioning the contributions from Kaufmann and Kraay (2007), Gelb et al. (2007), and Gonzalez et al. (2007).
24. The issues of political lobbying and corruption that are focused on obtaining privileged access to rent-seeking activities and the economic and social costs of rent-seeking are broadly treated in the literature. See, for example, Baghawati (1982) and Krusell and Rios-Rull (1996).
25. For an interesting case of high market informalization caused by corruption, see Auriol et al. (2009) on Paraguay.
26. See Biggs and Srivastava (1996) and Van Biesebroeck (2005).
27. Burkina Faso, Cameroon, Chad, Ghana, Kenya, Uganda, and Zambia.

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