Corruption: Measuring the Unmeasurable

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Abstract: While the strategy of measuring and quantifying has been extremely successful, and valuable in the progress of science, it does not follow that it is universally useful. We argue that attempts to measure corruption can be counterproductive in several different ways. Qualitative and action oriented approaches may prove more valuable. A political economy explanation of why extremely distorted and biased measures of corruption continue to be used is also offered.

Keywords: Corruption, measurement, quantitative imperative, corruption perception index

1. The Quantitative Imperative

During WW I, Florence Nightingale experienced the benefits of fresh air and light for her patients in Turkey. Later, as advisor to the India Office, she issued orders that all windows in Indian hospitals should be kept open at all times. Substantial outcry and political influence was required to reverse this order, which was extremely inadvisable due to Indian heat.

Developments in measurement have been so crucial to the advance of physical sciences that Lord Kelvin was led to proclaim that when you cannot measure, you do not really know what you are talking about, and when you can, you do. The history of this idea of the central importance of measurement, sometimes called the “quantitative imperative,” has been ably traced by Michell (2003). Despite the impressive benefits to science from measurement, it does not follow that all things can be, or should be, measured. Nor does it follow that the tactic of attempting to measure and quantify all concepts is necessarily useful in advancing research.
For example, consider the following scenario, a pastiche on reality in Vietnam: the “Quantitative Approach” to winning the Vietnam War in two years.  

1. Count the enemy, and divide by 24 (months in two years). This is the target T.  
2. Count the number of enemy killed per month, and the resources required per kill.  
3. Requisition enough resources (soldiers & arms) to make kills per month equal T.  
4. Forecast the end of war in two years.  

This was the approach adopted by US Defence Secretary McNamara, based on his business experience and Harvard MBA. There was great emphasis on measurement, and sometime more casualties were incurred in the process of counting the enemy killed than during the actual engagement. McNamara ignored more experienced soldiers, who suggested that this was not a conventional war, and gave “qualitative” advice along the following lines:  

The guerrillas rely on local population for recruitment and support. To win the war, we must win the support of the local population, which would deprive the guerrillas of their base of operations. Thus our focus must be on winning the hearts of the local population.  

The first strategy, which appears scientific and quantitative, was tried and found wanting. Implementation of the second strategy would require more of a focus on qualitative methods, using provision of support, security, justice, as a means to a non-quantitative end.  

The point here is not to debate the merits of alternative strategies in Vietnam, but to note that the quantitative approach actually prevented McNamara from focusing on elements which may have been central to the issue. There are many other situations where attempts to measure the immeasurable can lead to errors of various types. A great deal of controversy has been generated by recent studies (Elert(2006)) showing that the
correlation of SAT with long run success in college is only between 1% to 4%. The enormous amount of effort and expense associated with administering and preparations for the test do not seem justified in view of the meagre gains. Psychological studies show that the less measurable characteristics of commitment, motivation, and interest correlate much more strongly with academic success. The problem is an attempt to measure something which is not quantifiable – intelligence, motivation, determination, etc. The parable of the man searching for his keys under the light, when he dropped them elsewhere, seems to be apt.

In this article, our goal is to show that currently popular strategies for measuring corruption do not serve any useful purpose. We also suggest alternatives on how to avoid measurements, and also what can and should be measured.

2. Can Corruption be Measured?

It is not difficult to see that “corruption” cannot be measured. The term is too broad and vague. Let us restrict the meaning of “corruption” to “bribes paid to government officials” which is a common interpretation. With this very specialized interpretation, it would be possible in theory to measure the quantity of bribes. There are still two dimensions to measuring this quantity: the number of bribes and the size or volume of the bribes. For example, it is well known and easily documented that corporations in USA hire influential politicians or generals (or relatives) at fat consultant fees, and end up winning enormous government contracts. The volume of a small number of such transactions is greater than the total estimated volume of bribes for many LDC’s ranked
as highly corrupt. Thus the volume measure would rank the USA as more corrupt, while
the number of transactions measure would reverse this ranking. Separate consideration of
just two dimensions of corruption makes it impossible to arrive at an unambiguous
ranking there are so many dimensions to corruption that it would be hopelessly imprecise
and ambiguous to give a one number summary of the whole.

Upto the early twentieth century, a lot of people used to die of “consumption.”
This was a label given to a cluster of diseases which the doctors could not correctly
diagnose and identify. Progress in medicine led to correct classification of many of the
diseases previously tagged as “consumption.” Cures became possible only after a correct
diagnosis. To try to measure “corruption,” without having a clear idea as to exactly what
corruption is, is merely an illustration of a confused thought process, and a desire to
imitate science without having an understanding of what science is about. For example,
we need to distinguish ‘bribery,’ which takes place with mutual consent, from ‘extortion’
which does not; and ‘petty’ corruption (typically between citizens and government) and
‘grand’ corruption, often involving heads of states and governments, multinational
corporations, big business, and top officials. Such distinctions make a tremendous
difference in ranking of countries for “corruption.” Conventional measures, focusing on
petty corruption would rank Nigeria and Bangladesh as more “corrupt” than USA. If we
focus on corrupt commercial behaviour, then the trillion dollar Savings and Loan bailout
in the 1980’s, the spectacular Enron failure, and the recent failure of Mortgage market
would put USA far ahead².

From the fact that the general term “corruption” is too broad and vague to
measure meaningfully via one number, we come to two conclusions. Existing measures
of “corruption” must be examined carefully to assess exactly what it is that they are measuring (if anything). Also, we may be able to devise better targeted measures of corruption when the purpose of measuring corruption is made clearer. For example, as we discuss at length, most popular measures of “corruption” actually measure the perception of corruption by businessmen. This measure is only relevant to certain very specific projects and should definitely not be taken as a general measure of overall corruption.

3. Two Rules for Measurement.

In order to avoid the problems of the type discussed above, we propose two rules for constructing useful and valid measures of special types of corruption. The motivation for these rules has already been presented above. Below we will discuss how these rules apply as a critique of existing measures and as a guideline for construction of new measures.

Rule 1: *The target of a proposed measure must be, in principle, measurable.*

That is, if we have complete information about an economy, we should be able to name a number which is the correct measure of whatever it is that we are trying to measure. For example, “corruption” does not qualify, since even if we have complete detail of all economic and non-economic transactions in an economy, we would not be able to say what number should be used as a measure of corruption. However, we could ask (for example) about the amount of money received by officials in the income tax office from taxpayers over and above their salaries, and any official payments due to them. This is clearly measurable in theory, and therefore a legitimate target to attempt to measure.
**Rule 2:** The goal (or goals) of measurement must be specified.

This is essential since the value of a method of measurement can only be assessed in relation to how well or poorly it achieves desired goals. How much inaccuracy can be tolerated, what kind of proxy measurements can be used, and many other issues can only be decided in relation to the goal for which the measurement is being done. This will be clarified in connection with examples to be given shortly.

As a simple and illuminating example based on an actual case in Pakistan, the government was interested in eliminating smuggling of certain types of goods. It calculated the total cost of bringing in smuggled goods, which included bribes to police and customs officials. Then it set the official tariff rate at a level which was about equal to this cost, so that the incentive to smuggle was eliminated. The goal (elimination of smuggling) dictates what has to be measured (bribery costs and transport cost differentials for smuggling routes versus normal routes for imports) as well as the accuracy required for the measurement (to accurately set matching tariff rates).

As a second example, one may be interested in measuring nominal revenue loss due to bribery in customs (or in income tax). This would be useful as a guide to how much money can be invested in fighting corruption in these departments, as these numbers would provide an upper bound on the maximum saving which could be realized by eliminating corruption. In particular, assessing the value of privatization, of salary incentives to reduce corruption, of tax farming, and other measures to combat corruption would depend on an accurate gauge of these numbers. This illustrates our general
principle that focussed measures of corruption for specific objectives may be useful, while general overall measures are not.

4. A Critique of the CPI

One widely used measure of corruption is CPI (Corruption Perception Index), produced by Transparency International. We will show how it violates our proposed rules and is consequently not helpful. Similar criticisms apply to all general measures of corruption, and we utilize the CPI only as an example here.

4.1: Perceptions Differ from Reality

To say the Transparency International produces measures of corruption is simply wrong. TI does not measure corruption, and to label the measures produced by TI as measures of corruption is highly misleading. We could more accurately label TI measures as averages of perceptions of businessmen regarding corruption in various countries. Once this is clear, than TI rankings would not attract headlines such as “Bangladesh: the most corrupt country in the world.” Rather, it could be said that Bangladesh is perceived to be most corrupt by a certain group of businessmen. The meaning changes dramatically with this rephrasing. Many studies show systematic biases in perceptions from many sources. For example, surveys showed that the majority of the USA public believed that Al-Qaeda was in Iraq, and that Iraq was involved in the 9/11 attacks on WTC. Stiglitz and Bilmes At a time when statistics showed that the homicide rate in Washington DC was four times that of Karachi (a violent city), the public perception based on newspaper reports was dramatically different.³
4.2: Who is the Perceiver?

Again, there is the issue in perceptions of who is doing the perceiving. One might consider the TI rating to be useful for businessmen planning to invest in a foreign country – perceptions of businessmen regarding corruption may be considered relevant to this. Then of course, the measure should be renamed as a measure of extra-legal payments needed for FDI in the target country, since that is what it is trying to capture. Once the goal is clear, then we could considerably sharpen our measures, since now we know what the purpose of measurement is. We could look at all obstacles to FDI in chosen country, legal and governance, and assess the role of corruption within this context, where it would make a lot more sense. As our proposed second rule suggests, the goal of measurement sheds a lot of light on what needs to measured and how. As a concrete illustration of “obstacles to FDI”, consider the problems that Muslim investors face in the US. The threat of arbitrary and illegal seizure (as in the case of Iranian assets) as well as cancellation of signed contracts (as in the Dubai Port World, certain Muslim Charities, endowments and chairs at US Universities, and many other cases ) would clearly classify in the same category as corruption. On this basis, rankings could be done and would produce meaningful numbers on risks of doing business. The point is that once the goal is specified, then exactly what aspects of corruption need to be measured, and how they relate to the overall picture, becomes much clearer.

Another reason to consider carefully “who is doing the perceiving” is made clear by the CPI itself. While the construction of the CPI from a collection of indices is shrouded in mystery (leading to complaints of “Non-Transparency” of Transparency International),
enough details are available to suggest that the indices depend heavily on perception of
wealthy businessmen. The types of corruption that this class experiences, as well as the
journals/newspapers that inform them, is substantially different from what the local
populace would experience or read. Accordingly, the CPI would differ systematically
from corruption perceptions of local populace (which might be a more accurate measure
of corruption). This is documented in the Hungarian Pilot Project by Gallup, which
shows that there is a methodological difference between the measurement of petty
corruption and white-collar corruption in the higher spheres of state or business
administration. Similarly, as pointed out by Sik (1999), the “expert” evaluations of the
group of international businessmen utilized in the TI surveys are severely biased. This is
because this group is (a) fairly closed (the cross-validity of separate experts’ evaluations
are not the consequence of their similar reflection of the same truth, much more the
common stereotypes, developed on social events they jointly attend, or other sources of
personal networking), (b) the group is not accustomed to the local customs and language
(they do not know how issues are settled locally and tend to use bribery to solve problems
fast), and (c) they are businessman.

4.3 What is being measured?

There is a 98% correlation between the Corruption Perception Index (CPI) produced by
Transparency International and log(GNP per capita) run on all the countries of the world
for which data is available for 2005! The log was taken simply because CPI is bounded
between 1 and 10 while GNP per capita is not similarly bounded. This creates substantial
confusion about exactly what CPI measures. On the surface, it seems that businessmen
perceptions of corruption are almost completely based on wealth. Given that there is only
2% additional variation over log(GNP per capita) it does not seem credible that the CPI measures “corruption” in any significant sense.

4.4 Why is it being measured?

A credible answer to this question is provided in the final section of this paper. For the moment let us take on faith the standard answer, namely that measurement of corruption is a means of combating corruption. If this is the goal, then there are several reasons why perception based measures would be especially harmful.

It is well established that perceptions are strongly influenced by factors having little to do with underlying realities. People give excess weight to personal experiences, so that people with relatives who have died of cancer will assign unduly high probabilities to cancer in the general population. Perceptions are strongly influenced by media, with resultant obvious biases. Thus, the US public generally believed that Iraq possessed WMD, and the purpose of the Iraq War was to bring democracy to Iraq, while European public believed that the war was about control of oil resources. The media portrayals are influenced by spectacular events and also by politics, so that fluctuations of media based opinions are likely to be much greater than those in the underlying reality of corruption.

Two aspects of perception based measures are even more disturbing when taken in context of combating corruption. Given influence of media and personal experiences in forming perceptions, a government which wanted to lower its corruption perception ranking would be well-advised to hire Madison Avenue experts, and invite foreign
businessmen on special tours etc. These propaganda measures would be much more effective in changing perceptions of corruption than serious efforts to combat corruption.

A second aspect is the demonstration effect – publicizing corruption tends to lead people to emulate it, once they see that it appears to be common and go unpunished. Perceptions about corruption may substantially influence the level of corruption and it may increase the level of corruption in a economy. For example, Cabelkova (2000) finds that high corruption perceptions make people believe that they have to pay bribes, and make the officials think that there is nothing wrong with accepting them. Thus, publicly available measures of corruption perception may actually contribute to the problem.

5. The Variable Yardstick

From the 98% correlation between log (GNP per capita) and “Corruption” as measured by CPI in 2005, one would conclude that “corruption” is another name for “poverty” while “honesty” is another name for “wealth”. While other measures and other periods of time may not yield as high a correlation, there is no doubt that nearly all measures show low corruption in Europe and USA, and high corruption in the poorer countries, and hence a strong correlation between wealth and honesty. Is it really true that corruption declines as countries become richer, or is this an artefact of the methods of measurement chosen? We pause to consider this crucial question in greater detail.

It is acknowledged by both proponents and opponents that concern with governance and corruption emerged in the early 90’s in response to the realization of widespread failure of World Bank Structural Adjustment Programs to achieve significant
progress in development. The breakdown of the “Washington Consensus” on the route to
development was also a consequence of this failure. World Bank sympathizers like
Santos (2001) argue that this was a learning process, where failure led to examination of
the causes of failure. Opponents, like Susan George(2008) or Hardstaff and Jones(2006),
argue that neo-colonialist policies being pursued by the IFI’s are not meant for
development; rather these policies transfer of huge amount of resources from the poorer
to the richer nations causing vast amounts of misery, hunger and deaths. Governance and
corruption provide a convenient cover and an excuse for failure of policies not designed
for development in the first place. Support for this second point of view is provided by
Chang (2000) and Abed and Davoodi (2000) who show that conventional factors are
better are explaining growth, and the “invisibles” of governance and corruption fail to
explain differential outcomes in growth. The professional literature toes the hegemonic
line, and the second point of view is vastly under represented. For this reason, we present
a more detailed exposition of this latter view below.

Before WW1, when Britannia ruled the waves, sea power and other criteria more
aligned with British hegemony were used to judge world dominance. Destruction of
European economies in the War led to the undisputed leadership of USA, and the
matching yardstick of GNP per capita. Later, when certain sparsely populated Middle
Eastern oil based economies overtook USA in GNP per capita, it was realized that in
addition to wealth, an even income distribution is also an essential prerequisite for
leadership in the world. When Sweden, Switzerland, and certain other European
economies overtook USA in GNP per capita, and had better income distributions, it was
realized that infrastructure (roads, dams, etc. which are substantially greater in USA
relative to Europe) was also required for leadership⁵. The point is that the powerful get to
make the rules on what criteria are appropriate to measure power, wealth, leadership, etc.

Prior to WW1, European imperialism was justified on purely racist grounds. For
example, Cecil Rhodes said; "I contend that we (the British) are the finest race in the
world; and that the more of the world we inhabit, the better it is for the human race."
Sentiments like Macaulay’s “(none) could deny that a single shelf of a good European
library was worth the whole native literature of India and Arabia” were common among
European intellectuals. The racist assumption of European superiority was accepted as
being just as factual as the law of gravity, or the revolution of the Earth around the Sun.
A sophisticated intellectual analysis of this phenomenon is available in “Orientalism” by
Edward Said. For our purposes, it is enough to note that this philosophy provided the
moral backbone for the otherwise sordid historical processes of imperialism and
colonialism. Cecil Rhodes became the richest man on Earth, and England the richest
country on Earth, while carrying the White Man’s burden of bringing civilization to the
rest of the world.

While racism is outmoded and no longer politically correct, the imperatives of
imperialism and neo-colonialism continue to drive world politics. As before, it is
necessary to have a moral cloak to cover baser motives. The imperialist imperatives
require us to say that it is bad for Iraq to invade Kuwait for securing its oil, but it is good
for the USA to invade Iraq for the same purpose. Similarly, USA and European
adventures all over the world, sometimes under the cover of law (of the WTO, for example) or sometimes without, require some moral justification. Today the buzzwords of “governance” and “corruption” function as the substitute for the racism of the past. The dictator Saddam provided extremely poor and corrupt governance to his people, justifying the US invasion. The ‘infinite justice’ available in US gives it the moral right to kidnap heads of state like General Noriega, Aristides, Saddam for their corrupt activities and bring them to trial. All over the world, trade and domestic policies favourable to multinationals are dictated to the poor and powerless countries – the better governance and low corruption of the rich and powerful countries gives them a moral right to advise and compel the lesser races to perform according to the higher standards.

Do rich countries have a right to claim the mantle of moral superiority on the basis of better governance and lesser corruption? To many this claim seems as factual as the bombing of Hiroshima in WW2, just as idea of superiority of the white race was considered factual in the last century. Consideration of a few facts should serve to dispel this illusion. It is well known that Bush lied to the public and generated misleading CIA reports about WMD in Iraq (as well as Iraqi involvement in 9/11) to motivate the public and the Congress to start the war. As documented by Stiglitz and Bilmes (2008), a conservative estimate of the cost is three trillion dollars and five trillion is a more realistic estimate. This misuse of public office and betrayal of public trust is perhaps the single most massive corrupt transaction in the history of mankind. The combined monetary value of all petty bureaucratic corruption in the poorer countries pales in comparison.
To dispel the idea that this is the exception which proves the rule, we report the outcome of some recent polls conducted in wake of several corruption scandals involving US Congressmen. In a USA Today/Gallup Poll conducted April 28-30, 2006, 83% of the population considered corruption in Congress to be a very serious or somewhat serious problem. Similarly, in Pew Research Center for the People & the Press survey conducted by Princeton Survey Research Associates International. Feb. 1-5, 2006, 81% of the public considered that bribing and corruption are common in Congress. Similarly, in wake of scandals and court cases about “vote stealing” by Bush, public opinion polls show that more than 80% of US public distrusts the voting process, especially the electronic voting machines currently in common use (see http://www.acm.org/usacm/weblog/index.php?p=73) In view of this evidence, can we conclude that the world leaders are qualitatively different from the primitive and underdeveloped (these pejoratives being synonymous with low income) countries?

6. Conclusions

Several qualifications are necessary to ensure that our message is understood. Corruption is a multidimensional phenomenon and no one number can measure it adequately. If it is suitably specialized to a particular aspect, it can be measured and countries ranked. If we consider corruption in petty bureaucracy, there is no doubt that there are fewer corrupt transactions in rich countries where the bureaucrats receive hefty salaries. Small private sectors and large, underpaid bureaucracies in poor countries lead to substantially greater exposure of general public to corrupt transactions. However, there are many more dimensions to corruption, and by changing the focus and definitions
suitably, it would be easy to establish that richer countries are more corrupt. It is the
powerful who decide which dimensions should be considered in constructing a measure
of corruption and governance. If, instead of the number of corrupt transactions, we focus
on ‘volume’ and ‘impact’ it is likely that the correlation between income and corruption
would be reversed. This is because the rich require heftier bribes, and the stakes and
resulting losses are much higher. When rich multinational drug companies “lobby” to
protect patent rights, deaths in poorer countries result from lack of availability of generic
equivalents. When agricultural lobbies protect subsidies against WTO rules in EU and
USA, African farmers starve\textsuperscript{10}. Millions die in wars conducted for naked pursuit of
power or profits for the rich countries. There is no parallel among the more corrupt
poorer countries to killing a half million children\textsuperscript{11}, or the burning of millions of Jews, for
political purposes.

It is in the interest of the powerful to focus on those dimensions which make them
appear better, as it provides a moral justification for their otherwise unjustifiable actions.
This does not mean that poor countries (with low GNP per capita) should not try to
eliminate corruption or improve governance – both of these steps are important and
necessary. However, spurious quantitative calculations do not prove the moral superiority
of the rich just as spurious biological arguments do not prove the racial superiority of the
whites.

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1 “Against the views of many of the top leaders in the military, McNamara put in place a statistical strategy for victory in Vietnam. He concluded that there were a limited number of Viet Cong fighters in Vietnam
and that a war of attrition would destroy them. He applied metrics (body counts) to determine how close to success his plan was.” from http://www.answers.com/topic/robert-s-mcnamara


3 See http://www.infoplease.com/ipa/A0004902.html for crime rate figures for US Cities, which lists 44 per 100,000 as the homicide rate in Washington DC. Chotani et. al. (2002) estimate homicide rates in Karachi to be around 11 per 100,000.

4 The alternative, that reduced corruption leads to increased growth, does not seem plausible on this data set, since GDP growth rates are negatively correlated with the CPI measure of corruption. Of course, this could be due to that fact that CPI does not measure corruption at all.

5 See Introduction to Pakistan Economic Survey (1990) for a discussion of how criteria for development are devised to match preconceived notions of development.

6 In fact, all crimes attributed to Saddam – arbitrary arrests without due process, torture of prisoners, use of chemical weapons, murder and bombing of innocent civilians – have been proven against Bush.

7 A strongly pro-American and anti-Noriega writer writes that “Noriega's trial was unjust. ... The prosecution was shameless in its bribery of witnesses.” See R. M. Koster (2004), and also reports in New York Times that “Prosecutors and defense lawyers have just struck a deal ... that (Noriega’s) lawyers will be paid, apparently in return for agreeing not to demand evidence that might help their client and hurt the ...” Evidence regarding racism in US Justice system is given by Hardisty(2004) who writes that “… it is nearly impossible to study the discrepancies between incarceration rates for people of color and those of Whites for similar behaviors and not conclude that these policies, and those who defend them, are racially motivated.”

8 For example, favoring patent rights and profits of rich drug companies over rights to health and life of the poor does not count as corruption. See Oxfam Briefing Paper No. 56 (2003).

9 Rich countries, being inhabited by superior races, have devised clever strategies to reduce corruption. For example, an industrialist can make a perfectly legal campaign donation to the PAC (political action committee) of a congressman while lobbying him for favors. Similarly, a lobbying firm can hire the daughter of a powerful congressman at a fabulous salary, to ensure that bills relating to rich clients get suitable treatment in Congress. In poorer countries, such transactions would be considered “corrupt.”

10 There are many well researched and referenced articles available from the Oxfam website which show how unfair trade practices of the rich countries, sometimes contravening WTO rules, and sometimes bypassing them, hurt the poorer countries. See for example “Kicking down the door: How upcoming WTO talks threaten farmers in poor countries” April 2005, and other reports available at Oxfam website.

11 American Secretary of State Madeleine Albright said when asked by Leslie Stah in a ‘Sixty Minutes’ broadcast on 12 May 1996: "We have heard that a half million children have died (as a result of sanctions against Iraq). I mean, that is more children than died in Hiroshima. And, you know, is the price worth it?” Albright responded: "I think this is a very hard choice, but the price, we think the price is worth it".