A New Paradigm of Corruption to Aid in Its Control and Dispel Its Sweet-spot Myth

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This study suggests that our anticorruption tools are fundamentally weakened by flaws in how corruption is conceptualized. After inferring an ideal definition of corruption, this study re-conceptualizes corruption as a breach-of-duty-of-care tort that is resolvable via the civil-courts. Stimulated by ambiguities in the concept of corruption, some researchers argue for a corruption sweet-spot. After reconsidering key socio-economic effects of corruption, this study concludes that corruption always harms society, many victims of corruption seek to offset or deflect harm by competing in the market for corruption and such competition (by inflating corruption) can precipitate cascading failures in society.

INTRODUCTION

The resolution of corruption is a pivotal issue on which societies rise, decline or even collapse. Corruption is a furtive act that thrives on darkness, deception, denial and treachery. As such, it is incompatible with accountability and does not long survive exposure of its infidelity, betrayals and defalcations. While much has been written on corruption and its consequences, such studies have been unable to provide a basis to contain, control, or even reliably identify corruption. Most studies on corruption use extant definitions rather than seeking to develop a first-principles understanding of corruption’s fundamental nature. The continuing failure to control corruption may be a reflection of human cupidity. However, it is more likely due to another human failing—blind intransigence, as epitomized by Brown’s (1983, p. 68) assertion that insanity “...is doing the same thing over and over again but expecting different results.” Variants of this statement are variously attributed to either Albert Einstein or Benjamin Franklin, but (unlike the Brown citation) there is no firm evidence tying the notion to either individual.

As part of its literature review, this study considers why extant definitions of corruption have not contributed to a definitive resolution to corruption and what attributes enable a definition of corruption to facilitate such a resolution. These objectives were achieved via:

- An overview of extant definitions of corruption,
- A listing of the attributes of an ideal definition of corruption,
- A contrast of the attributes of an ideal definition with 22 definitions of corruption, and
- A discussion of why corruption should be defined as the tort Breach of Duty of Care.
Claims of a *corruption sweet-spot* are assessed by revisiting the socio-economic consequences of corruption. This reassessment of the consequences of corruptions suggests that:

- The first-order effects of corruption provoke a second-order response and those effects combine form the observed effect of corruption on business freedom and on satisfaction with life, and
- There is a net social loss at all levels of corruption and a rising risk of cascading failures throughout society as corruption reaches high levels.

The conclusions draw from these discussions and illustrations to validate defining corruption as the tort *breach of duty of care* and assert that any level of corruption harms society. The inferred market for corruption explains some interesting observed behavior and has important policy implications.

**OVERVIEW OF EXTANT DEFINITIONS OF CORRUPTION**

Definitions of corruption vary, depending on where and when it occurred or was investigated. The literature review in this study found definitions of corruption tend to provide more perspective than understanding and offer little in the way of effective solutions. This type definition issue is common in accounting—as Sterling (1975, p.28) noted, accounting problems are often defined in such a way as to make them unresolvable. Consistent with the forgoing preamble, many studies on corruption start with definitions of corruption that are irretrievably and fatally flawed. Over the last few decades, the common root of many definitions of corruption is the World Bank (1997, p. 8) definition of corruption being "...the misuse [or abuse] of public office for private ends [or gain]."

There is a critical need for a *clear relationship between all elements* included within a definition of corruption, so it will be easier to understand and correlate them with each other, to corruption and to any act being evaluated. An ideal definition of corruption should clearly and unequivocally identify an act under review as being corrupt or innocent.

The roots of many corruption definitions can be traced back millennia. Plato (per Spence, 2007) ascribed five essential attributes to corruption:

1. **The possession of power** via “…the ability or capacity to act in a manner capable of bringing about a certain intended desired outcome” (Spence, 2007, p. 37).
2. **A disposition to exercise power** via a willingness to purposefully act or withhold actions.
3. **An opportunity to exercise power** via the opportunity to engage in corrupt activity.
4. **Invisibility or concealment** via the ability to hide the motives, identity, and/or outcomes of actions or inactions.
5. **A self-regarding gain** in monetary or non-monetary value, to the agent and/or a member of his/her group, resulting from an action s/he or they perpetrated.

Spence (2007, p. 39) suggests another attribute, that should be added to the forgoing five: "...a socially pre-established fiduciary relationship of trust between the corrupt person or group and the person or persons or group who are harmed in some way by the corrupt person’s or the corrupt group’s action”.

While this last essential attribute is missed in many corruption definitions, this study sees it as being critical and expands it to form a viable definition of corruption.

Previously, a corrupt act was described as simply any act that involved the misuse or abuse of power. However, the notions of *power, misuse and abuse* are fuzzy and ill-defined. As a result; many definitions fail to highlight potentially corrupt acts as being corrupt. The oft-added notion of a self-regarding wrongful gain further confounds the issue and triggers the profoundly onerous requirement of having to prove an accused acted (or failed to act) with an intent to wrongfully gain. Also, a basic tenet of most criminal law is that, to be found guilty, an offender must have intended to commit the act that breached
the law. If a defendant’s guilty intent could not have been formed (e.g. they were underage, drunk, or mentally disabled) or if it is not proven beyond a reasonable doubt (i.e. 90-95 percent confidence), they must be found not guilty. Thus, fuzzy, ambiguous and culturally or situationally-fixed definitions of corruption make criminal prosecution of corruption onerous. Further, such issues can make claims of stupidity or naivety an effective defense against a charge of criminal corruption (e.g. Premier Vander Zalm of British Columbia (Canada), in the 1990s, successfully claimed a defense that amounted to an admission he was too stupid to know that being given $10,000 in an unmarked envelope in return for a favor from his office, was a bribe; Pynn, 2007 and personal memory).

Another means to define corruption is to list an ever expanding array of acts as being corrupt. However, this procedural approach to defining corruption runs afoul of Peer’s Law (i.e. the solution to the problem, changes the problem; Lyall, 1986; Rawson, 2002) and often creates a perverse roadmap of how to be corrupt, while staying within the pale of the law and social mores. A root definition of corruption is clearly needed, to encompass all variants of corruption and focus anticorruption efforts on the root cause(s) of corruption.

**An Ideal Definition of Corruption**

An ideal definition of corruption will benefit society by allowing:

1) Those victimized by corruption to more easily identify that they were wrongfully harmed, who harmed them, how they were harmed, and the quantum of that harm, and

2) Those in a position of power to identify and avoid actions that might reasonably be deemed as corrupt and/or document how they have discharged their duty of care.

Thus, an effective definition of corruption, by making both parties aware of their responsibilities and obligations, reduces the opportunities for, and the risks of, corruption.

An ideal definition of corruption must have the following attributes:

1) Unambiguously classify an act under consideration as being either corrupt or innocent,

2) Transcend cultural differences (i.e. must not be reliant on inferred cultural values),

3) Be generally applicable across most situations,

4) Provide clear linkages between actions, outcomes, and consequences,

5) Consider actions and outcomes rather than intent,

6) Provide a trusted means to measure Quantum (i.e. the harm must be measurable), and

7) Provide retribution and restitution solutions that discourage corruption and ease the plight of victims.

Table 1 evaluates 21 extant definitions of corruption plus the definition formed in this study are judged against the above desirable attributes. In terms of each desired outcome, a “X”, “✓”, or blank denote, respectively, a failure, a success and neutral.

In terms of seven important attributes of an ideal definition of corruption, Table 1, shows that 17 of the 22 reviewed corruption definitions are fatally flawed and four are flawed. As a result, these definitions are unable to provide a solid working basis for anti-corruption tools—of the 21 extant definitions of corruption reviewed, the Transparency International (2010) definition is the closest to being viable. However, the use of private gain in that definition is a serious flaw that makes the identification and prosecution of many types of fraud difficult or even impossible. Efforts to distinguish different variants of corruption tend to be a confusing waste of time that deflects the anti-corruption effort into a thicket of irrelevancies. As Thoreau (1854, p. 80) noted:

“There are a thousand hacking at the branches of evil to one who is striking at the root…”

The root definition of corruption developed in this thesis (that corruption is harm arising from a breached duty of care) is the only definition, of those reviewed, that has all seven of the desired attributes of an ideal definition of corruption.
Ambiguity in extant corruption definitions creates dark-and-gray places that facilitate the corrupt and make it difficult for victims of corruption to seek retribution against those who harm them and restitution for that harm.

In some cases, ambiguous definitions of corruption may result in those creating the harm not realising that what they are doing is wrong. Such ignorance is all the more likely, given that, as Upton Sinclair (1935) noted:

“It is difficult to get a man to understand something when his salary [or living] depends upon his not understanding it.”

TABLE 1
EVALUATION OF CORRUPTION DEFINITIONS AGAINST SEVEN IMPORTANT ATTRIBUTES OF AN IDEAL DEFINITION OF CORRUPTION

<table>
<thead>
<tr>
<th>Extant Definition of Corruption</th>
<th>Desirable Attribute</th>
<th>Fatally</th>
<th>Flawed</th>
<th>Viable</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) “Corruption is an extra-legal institution used by individuals or group to gain influence over the actions of the bureaucracy. As such, the existence of corruption per se indicates only that these groups participate in the decision-making process to a greater extent than would otherwise be the case.” <em>Leff (1964, p. 8)</em></td>
<td>X X X X X X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2) “...behaviour which deviated from the normal duties of a public role because of private-regarding (family, close private clique), pecuniary or status gains, and violated rules against the exercise of certain types of private-regarding influence.” <em>Nye (1967)</em></td>
<td>X X X X X X</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>3) “A corrupt act violates responsibility toward at least one system of public or civic order and...A system of public or civic order exalts common interest over special interest.” <em>Rogow and Laswell (1970, p. 54)</em></td>
<td>X X X X X X</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>4) “Corruption, we would all agree, involves a deviation from certain standards of behaviour.” <em>Scott (1972, p. 3)</em></td>
<td>X X X X X X X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5) “…the abuse of public power and influence for private ends.” <em>Waterbury (1973, p. 533)</em></td>
<td>X X X X X X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6) “Corruption is defined as the moral incapacity of citizens to make reasonably disinterested commitments to actions, symbols and institutions which benefit the substantive common welfare.” <em>Dobel (1978, p. 958)</em></td>
<td>X X X X X</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>7) “...an immoral and unethical phenomenon that contains a set of moral aberrations from moral standards of society, causing loss of respect for and confidence in duly constituted authority.” <em>Gould (1991, p. 468)</em></td>
<td>X X X X X X X</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>8) “the sale by government officials of government property for personal gain.” <em>Shleifer and Vishny (1993, p.599)</em></td>
<td>X X X X X</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>9) “corruption is a colonization of social relations in which two or more actors undertake an exchange relation by way of a successful transfer of the steering media of money or power, thereby sidestepping the legally prescribed procedure to regulate the relation.” <em>Deflem (1995, p. 243)</em></td>
<td>X X X X X</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>10) “…is the abuse of public power for private benefit”. <em>World Bank (1997)</em></td>
<td>X X X X X X</td>
<td></td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>
### Extant Definition of Corruption

<table>
<thead>
<tr>
<th>Extant Definition of Corruption</th>
<th>Desirable Attribute</th>
<th>Fatally Flawed</th>
<th>Flawed</th>
<th>Viable</th>
</tr>
</thead>
<tbody>
<tr>
<td>11) “...deviation (for private gain) from bidding rules, the arbitrary exercise of discretion powers and illegitimate use of public resources.” Shihata (1997, p. 257)</td>
<td>X X X X X X X X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13) “the improper use of public office for private gain.” Sandholtz and Koetzle (1998, p. 4)</td>
<td>X X X X X X X X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14) “use of official position, rank or status by an office bearer for ... personal benefit.” Myint (2000)</td>
<td>X X X X X X X X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15) “...illegal actions with private gain as the main goal, performed by public employees or holders of elected positions.” Løvseth, T. (2001, p. 3)</td>
<td>X X X X X X X X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16) “corruption refers to act I which the power of public office is used for personal gain in a manner that contravenes the rules of the game.” Jain (2001, p. 73)</td>
<td>X X X X X X X X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17) “Corruption is behavior of public officials which deviates from accepted norms in order to serve private ends” Huntington (2002, p. 253)</td>
<td>X X X X X X X X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19) “as the misuse of public office for private financial gain by an elected official.” Kunicova and Rose-Ackerman (2005, p. 577)</td>
<td>X X X X X X X X</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>20) “Corruption occurs amongst the networks of professional managers and their associates, who use their positions of power and authority for their own collective and individual political and economic interest.” Ayius (2007, p. 1)</td>
<td>X X X X X X X X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21) “Corruption is operationally defined as the abuse of entrusted power for private gain.” Transparency International, (2010)</td>
<td>X X X X X X X X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>22) Corruption is harm arising from a breached duty of care (this Study, 2010)</td>
<td>✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓</td>
<td></td>
<td></td>
<td>✓</td>
</tr>
</tbody>
</table>

Thus, the virtues of an ideal definition of corruption may make its acceptance more difficult, as its clarity may prove embarrassingly inconvenient to those profiting from the current ambiguity in what is and is not seen as corrupt. The focus on a personal gain found in many definitions of corruption creates an unacceptable risk that an innocent gain will be deemed corrupt or that the nature of corrupt acts will be obfuscated by being associated with innocent acts. Amos (1982) asserts there “…is nothing wrong in making partial decisions in return for favors on the grounds that it harms nobody”.

**Corruption as a Tort**

Consistent with an international accounting focus, this study seeks a principles-based definition of corruption, rather than one based on procedures. Also, flowing from earlier discussion in this study, the notion of corrupt a gain was ignored as a difficult-to-prove irrelevancy. The essence of corruption is asserted to be *harm where a duty a care was reasonably expected*—that essence, inevitably, leads to the notion that corruption is a *Breach of Duty of Care* tort (see Figure 1). NB: Tort is a legal term for a torturous act (e.g. causing an unwarranted injury or other harm).
The elements in Figure 1 (i.e. harm, via commission or omission, which breaches a duty of care) form the three legal legs of a tort. This study argues that the three legs of the breach-of-duty-of-care tort are individually necessary and, in combination, sufficient to define corruption. Also, the violated duty of care is what emotes the widely-held view of corruption being more than an offence—it is seen as a heinous offence.

Efforts to sanitize corruption usually seek to portray it as victimless (e.g. a means to overcome an inefficient or unresponsive bureaucracy) and ignore or minimize the associated harm. According to the new paradigm of corruption, a corrupt act is a breach of trust that always involves:

1) A duty of care, that
2) Is breached, by intent or negligence (e.g. a reckless disregard), that
3) Directly and/or indirectly harms an individual, group, and/or society that had reasonable expectation they would not be so harmed.

The definition of corruption as harm where care was reasonably expected sidesteps the emotive and cultural baggage found in most corruption definitions, avoids the onerous task of proving a defendant’s intent, and provides a practical focus to attack this ancient social evil at its root.

THE SOCIO-ECONOMIC CONSEQUENCES OF CORRUPTION

Corruption and Poverty
The high correlation between poverty and corruption (in Figure 2, a CPI of 100 indicates no corruption) is an increasingly well-known issue (Graeff and Mehlkop, 2003) and corruption is now being condemned as a crime against humanity (Acquaah-Gaisie, 2005; Bantekas, 2006).
Diamond (2004) called corruption a crime “... against development.... [and when] you have rapacious corruption, which exists in many parts of the developing world, this is on the level of a crime against humanity.” There is little doubt that corruption and low GDP per capita are closely correlated. However, the direction of causality is a key issue in such correlations. Insight into the direction of causality in the corruption-to-poverty correlation can be found in the assertion by the G20 2010 Summit (p. 7) “…that corruption threatens the integrity of markets, undermines fair competition, distorts resource allocation, destroys public trust and undermines the rule of law.” Further insight can be provided by the correlation of corruption with other social indicators.

**Corruption and Violence**

Figure 3 shows that the violent-death rate increases as a double exponential with corruption (e.g. the function in Figure 3 is an exponential even though the y-axis is to the log_{10}).

Huntington (2002, p. 257) maintains that a society with “...a high capacity for corruption also has a high capacity for Violence.” Furthermore, Bhargava (2005, p. 3) suggest that countries “...with high levels of corruption can become targets for crime networks, as has happened, for example, in Russia and Ukraine.” The strongest logic that corruption causes violence is that, ultimately, corruption without an underlying threat of violence is madness—how can people who accept bribes to breach trust be trusted? Ultimately, given that most courts will not involve themselves in shameful matters, a threat of violence (backed-up by the reality of violence) is often needed to enforce corrupt agreements.
Figure 4 shows that the ability of business to do business (e.g. the Business Freedom Index) declines with a rising level of corruption. The measure of perceived corruption in Figure 4 is different from that used in the other figures. This measure was used because both it and the Business Freedom Index were developed by the Heritage Foundation. Al Zadjali (2010, p. 64) showed that the two indices are very close in terms of their outcomes.

The data presented in Figure 4 could be used to mistakenly infer that, at low levels of corruption, a little corruption may actually increase the freedom of business. Also, there is a discontinuity, in Figure 4, in the Business Freedom Index at a Freedom from Corruption Index (FCI) of 62, after which the freedom of business appears to rise until a FCI of around 47. This pattern along with the pattern of private gain from corruption may be why some people perceive that low levels of corruption can be good for an economy. However, there is no rational basis for the bi-modal shape in Figure 4. As an alternative explanation, the bi-modal shape in Figure 4 may be caused by two patterns being simultaneously at play—with one dominant in the upper range, another dominant in the mid-to-lower range, and both at play in the upper-mid range.
If the corruption effects are separated into initial effects (eqn (1)) and a business compensating response (eqn (2), where business competes in the market for corrupt outcomes), a clear and sensible view of the nature and effects of corruption emerges.

\[
C = \frac{g}{1+(d/X)^n} \tag{1}
\]

\[
A = X e^{a(1-X/b) - c} \tag{2}
\]

\[
C = 1^{\text{st}} \text{ order effects of corruption}
A = 2^{\text{nd}} \text{ order effects of corruption}
\]

\[
Y = \frac{g}{1+(d/X)^n} + X e^{a(1-X/b) - c} \tag{3}
\]

Regressing eqn (3) against Figure 4 data generates disappointing results—i.e. some parameter values and signs are illogical; indicating there is severe multicolinearity between the variables in equations (1) and (2). This issue was resolved by using a double-bootstrapping process to isolate and analyze the effects of equations (1) and (2)—where:

- Parameter values for eqn (1) were guestimated, then
- Values from that eqn were deducted from the values in Figure 4, and eqn (2) was regressed against the residuals to generate estimates of its parameter values, then
- Those values were substituted into eqn (2) and values from that equation were deducted from the values in Figure 4, and eqn (1) was regressed against the residuals to generate estimates of its parameter values, then
Those values were substituted into eqn (1) and values from that equation were deducted from the values in Figure 4, the negative residuals were converted to zero (on the assumption that businesses are rational wealth maximizers), and eqn (2) was regressed against the residuals to generate estimates of its parameter values, then

Those values were substituted into equation (2) and values from that equation were deducted from the values in Figure 4, and eqn (1) was regressed against the residuals to generate estimates of its parameter values.

After using the above process in two bootstrap iterations, the regression results for eqn (1) were:

<table>
<thead>
<tr>
<th>Statistical Measures -- Goodness of Fit</th>
<th>Parameters</th>
<th>t-Statistic</th>
</tr>
</thead>
<tbody>
<tr>
<td>$R^2 = 0.8832$</td>
<td>G Maximum Y</td>
<td>134.58</td>
</tr>
<tr>
<td>LM Statistic = 7.64665E-16</td>
<td>D Inflection point</td>
<td>76.899</td>
</tr>
<tr>
<td>Durbin-Watson Statistic = 2.0016</td>
<td>N Slope</td>
<td>4.0195</td>
</tr>
<tr>
<td>CHI$^2$ test on normality of residuals</td>
<td>P Rho error</td>
<td>0.31283</td>
</tr>
</tbody>
</table>

= 66.5765 with 27 degrees of freedom

And, the regression results for eqn (2) were:

<table>
<thead>
<tr>
<th>Statistical Measures -- Goodness of Fit</th>
<th>PARAMETERS</th>
<th>t-STATISTIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>$R^2 = 0.7530$</td>
<td>a Slope</td>
<td>2.1303</td>
</tr>
<tr>
<td>LM Statistic = 1.8424E -14</td>
<td>b Y=X point</td>
<td>69.288</td>
</tr>
<tr>
<td>Durbin-Watson Statistic = 1.9900</td>
<td>c Shift</td>
<td>43.321</td>
</tr>
<tr>
<td>CHI$^2$ test on normality of residuals</td>
<td>p Rho error</td>
<td>0.37996</td>
</tr>
</tbody>
</table>

= 125.8135 with 27 degrees of freedom

$C = 134.58 / (1 + (76.899/X)^{4.0195})$  \hspace{10mm} (1a)
$A = X e^{2.1203(1-X/69.288) - 43.321}$ \hspace{10mm} (2a)
$Y = 134.58 / (1 + (76.899/X)^{4.0195}) + X e^{^{2.1203(1-X/69.288) - 43.32}}$ \hspace{10mm} (3a)

The first-order effects of corruption damage trust, which reduces the effectiveness of business. This is captured in Figure 5 via eqn (1). Business, rather than being a passive victim, responds to corruption by competing for corrupt actions—this is captured in Figure 5 via eqn (2).

At low levels of corruption, the compensating response of business to corruption restores some, but not all, of the business effectiveness and efficiency lost to corruption. However, as the level of corruption rises, the market value of corrupt acts declines and is eventually overwhelmed by the negative effects of corruption. Further, the net social harm arising from corruption rises with the level of corruption, because corruption only has a market value to a corruptor (eqn (3a)) if it is rare and unexpected. As it becomes more commonplace, its value declines exponentially and the net harm to business increases exponentially, until businesses (unable to function) collapse. Thus, corruption is always a negative sum game—while a few individuals benefit, per Figure 5, society and business activity (as a whole) are always harmed by corruption.
Corruption and Satisfaction with Life

Violence and unemployment are key contributors to the misery index. Given that the corruption level is directly related to the violent-death rate and inversely related with business activity, it is unsurprising that (as displayed in Figure 6) Satisfaction with Life declines exponentially as the level of corruption rises. There are, however, untapped patterns in the scattering of data in Figure 6.
Specifically, the data distribution looks similar to the distribution in Figure 5. That similarity suggests that individuals (like businesses) are not passive victims of corruption, but seek (to the best of their ability) to compete in the market for corrupt acts and, in so doing, claw back (or, at least, shift) some of the losses corruption imposes on them. This implies that in corruption, there may be no clear separation between victims and perpetrators—there may be a gradient in the ability to perform in the market for corrupt acts.

The Figure 6 data was subjected to a similar process to what was done with the data in Figure 4. Equation (4) represents the initial effects of corruption on the wellbeing of a populace, eqn (5) portrays the counter response of the populace to being harmed, and eqn (6) combines those effects.

\[
W = a e^{bX} \quad (4)
\]

\[
M = X e^{g(1-X/h) - c} \quad (5)
\]

\[
SWB = a e^{bX} + X e^{g(1-X/h) - c} \quad (6)
\]

Initially, to start the double-bootstrap process, the following conditions were imposed on eqn (4):
- At the maximum CPI of 100, the W is 300, and
- When W equals 100, the CPI is 70.

The above conditions are achieved when the following parameter values are applied:

\[
W = 7.7045 e^{0.03662X} \quad (4a)
\]

The net values after the eqn (4a) values were deducted from the data in Figure 6 were regressed using eqn (5). The resulting parameters were substituted into eqn (5) and those values were deducted from the data in Figure 6. The resulting net values were regressed using eqn (4) with the parameter values in eqn (4a) as seed values. The resulting parameters were substituted into eqn (4) and those values were deducted from the data in Figure 6. The resulting net values were regressed using eqn (5) with the previous eqn (5) parameters used as seed values. This process was continued through two bootstrap iterations to produce the following statistics for eqn (4):

<table>
<thead>
<tr>
<th>Statistical Measures -- Goodness of Fit</th>
<th>Parameters</th>
<th>t-Statistic</th>
</tr>
</thead>
<tbody>
<tr>
<td>( R^2 = 0.7179 )</td>
<td>a Scaling parameter</td>
<td>9.7728</td>
</tr>
<tr>
<td>LM Statistic = 5.4939E-09</td>
<td>b Slope parameter</td>
<td>0.033075</td>
</tr>
<tr>
<td>Durbin-Watson Statistic = 2.0136</td>
<td>P Rho error</td>
<td>0.11675</td>
</tr>
<tr>
<td>CHI(^2) test on normality of residuals = 12.3024 with 9 degrees of freedom</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

And, regression results for eqn (5) of:

<table>
<thead>
<tr>
<th>Statistical Measures -- Goodness of Fit</th>
<th>Parameters</th>
<th>t-Statistic</th>
</tr>
</thead>
<tbody>
<tr>
<td>( R^2 = 0.4741 )</td>
<td>g Slope</td>
<td>2.7598</td>
</tr>
<tr>
<td>LM Statistic = 5.28437E-16</td>
<td>h Inflection point</td>
<td>90.052</td>
</tr>
<tr>
<td>Durbin-Watson Statistic = 2.0362</td>
<td>c Shift</td>
<td>17.469</td>
</tr>
<tr>
<td>CHI(^2) test on normality of residuals = 9.5202 with 9 degrees of freedom</td>
<td>( \rho ) Rho error</td>
<td>0.14195</td>
</tr>
</tbody>
</table>
When the above parameter values are substituted into eqns (4), (5), and (6), the result is:

\begin{align*}
W &= 9.7728 e^{(0.033075X)} \\
M &= X e^{2.7598(1-X/90.052)} - 17.469 \\
SWB &= 9.7728 e^{(0.033075X)} + X e^{2.7598(1-X/90.052)} - 17.469
\end{align*}

Figure 7 superimposes the above equations against the data in Figure 6, shows that eqn (6a) is an excellent fit against the observed data and indicates that two process similar to those described by eqns (4) and (5) likely combine to create the undulating pattern between Satisfaction with Life and corruption. Figures 5 and 7 suggest that very few victims of corruption are passive.

Specifically, most victims of corruption actively seek to offset or divert the harm they suffer by actively competing in the market for corrupt services. Such participation in corruption, by victims of corruption, complicates the anti-corruption struggle. Specifically, many of those participating in corruption may act more out of self-defense, than an aggressive pursuit of a wrongful gain.

If the markets for corruption are efficient, then transaction costs and the level of corruption are likely to be conflated, while the private gain to corruption is likely to be competed down to mere normal returns. Thus, while corruption immensely harms society, very few benefit by more than what they could have gained via honest trade. However, these competition effects may be evaded or off-loaded by those peddling corrupt acts and/or influence, if they are able to use government authority and/or a predilection to violence to create and enforce a monopoly in corruption.
Business Freedom and Satisfaction with Life

Figures 5 and 7 suggest a strong positive correlation between Business-freedom and Satisfaction with Life. The relationship is strengthened if some outlier countries are removed—e.g. those benefiting from high oil output and those suffering from being part of what the Russians call their near away (i.e. neighbor countries in which they meddle, like their invasion of Georgia).

Based on Figure 8, one of the best ways for a government to enhance the quality of life of its citizens is to increase the Business Freedom in their country and (per Figure 5) Business Freedom appears to vary inversely with the level of corruption.

CONCLUSIONS

This study considers why extant definitions of corruption have not contributed to a definitive resolution to corruption and what attributes enable a definition of corruption to facilitate such a resolution. This study also evaluated claims that there is a corruption sweet-spot where society may benefit from a low level of corruption.

It was found that a majority of 21 reviewed extant definitions of corruption were fatally flawed in at least two critical areas. Specifically, the definitions are so ambiguous that they create dark and gray places that facilitate the corrupt and make it difficult for the victims of corruption to seek retribution against those who harm them and restitution for that harm. Further, the common focus on wrongful gain is an irrelevancy that confounds the issue and triggers the profoundly onerous requirement of having to prove that an accused intended to wrongfully gain. This requirement is especially onerous if corruption is treated as a criminal offense and the wrongful gain and guilty intent must be proven beyond a reasonable doubt.

Defining corruption as a Breach-of-Duty-of-Care tort avoids the emotive and cultural baggage found in most corruption definitions and provides a cost-effective practical focus to attack this ancient social
evil at its root. Given that the harm from corruption is often a multiple of the gain to the corrupt, the use of civil courts is likely to bankrupt the corrupt and, thereby, reduce their capacity to inflict further harm. It was clearly shown that very corrupt countries are likely to also be very poor, very violent, have a low business activity, and have citizens with a low satisfaction with life. Also, the relationship of corruption with both the Business-freedom and the Satisfaction-with-life indices are likely compound functions. Specifically, the victims of first-order corruption are not passive victims, but (in trying to minimize or deflect the harm they suffer from corruption) create second-order effects by competing in the market for corrupt acts. The inferred market for corruption has four serious implications:

1) If the markets for corruption are efficient, the gain to expected corruption is likely to be competed down to normal returns. Thus, while corruption immensely harms society, its long-run private gains may be more illusory than real (i.e. few benefit by more than what can be gained via honest trade),

2) If expected corruption generates only normal returns to effort, the pursuit of excess gain by those selling corrupt acts is likely to precipitate to an accelerating race to ever higher levels of corruption,

3) Government authority and/or a predilection to violence can be used to create and enforce a monopoly in corruption that will reduced the effects of competition on the gains to corruption — this may in part explain why highly corrupt nations tend to be very violent and to have very corrupt government agencies, and

4) Many participants in corruption may be acting more out of self-defense, than an aggressive search for a wrongful gain. Thus, effective anti-corruption efforts in a highly corrupt nation (by disrupting the average citizen’s ability to compete for corrupt acts) may initially cause the average quality of life to fall — until the average level of corruption is reduced.

This last implication makes defining corruption as a tort and using civil courts even more attractive — if corruption cannot be unilaterally eliminated, then greatly increasing the cost-effective remedies available to victims of corruption is the least harmful adjustment path to lower levels of corruption.

It is very clear, from Figures 5 and 7, that society suffers harm at all levels of corruption. The illusion of a corruption sweet-spot may arise from the complexities of the first- and second-order effects of corruption and/or from victims of corruption finding that they gain some relief by engaging in a little competitive corruption. Social-well-being tends to vary inversely with the level of corruption throughout the range of corruption. Further, when the transaction costs of competing for corruption are added to the mix, the deadweight loss of corruption is greatly magnified. The absence of CPI values below 20 in Figures 6 and 7 and the paucity of FFC values below 18 in Figures 4 and 5 suggests a possible tipping point, where further increases in the level of corruption collapses business activity and the population’s satisfaction with life.

It is interesting, but not entirely unexpected, that the Satisfaction-with-life and Business-freedom indices are so closely related and future research should examine that relationship in more detail.

REFERENCES


