# Transparency International's Corruption Perceptions Index: Whose Perceptions Are They Anyway?

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#### **Introduction:**

In recent years, corruption has become an important issue among a wide audience, including development economists, development institutions, politicians and the general public alike. Along with the realization that the quality of a country's institutions is crucial to development have come various empirical studies that have used various corruption indices in regressions. The widespread usage of the corruption indices necessitates a closer examination of the reliability of these indicators.<sup>2</sup>

We find that there are many limitations to corruption indicators due to the methodologies used in aggregating or averaging, the reliability of the sources on which they are based, and the varying definitions of corruption utilized. In particular, we find the large standard errors of the aggregate corruption indices problematic. This lack of precision of the scores leads one to question the feasibility of compiling meaningful rankings across countries or trends across time.

The remainder of the paper is organized as follows. The first section of the paper explains the methodology behind one of the more popular indicators, Transparency International's Corruption Perceptions Index (CPI), as well as its component indicators.<sup>3</sup> The second part describes some limitations of the CPI. The final section makes suggestions for future empirical studies of corruption.

# **Description of the Corruption Perceptions Index**

Transparency International's CPI is a composite of various corruption indicators. It ranks countries on a zero to ten scale, with a score of zero representing very high

<sup>&</sup>lt;sup>2</sup> See Lambsdorff (1999), Lambsdorff (2003a), Lambsdorff (2003b), Habib and Zurawicki (2002).

<sup>&</sup>lt;sup>3</sup> The full list of ratings that make up the CPI from 1995 – 2003 are listed in Appendix Tables 1-3 and the questions from the components of the 2001 CPI are in Appendix 1.

corruption. Since each source of data about the level of corruption used a different scale, the scores need to be standardized before being averaged into the CPI.<sup>4</sup> Once standardized, each source receives equal weight in the index. In other words, it is the simple mean of the standardized sources.<sup>5</sup> Most of the component indictors only rate corruption for a sub-set of the countries included in the CPI. Therefore, all of the countries included in a particular year's CPI have not been rated by the same sources. In addition, since results from multiple editions of some sources were used, the ratings of some organizations had a higher weight. For example, in the 2003 CPI, the World Economic Forum's "Global Competitiveness Report" corruption scores from 2001, 2002, and 2003 each received equal weight in the CPI as the Economist Intelligence Unit's "Country Risk Service and Country Forecast", since only 2003 data was included from the EIU score.

The number of sources used in the index tends to change from year to year, as well as the number of countries scored (see table 1 below). Some sources such as Business International and Wall Street Journal Central European Economic Review (CEER) are used in only one year's CPI, while other sources such as the World Competitiveness Report and the Asian Intelligence Issues are included in all years from 1995 until 2003. Appendix tables 1-3 in the appendix lists all the sources used in each year's CPI. From 1995 to 1997, in order for a country to be rated by Transparency International, there had to be at least four sources of information about corruption in that country. Starting in 1998, the minimum number of required surveys was lowered to three.

$$CPI^{j} = \frac{1}{N_{j}} \sum_{i=1}^{N_{j}} S_{i}^{j}$$
, where  $N_{j}$  is the number of different corruption ratings sources for country j.

 $<sup>^4</sup>$  For example, one source rates countries on a 0-6 scale, while another rates on a 0-10 scale.  $^5$  The CPI for country j is calculated as the mean of the standardized corruption scores for that country:

Table 1: CPI 1995 – 2003: Country Coverage and Sources

Year	1995	1996	1997	1998	1999	2000	2001	2002	2003
Number of	41	54	52	85	99	90	91	102	133
Countries									
Included									
Number of	7	10	7	12	17	16	14	15	17
Indicators									
Number of	3	6	6	7	10	8	7	10	13
Independent									
Sources									

Source: Various documents available on Transparency International's website

Up until 2002, Transparency International (TI) included three years of data (if available) from surveys and only one year in the case of expert assessments. Surveys were averaged, according to TI, in order to lessen sharp variations in the scoring when these deviations are not related to changes in the level of corruption but rather high-level scandals that have surfaced. In the case of expert opinions, TI stated that only one year's score was included because any change from previous years is the considered to be the product of careful evaluation of changing circumstances in the country by the country experts. The scores given by the country experts do not vary much over time.

There were two major changes in the CPI starting with the 2002 edition, having to do with the selection of sources for the component indictors and the methodology used to compute the CPI. Regarding the choice of sources, TI decided to no longer include surveys of the general public, but rather include only expert assessments and surveys of business people. The most significant change to the CPI in 2002 was the procedure used to standardize the scores of the individual corruption indicators before they are averaged into the CPI (described below). Also, the method for determining the confidence range for each score was modified. Despite changes to the standardization procedure for the

<sup>&</sup>lt;sup>6</sup> Lambsdorff, "Background Paper to the 2000 Corruption Perceptions Index Framework Document," p. 3.

component ratings, the final CPI rating for a particular country has always been a simple average of the standardized scores.

Current Standardization Procedure (since 2002):

The new standardization procedure, referred to as "matching percentiles" occurs in two steps. The inputs to standardizing a particular indicator are i) rankings of countries covered by that source, and ii) the previous year's CPI scores for that same subset of countries. For example, suppose that a particular data source on corruption for 2003 ranks three countries on their level of corruption. Then, in the first step of standardization, the best score (lowest corruption) from the 2002 CPI for those same three countries becomes the standardized score for the country with the highest ranking (lowest corruption) for that particular 2003 source. The second highest score among the 2002 CPI scores for the three countries is applied to the country with the second highest ranking according to the 2003 source, and so on.

The second step in the standardization procedure applies a monotone transformation (using a variation on the beta function) to each of the scores. The purpose of this transformation is to prevent different countries' CPI scores from converging over time, while maintaining the same ordering of countries and also keeping all of the scores in the 0-10 range. For instance Finland's (rated as the least corrupt country) CPI score would tend to fall over time unless it is always rated as the least corrupt country by all the sources included in the CPI. Likewise, Bangladesh's (rated as most corrupt) CPI score would tend to rise over time unless it is consistently rated as the most corrupt country by

all of the sources that include it in its sample.<sup>7</sup> Hence, the monotone transformation helps to maintain dispersion of CPI scores by slightly raising scores of the highest rated countries, and by slightly lowering scores of the lowest rated countries.

After the component indicators are standardized, they are averaged to create the CPI rating for each country. In order to create confidence intervals, TI uses a nonparametric bootstrap approach. The corruption scores for a particular country are sampled 10,000 times (with replacement) in order to calculate a confidence interval for the sample mean.

#### 1995 – 2001 CPI Standardization Procedure:

The objective of the standardization procedure applied to the component indicators of the 1995 – 2001 versions of the CPI was "to ensure that inclusion of a source consisting of a certain subset of countries should not change the mean and standard deviation of this subset of countries in the CPI." The starting point for the standardization procedure was the previous year's CPI. It is best explained by an example. The 2000 Asian Intelligence Issue (from PERC) rated the level of corruption in 14 countries. In order to standardize each corruption rating from the Asian Intelligence Issue, one needed the mean and standard deviation of those 14 countries from the 1999 CPI, and the mean and standard deviation of the Asian Intelligence Issue 2000 ratings. The formula for calculating the standardized value  $S_i^j$  for the  $i^{th}$  component of CPI (i.e. corruption rating source) for the  $j^{th}$  country was then:

<sup>&</sup>lt;sup>7</sup> "Background Paper to the 2003 Corruption Perceptions Index, pp. 6 – 7.

<sup>&</sup>lt;sup>8</sup> Lambsdorff, "The Transparency International Corruption Perceptions Index 1999—Framework Document, pg. 20.

$$S_i^j = \left[V_t^j - \mu_t^{sub}\right] * \frac{\sigma_{t-1}^{sub}}{\sigma_t^{sub}} + \mu_{t-1}^{sub}$$

Where:

 $V_t^j$  = the value of a particular corruption rating for a particular country in year t  $\mu_t^{sub}$  = mean of sub – group for a particular corruption rating in year t  $\sigma_{t-1}^{sub}$  = standard deviation of sub – group from CPI in year t-1  $\sigma_t^{sub}$  = standard deviation of sub – group from CPI in year t  $\mu_{t-1}^{sub}$  = mean of sub – group from year CPI in year t-1

For example, the 14 countries rated by PERC in the Asian Intelligence Issue formed the sub-group for that corruption rating. In calculating the standardized value for the 2000 PERC, the ratings for 2000 and 1999 was used as t and t-t according to the formula for  $S_i^j$ .

# **Limitations of the CPI and its Component Indicators**

Transparency International's Corruption Perceptions Index (CPI) is an average of several other corruption measures. TI compares its Corruption Perception Index to a price index and suggests that an aggregation of subjective assessments by heterogeneous groups leads to an accurate measure of corruption. Closer scrutiny of the methodology used to average the component ratings as well as questions about the component ratings themselves raises serious doubts about the usefulness of aggregated measures of corruption. The different corruption ratings averaged into the CPI appear to be measuring different dimensions of corruption; some measure petty corruption while others measure grand theft (types of corruption), some measure the frequency of

corruption, while others measure the amounts of money involved (quantity measures). There are various sources of potential bias in the various corruption indicators which range from experts' assessments to surveys of households and firms. <sup>9</sup> It is not clear that averaging these measures leads to greater accuracy, as is claimed by the proponents of aggregate corruption indicators. In fact, aggregating such disparate ratings may result in exacerbating biases. These concerns, in addition to potential bias introduced by measurement errors lead to the conclusion that these measures are unlikely to be reliable, especially when employed in econometric analyses.

# a. What is Being Measured?

Regardless of the accuracy of the corruption ratings, it is unclear what the corruption ratings actually tell us, since corruption is such a broad concept. According to Transparency International, the objective of their Corruption Perceptions Index is "enhancing understanding of levels of corruption from one country to another" through data on perceptions of corruption. 10 The difficulty arises because there are many ways in which corruption can manifest itself, and the different types of corruption may cause different problems depending on the circumstances. There are different forms that corruption may take. The "degree of corruption" might refer to the frequency of corrupt acts, the amount of bribes paid, or the gain (financial or otherwise) that contractors achieve through corruption. 11 The information from the Gallup International survey (used in the 1997 – 1999 CPIs) refer to the number of corrupt acts. The International Crime Victim Survey (2000 CPI), Global Competitiveness Report and World Bank

<sup>11</sup> Ibid, pg. 8.

<sup>&</sup>lt;sup>9</sup> Since 2002, TI no longer includes surveys of the general public in the CPI.
<sup>10</sup> Lambsdorff, "The Transparency International Corruption Perceptions Index 1999—Framework Document, pg. 1.

Private Sector Survey (question 2) are directed toward the amount of bribes paid. The Asian Intelligence Issue and World Bank Private Sector Survey (question 1) ask about the damage done by corruption. The other sources of corruption ratings do not indicate which definition of the "degree of corruption" that they attempt to measure. <sup>12</sup>

Therefore it is unclear what exactly the CPI is measuring, when sources which measure such different aspects of corruption are averaged together. It is a bit like adding, or in the CPI's case averaging, apples and oranges. To give a rough example, suppose that in city A there were 5 murders and 95 incidents of shopplifting, whereas in city B, there were 95 murders and 5 incidents of shopplifting. The size of the population is the same in both cities. Then, the total crime rate is the same in the two cities. But no one would venture to say that they are equally safe cities to live in. This is an exaggerated example of what happens in the CPI, where grand embezzlement and petty corruption are treated as the same entity. Transparency International asserts that since the different sources are highly correlated, then either people answer questions about corruption the same way regardless of what exactly is asked, or that most countries suffer the types of corruption.<sup>13</sup>

In reality, the prevalence of various types of corruption is likely to vary by country. Corruption may take the form bribes or favors related to many activities, a short list of these being taxes, licences, regulations, import duties, foreign exchange, government contracts/procurement, payoffs for political favors/support, preferential access to bank credit, and high level embezzlement. In addition, corruption is likely to affect different sectors of the economy and/or segments of the population differently, depending on the

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<sup>&</sup>lt;sup>12</sup> Ibid, pg. 9.

<sup>&</sup>lt;sup>13</sup> Lambsdorff, "Background Paper to the 2001 CPI: Framework Document," June 2001, p. 6.

type of corruption involved. High-level corruption and embezzlement of funds is more likely to affect aid projects than foreign businesses operating in the country. Corruption among customs officials is unlikely to directly affect the production of non-tradable goods by domestic firms. The effects of excessive regulation (and the need to get around them through bribery) may depend on the size of the firm. Very small firms in the informal sector are sometimes small enough so that they are not detected and therefore not harassed by corrupt bureaucrats. Large firms are the ones that are the most likely to be able to influence the government and avoid regulation through state capture. Medium sized firms are the ones that are likely to suffer the most, since they are large enough to be detected but not big enough to have influence.

In the next several paragraphs, we raise some questions about the scores of the some of the corruption indicators that are included in the CPI:

Political and Economic Risk Consultancy, Ltd. (PERC) - Asian Intelligence Issue (included in 1995 – 2003 CPI): Inspection of the corruption scores published in the Asian Intelligence Issues might make one suspect of their validity due to the large jumps in scores over short time horizons (see Table 2). According to PERC's ratings, Japan became almost 2.4 times as corrupt (an increase of 138%) between 1996 and 1997. China, India, and Malaysia also jump up almost two points each between 1998 and 1999. The reason why one might doubt the reliability of these numbers is that corruption is deep-rooted in a country, the result of a combination of factors, including weak institutions (such as the judiciary and property rights), over-regulation, entrenched bureaucracy, and an under-developed civic society and media. These factors are unlikely to change so dramatically in a one-year period. That the scores display such unrealistic

and dramatic variation is particularly troublesome for the CPI since up to three years of Asian Intelligence survey data is included, giving it a particularly high weight.

There is some indication, even in the Asian Intelligence Issue itself that the scores may have been more strongly related to the incidence of *discovering* corruption rather the incidence of corruption itself. For instance, the report states that,

Japan's recession has dragged on for so long that many corrupt relationships between major companies and government departments have been exposed. (Asian Intelligence Issue #531)

Table 2: Trend of Survey Scores for Corruption, PERC

	1995	1996	1997	1998	1999	2000	2001
China	7.30	8.00	8.06	6.97	9.00	9.11	7.88
Hong Kong	2.80	2.79	3.03	2.74	4.06	2.49	3.77
India	7.00	6.86	8.20	7.40	9.17	9.50	9.25
Indonesia	7.30	7.69	8.67	8.95	9.91	9.88	9.67
Japan	2.00	1.93	4.60	5.00	4.25	3.90	2.50
Malaysia	4.60	5.00	5.80	5.38	7.50	5.50	6.00
Philippines	6.60	6.95	6.50	7.17	6.71	8.67	9.00
Singapore	1.20	1.09	1.05	1.43	1.55	0.71	0.83
South Korea	4.00	5.16	7.71	7.12	8.20	8.33	7.00
Taiwan	4.20	5.53	5.96	5.20	6.92	6.89	6.00
Thailand	5.90	6.55	7.49	8.29	7.57	8.20	8.55
Vietnam	N/A	7.78	8.00	8.25	8.50	9.20	9.75

Grades are scaled from zero to 10, with zero being the best grade possible and 10 the worst. Source: PERC Asian Intelligence Issue # 579 (March 1, 2001), available at: http://www.asiarisk.com/lib10.html

Political Risk Services (PRS) - International Country Risk Guide (ICRG)<sup>14</sup>
(included in 1996 – 2000 CPI): Political Risk Services (PRS) has strong priors about the level of corruption in a country when it makes its assessments, using the type of

<sup>14</sup> The ICRG corruption rating was included in the CPI from 1996 – 2000, but has been excluded since 2001 because it estimates the *political risk* involved in corruption, rather than corruption itself.

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government (elected government or not) and the length of time that it has been in power as a strong indication of the level of corruption. According to PRS, corruption is a prerequisite in one-party states and non-elected governments, and those governments are rated as having high levels of corruption. Additionally, in their experience "things begin to go wrong" in a country whose government has been in office for more than 10 years. Accordingly, in assigning a corruption rating PRS looks closely at how long a government has been in power. Governments are generally rated as having low corruption when there is an accountable democracy and a particular government has been in power for less than five years. When a government has been in power for more than 10 years and where a large number of officials are appointed rather than elected, an intermediate rating is usually merited, according to PRS.

If actual levels of corruption are mainly a function of the type of government and length of time in power as posited by PRS, then there would be little need for separate corruption indices. These political variables could then be instruments for corruption in econometric regressions.

World Bank and EBRD - Business Environment and Enterprise Performance Survey (BEEPS) (included in 2000 CPI): The responses to questions about "state capture" in this survey are likely to be biased due to the fact that the respondents are those who are potentially engaged in state capture—the firms themselves. It is reasonable to expect that firms that are successful in altering laws and regulations are those least likely to answer the question honestly. Given that firms are not likely to self report their illegal activities, the results of this survey should be viewed with caution.

World Bank: World Business Environment Survey (WBES) (2000)

(included in 2001 – 2003 CPI): The data included from the World Business Environment Survey, despite being outdated, has been used in several year's editions of the CPI.

According to the World Bank Institute's website, this survey was completed between 1999 and early 2000. However, Transparency International reports the survey as being completed in 2001 and includes the results in the 2001 – 2003 versions of the CPI.

# b. Whose Perceptions Are They Anyway?

The CPI relies heavily on "expert assessments" of corruption, representing the views of a small number of people. <sup>16</sup> For the most part, these expert assessments are carried out by expatriates of the countries involved. The longer these expatriates are living outside their country of origin, the less likely they are to have an accurate understanding of the current situation in the country. Absolute objectivity is difficult to achieve, and most people naturally will be biased toward either a government or its opposition. To the extent that the expatriates making the assessments of corruption are members of particular economic or social groups, expert assessments of corruption may be biased.

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## c. Technical Issues

<sup>15</sup> http://info.worldbank.org/governance/wbes/?#wbes

<sup>&</sup>lt;sup>16</sup> For the 2003 version of the Corruption Perceptions Index, four of the twelve sources used were expert assessments. These were: World Markets Research Centre Risk Ratings, Freedom House Nations in Transit, Columbia University State Capacity Survey, and Economist Intelligence Unit Country Risk Service and Country Forecast.

There are several technical problems that called into question the validity of the CPI, including large standard errors, overly complex standardization procedures, measurement error and biased perceptions of corruption. These

#### i. Standard Errors

Transparency International's Corruption Perceptions Index (CPI) has large standard errors that lead one to question the precision of the scores. Some examples from the 2004 CPI are informative.<sup>17</sup> Belarus received a score of 3.3 with a 90% confidence interval of 1.9 to 4.8. Therefore, Belarus could be as clean as Italy (score=4.8) or as corrupt as Angola, DR Congo, Indonesia, and Turkmenistan (scores=2.0). Malta, with a CPI of 6.8 and confidence interval of 5.3 – 8.2 may be as clean as Germany (score=8.2), cleaner than the United States (score=7.5) and Japan (score=6.9) or as corrupt as Jordan (score=5.3). From a first glance, it appears that one should exercise caution when using the CPI scores as accurately measuring the level of corruption in a particular country.

#### ii. Standardization Procedure

#### 1995 – 2001 CPI:

There are some problems with this standardization procedure. While it is necessary to standardize the different rankings in some way since they each have different scales, it is not clear what the appropriate procedure would be. The difficulty arises because not all sources rate all the same countries. The objective of the

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<sup>&</sup>lt;sup>17</sup> Here are some examples from the 2000 CPI. On a zero to ten scale, Costa Rica received a 5.4 with standard error of 1.1. Therefore, with 95% confidence, Costa Rica's corruption rating is between 3.2 and 7.6. Looking at other country's rankings, then, Costa Rica may be as corrupt as Colombia, Ethiopia, and Thailand (score=3.2) or as transparent as Germany (score=7.6).

standardization procedure, as stated previously, was that the mean and standard deviation of the CPI for a certain subset of countries does not change whether or not a particular source (which only rates that subset of countries) is included in the index. Therefore a country would not be "'punished' for being compared with a subset of relatively uncorrupt countries, nor rewarded for being compared with a subset perceived to be corrupt."<sup>18</sup> The result is that the mean and standard deviations for this sub-set of countries is the same in 2001 as it was in 2000. Forcing each sub-set of countries to have the same mean and standard deviation each year may not be a necessary property, given that Transparency International has already said that the CPI is not comparable from one year to the next.

# Current Standardization Procedure:

According to Kaufmann et al (2003), the nonparametric bootstrapping method for determining the confidence intervals overestimates the precision (i.e. gives a confidence range that is too small) of the CPI for countries that include fewer corruption indicators.

iii. Bias

1995 – 2001 CPI:

Transparency International has argued that using both expert opinions and local opinion surveys helps to eliminate bias. There are two potential types of bias described in various editions of the CPI framework documents. The first type of bias comes from surveys of residents, and the second type from assessments where individuals were comparing multiple countries.

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<sup>&</sup>lt;sup>18</sup> Ibid, pg. 21.

The first type of potential bias (as described by Transparency International) is derived from the fact that when residents were surveyed about the prevalence of corruption, they do not have experiences with other countries to which they might compare their country. The assessment of a country is only useful in creating an index like the CPI when that respondent's appraisal is the result of comparisons with other countries. Therefore, in surveys of residents, there was no benchmark to which residents were comparing their home country, which suggests the possibility that cultural background may have been a factor in survey responses. There are two ways that surveys of residents may introduce bias into the corruption ratings. First, when a person surveyed rates their country as having high corruption, it may be because they have a high moral standard, and therefore they may assign a high-corruption rating to their country, while someone from another cultural background would rate the same country as having low corruption. Secondly, it could be that people are rating the importance of corruption relative to other problems in their country, rather than magnitude of corruption itself. <sup>19</sup>

The second type of bias that Transparency International perceives to be potentially a problem comes from the expert assessments of corruption. In making assessments of corruption, the experts are likely to compare countries to their home country. There are two possible problems stemming from the expert (often expatriate) assessments of corruption. First, if the experts come predominantly from a particular cultural background (with similar values and a similar definition of corruption), then the expert assessments would overly reflect that culture's view. Secondly, the experts may not have

<sup>&</sup>lt;sup>19</sup> Ibid, p. 6-7.

a proper understanding of the culture in countries other than their home country, and this may also bias their evaluation of corruption in those countries.<sup>20</sup>

Transparency International stated that there are two types of potential bias, but actually it appears that there are actually four potential biases. There are two *different* potential problems *each* from the resident surveys and expert assessments. Using resident surveys, problems could arise either because of differing ethical standards between countries or because residents might judge corruption relative to other problems. In the case of expert assessments, the bias could be caused by either from the over-representation of a particular culture, or misunderstandings about other countries' cultures.

Transparency International claims that the presence of each type of bias can be rejected through the following reasoning. The first type of bias, stemming from the single-country observations of resident surveys, is eliminated because expert assessments are included, and the experts apply a single definition of corruption and standard of ethics to each country they examine. The second type of bias, stemming from the possible over-representation of a particular culture, is dealt with by the inclusion of resident surveys since the surveys of country residents would not carry the bias of a particular cultural heritage. Transparency International believes that further proof that these biases are not present lies in the fact that all of the corruption indices (both from expert assessments and resident surveys) are correlated.<sup>21</sup>

<sup>&</sup>lt;sup>20</sup> The discussion of the two types of bias comes from: Lambsdorff, "Background Paper to the 2000 Corruption Perceptions Index Framework Document," p. 7.

<sup>&</sup>lt;sup>21</sup> Lambsdorff, "Background Paper to the 2000 Corruption Perceptions Index Framework Document," p. 7.

Transparency International's arguments that the two types of bias can be ignored are unpersuasive. When TI asserts that the inclusion of both types of corruption ratings eliminates both types of bias, they are implying that the two types of bias effectively balance each other out. In other words, the argument seems to imply that expert assessments balance out the bias of resident surveys, and vice versa. For this to be true, for a particular country, the bias from the residents would have to have the opposite sign as the bias from the expert assessments, and their magnitudes would have to be inversely proportional to the weight of the respective corruption rating in the CPI. There is no way to tell which countries' corruption ratings may be suffering from bias, or which type of bias is present. Therefore, there is no apparent reason to believe that biases would cancel each other out.

If it were the case for a particular country that the bias of both the resident surveys and the expert assessments work in the same direction (either both biased upward or downward), then the inclusion of both types of corruption ratings would not solve the bias problem. For example, consider the case where the residents of the country perceive corruption as a big problem compared to other problems in the country, and therefore the resident survey has biased the corruption rating upward. Suppose that at the same time the expert assessment of corruption is flawed and also biased upward (because of a misunderstanding of the culture). Then the biases in the two estimates of corruption would not balance each other out. Even if only *one* type of corruption rating (either the resident surveys or expert assessments) were biased, then the CPI average would still be biased because there would be nothing to balance out the biased rating.

Transparency International also submits as evidence of the CPI's validity is the fact that the different sources going into the Corruption Perceptions Index are highly correlated. For example, in the 2001 CPI, most of the correlations between sources were around 0.8. TI asserts that that since most sources rate countries similarly in terms of corruption, that the evaluations are most likely accurate.<sup>22</sup> This would be true if each corruption rating was determined independently of the other sources of ratings. There is an alternative explanation for the high correlation since it is likely that country experts are at least aware of the corruption ratings from other sources. The experts may partially base their assessments (unintentionally) on other corruption ratings, thus leading to a high correlation between the different sources.

# iv: Problems of Using Corruption as a Time Series

There are strong reasons to believe that it would be inappropriate to use the CPI as a time-series variable, including the changes in methodology, changes in the sources averaged into the CPI, the use of the same data for up to three years, and anecdotal evidence that changes in the CPI may have to do more with detection than changing levels of corruption.

Transparency International itself admits that there are problems with year-to-year comparisons of values of the Corruption Perceptions Index, and that changes in the sample and methodology may be the cause of changes in a country's score. However, it also states that "[c]omparisons with the results from previous years should be based on a

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<sup>&</sup>lt;sup>22</sup> Lambsdorff, "Background Paper to the 2001 CPI: Framework Document," June 2001, p. 2-3.

country's score..."<sup>23</sup> According to TI, trends may be discovered when the researcher can identify that changes in a country's score over time is due to changes in the component indicators and not due to technical factors.<sup>24</sup> However, TI does not indicate how one can distinguish between actual trends in corruption and spurious ones caused by changing methodologies. Three of the nine countries that TI cites as having an actual increase in corruption between 2002 and 2003 are Argentina, Israel and Zimbabwe. Given that these countries had major crises over the period, it is not surprising that their scores would change. A complex corruption index like the CPI does not add value if it can only identify trends for countries that are experiencing widely-reported deteriorations in law and order.

Since the sources used in the CPI changes almost yearly, changes in the value of the CPI may result not from a change in the level of corruption, but from changes due to the fact that each source uses a different methodology. Some sources are not updated, and therefore were dropped after a couple of years. For instance, the Wall Street Journal's corruption survey on Eastern Europe was included only in the 1999 CPI. New sources are added to the index as they become available, such as the Columbia University State Capacity Survey, added in 2002.

Transparency International includes data that is up to two years old in the CPI. For instance, the same data from the Gallup International 50<sup>th</sup> Anniversary Survey (conducted in 1997) was used in the 1997, 1998, and 1999 CPIs. Additionally, up to three years of data from the Global Competitiveness Report, Asian Intelligence Issue, and World

 $<sup>^{23}</sup>_{24}$  Lambsdorff, "Background Paper to the 2003 Corruption Perceptions Index," pg. 2.

Competitiveness Report were included in the 2001, 2002, and 2003 CPIs. According to the World Bank Institute's website, the World Bank's World Business Environment Survey was completed between 1999 and early 2000.<sup>25</sup> However, Transparency International includes the results in the 2001 – 2003 versions of the CPI. Since the CPI is the mean of all the sources, two-year-old data is receiving the same weight as current data. Therefore, if the corruption ratings of a country are improving over that period, the averaging with older data will dampen that effect.

There is evidence that perceptions of corruption are influenced by the disclosure of major scandals. A paper by Transparency International<sup>26</sup> noted how Germany and Ireland's CPI score had fallen between 1999 and 2000 (Germany 8.0 to 7.6 and Ireland 7.7 to 7.2) and that the drop may have been related to recent discoveries of political scandals. They stated that the World Economic Forum (Global Competitiveness Report) had not seen a rise in corruption in the previous years, but that possibly the scandals proved that the countries did not deserve the high CPI value (signifying low corruption) that they had received previously. Belgium experienced a major drop (signifying higher corruption) in their CPI ratings from a score of 6.84 in 1996 to a score of 5.25 in 1997. Several child abuse scandals in the previous year may have contributed to the jump.<sup>27</sup> If observations such as these are indicative of what happens with the corruption ratings in other countries, then changes in the CPI are reflecting the ability of the media to detect corruption rather than the actual incidence of corruption. In that way, countries with a

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<sup>&</sup>lt;sup>25</sup> http://info.worldbank.org/governance/wbes/?#wbes

<sup>&</sup>lt;sup>26</sup> Lambsdorff, "Background Paper to the 2000 Corruption Perceptions Index The Precision and Regional Comparison of Perceived Levels of Corruption—Interpreting the Results."

<sup>&</sup>lt;sup>27</sup> "Nigeria Again Tops Survey List of Corrupt Nations," CNN, Aug. 1, 1997.

Quote: "He [Dr. Eigen, TI Chairman] cited outrage there against the judicial system and political class which exploded last autumn among Belgians after a series of child abuse scandals."

strong media would be rated as having higher corruption than was actually the case. In addition, ratings are more likely to register increases in corruption (resulting from scandals) than a decrease in corruption, since bad news often gets most of the news coverage.

#### v. Econometric Problems Due to Measurement Error

Corruption indices have been used in many econometric regressions. Even if corruption ratings suffer from only from measurement error (with mean=0, variance= $\sigma^2$ , and uncorrelated with the true model's error term), then there are various econometric issues that can arise. If corruption is the dependent variable, then Ordinary Least Squares (OLS) estimates of coefficients in regression equations are unbiased and consistent, but inefficient. If corruption with measurement error is used as an explanatory variable, then the problems are more serious. In that case, coefficient estimates would be both inconsistent and biased towards zero. There will also be a bias towards zero for the coefficient estimate of a fixed-effects model (used to estimate panel data regressions) when there is measurement error in the explanatory variable.

# vi. Technical Issues in the Component Indicators

Economist Intelligence Unit (EIU) - Country Risk Service and Country Forecast: In the EIU's Country Risk Service and Country Forecast, the political risk category is the only one that mentions "levels of corruption" as one of the contributing factors. One should note that other factors included in "political risk" are the threat of war, social unrest, disorderly transfers of power, political violence, international disputes, regime changes,

institutional ineffectiveness, the quality of the bureaucracy, the transparency and fairness of the political system, and levels of crime in the country. 28 Therefore, corruption is only one of the many variables included in the assessment of "political risk." The EIU recognizes the difficulty in accurately measuring corruption. They state, "Political risk factors are the least quantifiable of all the factors in the risk ratings model."<sup>29</sup> According to Transparency International only the variable called "corruption in government," and not the political risk composite, is averaged into the CPI.<sup>30</sup>

World Bank and EBRD Business Environment and Enterprise Performance Survey (BEEPS)

Firms were initially selected at random from the phone book or business directory. Then firms were given an initial interview concerning firm characteristics so that firms could be selected according to certain quotas. The quotas ensured the proper representation of firms with various characteristics in the survey. These criteria had to do with sector, firm size, location, (foreign) ownership, exports, and state ownership.<sup>31</sup> Interviews were conducted face-to-face, since mail surveys often suffer from a low response rate. After the survey, some respondents were called the following day to verify some of their answers. Most of those interviewed fell into the categories of: owner/proprietor, director, finance officer, and chief executive.

Location: at least 15% from towns with population less than 50,000 or rural areas.

Ownership: at least 15% of firm with majority foreign ownership (or close to legal max where it is forbidden).

Exporters: at least 15% of firms with exports of at least 20% of output.

State Ownership: 20% of firms state-owned

<sup>&</sup>lt;sup>28</sup> EIU CRS September Handbook, 2000.

<sup>&</sup>lt;sup>29</sup> EIU Country Risk Service September Handbook, 2000.

<sup>&</sup>lt;sup>30</sup> Website of Transparency International, Background Information for the 2000 CPI.

http://www.transparency.org/cpi/2000/ganda.html

<sup>&</sup>lt;sup>31</sup>Ibid, pg. 5.

The precise criteria were:

Industry sector: # of manufacturing vs service companies allocated according to contribution to GDP, with 15% min. Number of employees: at least 15% each from firms with under 50 employees and those with over 200.

The quotas of firms were not based on weights in proportion to the universe of firms, since that information was unavailable in most countries. This means that the sample is not random, and in addition the standard errors cannot be corrected for the survey design. Also, since the firms were initially contacted by telephone (and selected from business directories or the phone book), this may make the survey less representative of firms in the informal sector if these firms are less likely to have a telephone.

World Bank and University of Basel - World Development Report, Private Sector Survey
1997

The low response rate and possible exclusion of the informal sector lead to concerns regarding how representative the results of the Private Sector Survey were. In order to decide which firms would receive the survey, firms were stratified with respect to firm size, geographic location, and proportion of firms that did not have any foreign contacts. However, since the response rate was only 30%, it is unclear whether the responses *received* consisted of a random and stratified sample. Secondly, it is unclear whether any firms in the informal sector were surveyed. If firms in the informal sector were excluded, then there would be sample selection problems because the universe of firms would not be accurately represented.

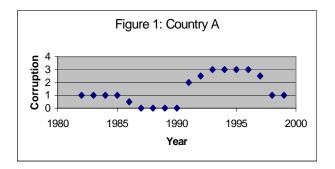
The paper accompanying the World Development Report 1997 Private Sector Survey recognizes some other biases that could have entered the survey. For instance, since the survey was conducted only after receiving permission from the governments of the respective countries, then there was some concern that some countries refused permission because they feared the results. That would have sample selection

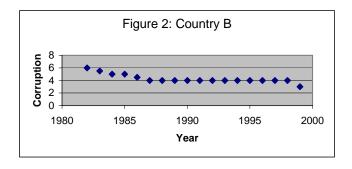
consequences for this particular survey, but not for the CPI as a whole, since the Private Sector Survey was only one of many sources for the CPI. In terms of individual responses, possible sources of bias are that entrepreneurs affected by corruption would be more likely to answer the survey than entrepreneurs that were reasonably satisfied with the business environment, thus leading to a higher corruption rating than merited. On the other hand, entrepreneurs that had experienced so many difficulties so that they had basically "given up" might be less likely to even answer the survey.

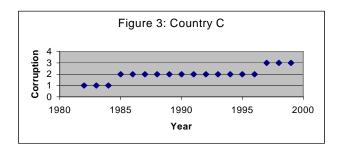
vii. Country Case Studies: Examples of Misleading Trends

Figures 1-3 for countries A, B, and C are the International Country Risk Guide (ICRG) ratings for three Asian countries. (Note that a higher score signifies lower corruption). Economic and political events in each of these countries casts doubt on the validity of the trends found in the corruption indices. We believe that trends in the corruption indices may be attributed in these cases to factors other than changing corruption levels.

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Country A is well known as having high corruption, especially at the upper-levels of government. In the late 1990's the country returned to democratic rule. But at the same time, the country's corruption ratings worsened. We suspect that the increased perception of corruption may have had more to do with the fact that corruption was more likely to be exposed (since the press became more free after the return to democracy), rather than there being any more corruption than before. The East Asian financial crisis also exposed weaknesses in the financial sector including bad loans that may have appeared to be higher corruption, when it was actually just exposing the bad practices that had been in place for many years.

We hypothesize that Country B's corruption rating worsened in the late 1990s, despite the country's strong economic performance, due to the poor reputation of its long-time leader. While there have been some strong-arm actions taken by the leader, the

ruling coalition includes parties from all of the country's ethnic groups and has had an important role as a stabilizing force in a country that is ethnically fractured. Since the ruling coalition cuts across ethnic lines means, all groups are represented in government, providing some measure of accountability.

In Country C, corruption trends showed that its measure was falling, despite the several instances of high-level embezzlement and systemic corruption that were widely reported in the press. Examples of well known setbacks during the 1990s included bribes for the government award of contracts, bribes for vote tampering, politicizing the bureucracy to maintain power, weaking the powers of judicial institutions, and sustained poor performance in tax collection and loan recovery (linked to corruption). We believe that the Western press' positive views of these leaders influenced the corruption ratings for Country C, despite its extremely weak institutional performance.

## Conclusion

Since corruption is the result of entrenched dysfunctional institutions in a country, changes at the country-level will be slow to appear. It will take some time for anti-corruption reforms to take effect after they are introduced, and even longer for people to notice the effects of the reforms so that perceptions to change. Since the CPI uses up to three years of data, then even if there are reductions in corruption according to the most recent figures, those advances will be tempered by the inclusion of previous years data. The 1998 CPI Press Release even states, "It needs to be emphasized, though, that it can take some time for these actions [anti-corruption reform] to influence international perceptions, and be consequently reflected in the CPI."

As we have seen, aggregate corruption indicators cannot be used to accurately measure changes in corruption over time. This has three important implications; First, it is improper to use corruption indicators in econometric regression analysis (as a time series, at least). Secondly, it would be inappropriate to use corruption ratings as a variable on which to base policy. Third, it would be incorrect to use corruption indicators as an output indicator to measure the success or failures of country reform programs.

There is a strong desire to quantify the entire concept of corruption into a single index, so that it may be compared across countries and over time. Unfortunately, corruption is such a complex phenomenon that attempts to compress it into a single number lead to results that are imprecise (at best) and misleading (at worst). This is not to say that corruption should not be studied. On the contrary, there is a great need for

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 $<sup>^{32}\</sup> http://www.gwdg.de/\!\!\sim\!\!uwvw/PR1998.html$ 

good measures of governance and corruption. Since corruption takes different forms in different countries, it needs to be examined case-by-case basis. It is not necessary for all types of corruption to be aggregated into a single indicator. Rather, the institutions that suffer from corruption in each country (for example: customs, tax evasion, judiciary, procurement) should each be studied individually, where the same set of questions are asked in each round of the survey and statistically sound sampling techniques are implemented. These steps will help ensure that corruption trends are being measured more precisely so that the results can be used as policy benchmarks or variables in econometric studies that will help us to better understand the dynamics of corruption and institutional change.

Organizations such as Transparency International say that corruption indices like the CPI are a "wake-up call to political leaders and to the public at large to confront the abundant corruption that pervades so many countries." The truth is that governments and citizens *are* fully aware of the corruption which pervades their country. The problem is that the people are powerless to stop corruption.

<sup>&</sup>lt;sup>33</sup>According to Dr. Eigen, Chairman of TI, in the 1998 CPI Press Release http://www.gwdg.de/~uwvw/PR1998.html

#### References

- Economist Intelligence Unit, EIU Country Risk Service September Yearbook, September 2000.
- Erb, Harvey, Viskanta, "Political Risk, Economic Risk and Financial Risk" *Financial Analysts Journal* (1996): November/December 52:6, 28-46.
- Graybow, Charles, "Explanatory Notes," from Nations in Transit 1998, http://www.freedomhouse.org/nit98/graybow.html
- Habib, Mohsin, and Leon Zurawicki, "Country-Level Investments and the Effect of Corruption: Some Empirical Evidence," *International Business Review* 10(6), 2001. (haven't looked at it yet for relevance)
- Hellman, Jones, Kaufmann, and Schankerman, "Measuring Governance, Corruption, And State Capture," World Bank Policy Research WP # 2312, April 2000.
- Institute for Management Development website, http://www.imd.ch/wcy/methodology/methodology.cfm
- IMD, The World Competitiveness Yearbook. (Lausanne, Switzerland: IMD) 1999.
- International Country Risk Guide, "Brief Guide to the Ratings System," June 1999.
- Karatnycky, Motyl, and Shor, (ed.) *Nations in Transit 1997: Civil Society, Democracy and Markets in East Central Europe and the Newly Independent States.* (New Brunswick U.S.A.: Transaction Publishers), 1997.
- Kaufmann, D., A. Kraay, and M. Mastruzzi, "Governance Matters III: Governance Indicators for 1996 2002, working paper, 2003.
- Lambsdorff, Johann G., "Corruption in Empirical Research: A Review," working paper, 1999, available at:
- http://www.transparency.org/working\_papers/lambsdorff/lambsdorff eresearch.html.
- Lambsdorff, Johann G., "The Transparency International Corruption Perceptions Index 1999—Framework Document," Transparency International, Oct. 1999.
- Lambsdorff, Johann G., "Background Paper to the 2000 Corruption Perceptions Index Framework Document," Transparency International, Sept. 2000.
- Lambsdorff, Johann G., "Background Paper to the 2001 Corruption Perceptions Index Framework Document," Transparency International, June 2001.

Lambsdorff, Johann G., "How Corruption Affects Persistent Capital Flows," *Economics of Governance* 4(3), 2003a. (haven't looked at it yet for relevance)

Lambsdorff, Johann G., "How Corruption Affects Productivity," *Kyklos* 56(4), 2003b. (haven't looked at it yet for relevance)

Political and Economic Risk Consultancy, Ltd., Asian Intelligence Issue #531, March 23, 1999.

Political and Economic Risk Consultancy, Ltd., Asian Intelligence Issue #579, March 7, 2001, http://www.asiarisk.com/lib10.html

Transparency International, www.transparency.org.

The PRS Group,

http:\\www.polrisk.com/commonhtml/methods.html http:\\www.polrisk.com/commonhtml/faq.html

- Ul Haque, Mark, and Mathieson, "The Relative Importance of Political and Economic Variables in Creditworthiness Ratings" IMF WP/98/46, April 1998.
- Ul Haque, Kumar, Manmohan, Nelson, Mathieson, "The Economic Content of Indicators of Developing Country Creditworthiness, IMF WP/96/9, Feb. 1996.
- Ul Haque, Mathieson, and Mark, "Rating the Raters of Country Creditworthiness," *Finance and Development*, March 1997.
- World Economic Forum, *The Global Competitiveness Report 1997*. (Geneva: World Economic Forum), 1997.

# **Appendix 1: Description of Sources Used in Various Years' CPIs**

Economist Intelligence Unit (EIU): Country Risk Service and Country Forecast

The Economist Intelligence Unit publishes Country Risk Service (CRS) reports for 100 countries. (Although TI Framework Document says there are ratings for 115 countries.) A new version of the EIU's ratings was included in the Corruption Perceptions Index each year between 1998 and 2000. They were originally published quarterly, but their frequency changed to monthly in May 2000. The analysis is carried out by country experts. The general categories in which countries receive ratings are political risk, economic policy risk, economic structure risk, and liquidity risk. In each category, a country receives a letter rating between "A" (lowest risk) and "E" (highest risk). The categories are averaged to calculate an overall rating for the country. In order to be averaged into the Transparency International ratings, the EIU ratings were converted to a 0 to 4 scale, with 0 representing high risk, and 4 representing low risk.

## Freedom House (FH): Nations in Transit

The 1998 Nations in Transit survey by Freedom House examined various aspects of performance in 28 post-Communist countries. The 1998 edition of the survey was incorporated into the 1999 and 2000 Corruption Perceptions Index of Transparency International. Freedom House's corruption ratings were based on country reports, the assessment of the Nations in Transit Academic Oversight Board, and the Ratings Committee. The final scores concerning corruption were from "A" (low corruption) to "D" (high corruption).

Each country report was written by either a staff member of Freedom House or a Ph.D. level consultant. The country reports were in a question/answer format. There was a standardized list of questions to be answered for each country, and the author of each report answered those questions according to the information available. Corruption was one of the nine areas researched. Subjects other than corruption that were analyzed included the political process, civil society, independent media, governance and public administration, rule of law, privatization, microeconomics, and macroeconomic policy.

The ratings were compiled as follows. The author of each report gave a preliminary rating of each area. Then the Academic Oversight Board (consisting of several experts) met to establish the ratings. Finally, the Ratings Committee checked the ratings for consistency.

*Gallup International (GI):* 50<sup>th</sup> Anniversary Survey (1997)

The survey conducted by Gallup International was administered to the general public in 44 countries. More than 34,000 people were interviewed. People were asked their opinion about the frequency of corrupt acts performed by politicians, public officials, policemen, and judges.<sup>34</sup> The results from this survey were included in the 1997, 1998, and 1999 CPIs.

Institute for Management Development (IMD): World Competitiveness Yearbook

The World Competitiveness Yearbook, which is compiled by IMD ranks countries' competitiveness using both "hard data" (such as GDP, current account balance, etc.) and

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<sup>&</sup>lt;sup>34</sup> All information about 50<sup>th</sup> Anniversary Survey from "The Transparency International Corruption Perceptions Index 1999—Framework Document".

survey data.<sup>35</sup> The rankings were based on standardized values ("STD values") which were calculated for each criterion using all data for all of the countries. Hard data received a weight of approximately 2/3, and survey data 1/3 in the overall rankings.<sup>36</sup>

Each year, the Executive Opinion Survey is sent out to a few thousand executives in middle and top management.<sup>37</sup> In both 1999 and 2000, the survey was conducted in 47 countries. The survey attempts to include domestic and international companies, and both local and expatriate experience. Each respondent only rated countries in which they worked.

Transparency International only uses the responses from one of the questions in the Executive Opinion Survey in calculating the CPI. In the section called Government/State Efficiency respondents rank the statement "bribing and corruption exist in the public sphere" on a 1 to 6 scale. IMD then converted those scores to a 0 to 10 scale.

"International Working Group": International Crime Victim Survey (ICVS)

The International Working Group, which is a part of the United Nations

Interregional Crime and Justice Research Institute, conducted the International Crime

Victim Survey (ICVS), posing various questions about crime to households rather than

firms in various countries. Telephone interviews were conducted for most of the

industrialized countries, whereas face-to-face interviewing was used in developing and

transition countries. In the survey, people were mostly asked about their experience with

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<sup>&</sup>lt;sup>35</sup> In 1999, 140 hard criteria and 106 survey questions were used to calculate the competitiveness rankings. In 2000, there were 140 hard criteria and 110 survey questions.

<sup>&</sup>lt;sup>36</sup> More specifically hard data received 0.66 in 1999 and 0.64 in 2000.

<sup>&</sup>lt;sup>37</sup> In 1999, there were 4,160 responses, in 2000, there were 3,263.

crimes over the previous five years, but in the case of corruption, people were asked about their experience over the previous year.

The first year that corruption was included in the 1996-97 survey. It covered both developing and industrialized nations, and the results from 43 countries (≈40,000 respondents) were included in the 1999 CPI. According to the ICVS website, 56 countries and 135,465 responses were included in the entire 1996-97 ICVS. From the 1999-2000 ICVS survey, data on corruption from 11 countries (≈20,000 respondents) were included in the 2000 CPI. In the 1996-97 survey, four questions were asked concerning corruption, but only the answer to one of these questions was included in the CPI.

Political and Economic Risk Consultancy, Ltd. (PERC): Asian Intelligence Issue

Transparency International utilizes three years of the Asian Intelligence Issue as part of its Corruption Perceptions Index (CPI). For example the 2000 CPI incorporates PERC's corruption ratings for 1998, 1999, and 2000, each with equal weight.

The Asian Intelligence is a newsletter published every two weeks, and each edition focuses on a different topic, with corruption being one of the topics that is periodically covered. The corruption scores are based on surveys of expatriate business executives.<sup>38</sup> They are asked about the "extent of corruption in a way that detracts from the business environment for foreign companies."

<sup>&</sup>lt;sup>38</sup> According to The Transparency International Corruption Perceptions Index 1999—Framework Document and Background Paper to the 2000 Corruption Perceptions Index Framework Document.

Political Risk Services (PRS): International Country Risk Guide (ICRG)

There are two different corruption ratings described by PRS. One is simply called "Corruption", and it is one of the "political risk components" used in assessing political risk as part of the ICRG. There is also a variable "Corruption in government" which is part of the IRIS data set gathered by Steve Knack. It is unclear if these two variables are the same and if they are not, which one was used by Transparency International. This confusion arises because Transparency International stated that for the 2001 CPI rating, the variable "Corruption in government" from the ICRG was used.<sup>39</sup>

According to Political Risk Services, their measure is mostly concerned with political corruption, such as excessive patronage, nepotism, job reservations, favors, secret party funding, and close ties between politics and business.<sup>40</sup> The corruption rating ranges in value from 0 to 6, where 6 indicates low corruption.

Wall Street Journal, Central European Economic Review (CEER): Annual Survey (1997)

The Wall Street Journal CEER's Annual Survey was included in the Transparency International's 1999 Corruption Perceptions Index. Twenty-six Eastern European countries were rated by business analysts in Europe and the United States. The number of people who replied to the survey was not available, but the question asked concerned the effect of corruption on the attractiveness of the country as a place to do business. 41

<sup>41</sup> This information taken from "The Transparency International Corruption Perceptions Index 1999—Framework Document" by J. Lambsdorff.

 <sup>&</sup>lt;sup>39</sup> Lambsdorff, "Background Paper to the 2000 Corruption Perceptions Index Framework Document," p. 13.
 <sup>40</sup> "Brief Guide to the Ratings System," International Country Risk Guide, June 1999, p. 6-7.

World Bank and EBRD: Business Environment and Enterprise Performance Survey (BEEPS) - 1999

This survey was carried out in 1999, and about 3,000 firms in 20 transition countries were questioned about various issues having to do with governance, corruption, and "state capture" (the purchase of laws and decrees by firms). Some of the information regarding corruption was included in the 2000 Corruption Perceptions Index. According to Transparency International, two pieces of information were taken from this source: an aggregate measure of "state capture" or grand corruption (created by the World Bank), and survey responses rating the frequency of firms' irregular "additional payments" in order to get things done. The composite index of "state capture" was measured as the average proportion of firms responding that each of four components of grand corruption was an obstacle. The four components were: legislative capture (sale of parliamentary votes or presidential decrees to private interests), central bank capture, legal capture (sale of court decisions in criminal and arbitration court cases), and non-transparent political party finance (contributions by private interests to political parties and election campaigns.)<sup>42</sup>

World Bank and University of Basel: World Development Report, Private Sector Survey - (1997)

The Private Sector Survey was conducted in 74 developing and developed countries, from all regions of the world. According to Transparency International, there were more than 3500 completed surveys. The survey consisted of 25 questions, and was

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<sup>&</sup>lt;sup>42</sup> Hellman, Jones, Kaufmann, and Schankerman (2000), "Measuring Governance, Corruption, and State Capture", pg. 21-23.

answered by local entrepreneurs. The surveys were either mailed or hand-delivered to firms, and the response rate was about 30 percent.

For the CPI, Transparency International used the responses to two questions concerning corruption from the Private Sector Survey of the World Bank and University of Basel. The two questions were:

- 1. Please judge on a six point scale how problematic [corruption is] for doing business.
- 2. It is common for firms in my line of business to have to pay some irregular "additional payments" to get things done. (There were six possible answers ranging from always to never)

World Economic Forum (WEF): Global Competitiveness Report and African Competitiveness Report

The World Economic Forum has published the Global Competitiveness Report for more than 20 years, and in 1996 completely updated the analytical framework. They attempt to construct an index that is correlated with economic growth over a 5-year time horizon. Similar to the IMD at its World Competitiveness Yearbook, WEF uses both "hard data" and survey data to rank countries according to competitiveness. Yearly data from WEF (from the 1996-2000 period) has been used in the Corruption Perceptions Index since 1998.

The Competitiveness Index is a weighted average of 8 factors. These factors are management, institutions, openness, government, finance, labor, infrastructure, and technology. For management and institutions, only survey data is used. For the other factors, a weighted average of hard data and survey data is used. According to the 1997

Global Competitiveness Report, a 170 question Executive Survey was sent to 58 countries that year, and over 3,000 responses were received.

The data that Transparency International's CPI used from the Global Competitiveness Report came from scores (on a 1 to 7 scale) that respondents gave on a question concerning how common irregular additional payments were. The number of countries from all continents that were included from the Executive Survey in the CPI varied from 40 to 59 and information for additional African countries came from the Africa Competitiveness Report, also published by the World Economic Forum. <sup>43</sup> The survey was administered to senior business leaders from domestic and international companies. 44 The question about corruption was asked slightly differently in the Africa Competitiveness Report survey, since it asked respondents to assess whether irregular additional payments were required and large in amount. 45 Additionally, for the 2000 Africa Competitiveness Report, a second question was asked about corruption, concerning how much of the contract value would have to be given in bribes when doing business with the government. 46 It is unclear how the two questions from the Africa Competitiveness Report were combined, since one question regarded the prevalence of corruption and the other question asked for an estimate of the amount of money paid in bribes.

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<sup>&</sup>lt;sup>43</sup> The number of countries ranked in the Global Competitiveness Report does not always correspond to the number of countries used in the CPI because Transparency International received the raw data from Harvard University (according to the TI 1998 CPI Framework Document).

There was corruption data on 40, 56, 68 59, and 59 countries in the Executive Surveys, in 1996-2000, respectively. There was corruption data on 20 and 26 African countries in the Africa Competitiveness Reports, in 1998 and 2000, respectively.

<sup>&</sup>lt;sup>44</sup> Number of respondents according to TI: Global Competitiveness Report 1996: 1,537. 1997: 2,778. 1998: 3,168. 1999: 3,734. 2000: 4,022; Africa Competitiveness Report: 1998: 582. 2000: 1,800.

<sup>&</sup>lt;sup>45</sup> Information from TI 2000 CPI Framework Document.

<sup>&</sup>lt;sup>46</sup> Information from TI 2000 CPI Framework Document, pg. 4.

# Appendix Table 1: Sources Included in Transparency International's Corruption Perceptions Index: 1995 – 1997

1995		1996		1997	1997		
Source	Years included	Source	Years included	Source	Years included		
Institute for	1992		1993	Institute for			
Management	1993	Institute for Management	1994	Management	1996		
Development, World Competitiveness Report	1994	Development, World Competitiveness Report	1995	Development, World Competitiveness Report	1997		
	1992		1993				
Political & Economic	1993	Political & Economic	1995	Political & Economic	1997		
Risk Consultancy, Asian Intelligence Issue	1994	Risk Consultancy, Asian Intelligence Issue	1996	Risk Consultancy, Asian Intelligence Issue			
Business International	1980	XXX	XXX	XXX	XXX		
XXX	XXX	Impulse, Peter Neumann	1994	XXX	XXX		
XXX	XXX	DRI/McGraw-Hill Global Risk Service	1995	DRI/McGraw-Hill Global Risk Service	1997		
XXX	XXX	Political Risk Services	1993-1995	Political Risk Services	1997		
XXX	XXX	Internet Corruption Perception Index, Gottingen Univerisity	1995-1996	Internet Corruption Perception Index, Gottingen Univerisity	1997		
XXX	XXX	XXX	XXX	Gallup International 50th Anniversary Survey	1997		

Appendix Table 2: Sources Included in Transparency International's Corruption Perceptions Index: 1998-2000

Perceptions Index: 1	<u> </u>	1999		2000		
1770		1777		2000		
Source	Years included	Source	Years included	Source	Years included	
	1996		1997	Institute for	1998	
Institute for Management Development, World	1997	Institute for Management Development, World	1998	Management Development, World	1999	
Competitiveness Report	1998	Competitiveness Report	1999	Competitiveness Report	2000	
Political & Economic		Political & Economic	1997	Political & Economic	1998	
Risk Consultancy, Asian	1997	Risk Consultancy, Asian	1998	Risk Consultancy, Asian	1999	
Intelligence Issue	1998	Intelligence Issue	1999	Intelligence Issue	2000	
Political Risk Services, ICRG	1998	Political Risk Services, ICRG	1999	Political Risk Services, ICRG	2000	
Gallup International 50th	1997	Gallup International 50th		VVV	VVV	
Anniversary Survey	1997	Anniversary Survey	1997 1997	XXX	1998	
World Economic Forum & HIID, Global	1990	World Economic Forum, Global Competitiveness	1997	World Economic Forum, Global Competitiveness	1998	
Competitiveness Report	1998	Report	1999	Report	2000	
World Bank, World	1770	World Bank, World	1777	Ttop of t	2000	
Development Report (Private Sector Survey)	1997	Development Report (Private Sector Survey)	1997	XXX	XXX	
Economist Intelligence Unit (CRS and Country	1998	Economist Intelligence Unit (CRS and Country Forecast)	1999	Economist Intelligence Unit (CRS and Country Forecast)	2000	
Forecast)	1998	Wall Street Journal	1999	rotecast)	2000	
XXX	XXX	Central European Economic Review	1997	XXX	XXX	
XXX	vvv	Freedom House, Nations in Transit	1998	Freedom House, Nations in Transit	1998	
AAA	XXX	International Working Group, International	1998	International Working Group, International	1998	
XXX	XXX	Crime Victim Survey	1996-1997	Crime Victim Survey	1999-2000	
XXX	XXX	World Economic Forum, African Competitiveness		World Economic Forum, African Competitiveness	1998	
XXX	XXX	Report	1998	Report	2000	
				World Bank and EBRD, Business Environment and Enterprise Performance Survey		
XXX	XXX	XXX	XXX	(BEEPS)	1999	

Appendix Table 3: Sources Included in Transparency International's Corruption Perceptions Index: 2001 – 2002

2001		2002			
2001		2002			
Source	Years included	Source	Years included		
7	1999		2000		
Institute for Management Development, World	2000	Institute for Management Development, World	2001		
Competitiveness Report	2001	Competitiveness Report	2002		
Political & Economic	1999	Political & Economic			
Risk Consultancy, Asian	2000	Risk Consultancy, Asian	2000		
Intelligence Issue	2001	Intelligence Issue	2001		
World Economic Forum	1999	World Foonancia Form	2000		
World Economic Forum, Global Competitiveness	2000	World Economic Forum, Global Competitiveness	2001		
Report	2001	Report	2002		
Economist Intelligence Unit (CRS and Country Forecast)	2001	Economist Intelligence Unit (CRS and Country Forecast)	2002		
Freedom House, Nations in Transit	2001	Freedom House, Nations in Transit	2002		
World Economic Forum, African Competitiveness Report	2000	World Economic Forum, African Competitiveness Report	2000		
XXX	XXX	XXX	XXX		
World Bank World Business Environment Survey (WBES)	2000	World Bank World Business Environment Survey (WBES)	2000		
Pricewaterhouse Coopers Opacity Index	2001	Pricewaterhouse Coopers Opacity Index	2001		
XXX	XXX	Gallup International (on behalf of TI) Corruption Survey	2002		
XXX	XXX	Columbia University State Capacity Survey	2001		
XXX	XXX	XXX	XXX		
XXX	XXX	XXX	XXX		
XXX	XXX	XXX	XXX		

Appendix Table 4: Sources Included in Transparency International's Corruption Perceptions Index: 2003 – 2004

Perceptions index: 2003	2004		
2003		2004	
2003		2001	
Source	Years included	Source	Years included
	2001		2002
Institute for Management Development, World	2002	Institute for Management Development, World	2003
Competitiveness Report	2003	Competitiveness Report	2004
Political & Economic Risk		Political & Economic Risk	2002
Consultancy, Asian Intelligence		Consultancy, Asian	2003
Issue	2001	Intelligence Issue	2004
	2001		2002
	2002	World Economic Forum,	2003
World Economic Forum, Global Competitiveness Report	2003	Global Competitiveness Report	2004
Economist Intelligence Unit		Economist Intelligence Unit	
(CRS and Country Forecast)	2003	(CRS and Country Forecast)	2004
Freedom House, Nations in Transit	2003	Freedom House, Nations in Transit	2004
World Bank and EBRD, Business Environment and Enterprise Performance Survey	2002	World Bank and EBRD, Business Environment and Enterprise Performance Survey	2002
World Bank World Business Environment Survey (WBES)	2000	XXX	XXX
Pricewaterhouse Coopers Opacity Index	2001	XXX	XXX
Gallup International (on behalf of TI) Corruption Survey	2002	Gallup International (on behalf of TI) Corruption Survey	2002
Columbia University State Capacity Survey	2002	Columbia University State Capacity Survey	2003
Information International	2003	Information International	2003
Multilateral development bank		Multilateral development	
survey	2002	bank survey	2002
World Markets Research Centre Risk Ratings	2002	World Markets Research Centre Risk Ratings	2004
··· <i>Q</i> =	<b>~ ~ ~</b>	Merchant International Group, Grey Area Dynamics	2004

# **Appendix 2: Questions Concerning Corruption from Various Surveys**

Gallup International (used in 1997 – 1999 CPI)

From the following groups of people, can you tell me for each of them, if there are a lot of cases of corruption given, many cases of corruption, few cases or no cases of corruption at all. The following groups were considered for the CPI: politicians, public officials, policemen, and judges.

Institute for Management Development (IMD) World Competitiveness Yearbook (Same question used for 2001 - 2003 CPI)

Bribing and corruption prevail or do not prevail in the public sphere.

International Crime Victims Survey (ICVS): (Note: Question 290 was used in 2000 CPI) 1996-1997 Survey (used in 1999 CPI)

290. In some countries, there is a problem of corruption among government or public officials. During 1995, has any government official, for instance a customs officer, a police officer or inspector in your country asked you, or expected you to pay a bribe for his service?

- 1) yes
- 2) no
- 9) refuses to say

if answer is equal to code 1, continue with question 291. Else continue with question 300

- 291. (The last time) what type of official was involved. Was it a government official, a customs officer, a police officer, or some sort of inspector? << INT. IF MORE THAN ONCE IN 1995, ASK ABOUT THE LAST TIME >>
- 1) government official
- 2) customs officers
- 3) police officer
- 4) inspector
- 5) other
- 9) refuses to say

Continue with question 292

292. (The last time) did you or anyone else report this problem of corruption to the police?

- 1) yes
- 2) no
- 9) don't know

If answer is equal to code 2 continue with question 293. Else continue with question 300

- 293. Did you or anyone else report it to any public or private agency?
- 1) Yes
- 2) No
- 9) Don't know

International Crime Victims Survey (ICVS) 1999-00 Survey (used in 2000 CPI)

In some areas there is a problem of corruption among government or public officials. During 1999, has any government official, for instance a customs officer, police officer or inspector in your own country, asked you or expected you to pay a bribe for his service?

### PERC Asian Intelligence Issue

(Note: Only have access to the question listed by Transparency International that was used in the 2000 CPI)

To what extent does corruption exist in the country in which you are posted in a way that detracts from the business environment for foreign companies?

World Development Report 1997 Private Sector Survey (used in 1998 – 1999 CPI)

Note: The answers to questions 12 part n. and 14 were used in the CPI

12. Please judge on a six point scale how problematic these different policy areas are for doing business (Please do not select more than 5 obstacles as the very strong (6)):

	Obstacles						
					Vei	,	
	N	No		Moderate		ng	
<b>a</b> . Regulations for starting business/new operations	1	2	3	4	5	6	
<b>b</b> . Price controls	1	2	3	4	5	6	
<b>c</b> . Regulations on foreign trade	1	2	3	4	5	6	

(exports, imports)						
d. Financing	1	2	3	4	5	6
e. Labor regulations	1	2	3	4	5	6
<b>f</b> . Foreign currency regulations	1	2	3	4	5	6
g. Tax regulations and/or high ta:	1	2	3	4	5	6
<b>h</b> . Inadequate supply of	1	2	3	4	5	6
of infrastructure						
i. Policy instability	1	2	3	4	5	6
<b>j</b> . Safety or environmental regulations	1	2	3	4	5	6
k. Inflation	1	2	3	4	5	6
l. General uncertainty	1	2	3	4	5	6
on costs of regulations						
<b>m</b> .Crime and theft	1	2	3	4	5	6
n. Corruption	1	2	3	4	5	6
o. Terrorism	1	2	3	4	5	6
p.Other	1	2	3	4	5	6

14. "It is common for firms in my line of business to have to pay some irregular "additional payments" to get things done."

# This is true

- always mostly frequently sometimes
- seldom
- never
- 15. "Firms in my line of business usually know in advance about how much this "additional payment" is."

# This is true

- always mostly

- (1) (2) (3) (4) frequently sometimes
- seldom
- never
- 16. "Even if a firm has to make an "additional payment" it always has to fear that it will be asked for more, e.g. by another official."

### This is true

- always
- mostly
- frequently

- (4) sometimes
- (5) seldom
- (6) never
- 17. "If a firm pays the required "additional payment" the service is usually also delivered as agreed."

#### This is true

- (1) always
- (2) mostly
- (3) frequently
- (4) sometimes
- (5) seldom
- (6) never
- 18. "If a government agent acts against the rules I can usually go to another official or to his superior and get the correct treatment."

#### This is true

- (1) always
- (2) mostly
- (3) frequently
- (4) sometimes
- (5) seldom
- (6) never
- 19. In the last ten years, difficulties in dealing with government officials have

increased remained about the same decreased don't know

World Bank

The 1999 Business Environment and Enterprise Survey

There are various questions relating directly and indirectly to corruption. For the first few questions, the table of possible responses is included similarly to the original questionnaire. Later, the tables are excluded in this appendix to save space and the possible answers are simply listed below the question. The full survey is available at: http://www.worldbank.org/wbi/governance/beeps.htm

Q.16a To what degree do you agree with the statement, "Interpretations of regulations affecting my firm are consistent and predictable"? SHOW CARD

Q.16b To what extent would you have agreed with this statement three years ago? SHOW CARD

	Fully agree	Agree in most cases	Tend to agree	Tend to disagree	Disagree in most cases	Strongly disagree	Don't know	Did not exist 3 years ago
Q. 16a Now	1	2	3	4	5	6	7	XXXX

Q. 16b	1	2	3	4	5	6	7	8
Three								
years ago								

Q.23a To what degree to you agree with this statement? "I am confident that the legal system will uphold my contract and property rights in business disputes".

Q.23b And to what degree would you have agreed with it 3 years ago? (same table as question 16 for answers)

We now want to ask your opinion on "Unofficial Payments" to officials in this country. Can I please reassure you that:

- We are interested in your opinions in a personal capacity
- We do not imply in any way that your company makes unofficial payments
- We recognise that your company as well as AC Nielsen neither approves of nor condones the use of unofficial payments
- The responses that you give will be aggregated and presented in purely statistical terms; any comments you give me cannot be attributed to either you or your company.

Q.25 Thinking about officials, would you say the following statement is always, usually, frequently, sometimes, seldom or never true?

"It is common for firms in my line of business to have to pay some irregular "additional payments" to get things done".

And would you say the following statements are always, usually, frequently, sometimes, seldom or never true:

Q.26a "Firms in my line of business usually know in advance about how much this "additional payment" is."

Q.26b "If a firm pays the required additional payment to a particular government official, another government official will subsequently require an additional payment for the same service"

Q.26c "If a firm pays the required "additional payments" the service is usually also delivered as agree." This is true

Q.27 On average, what percent of revenues do firms like yours typically pay per annum in unofficial payments to public officials?

0%	
Less than 1%	
1 – 1.99%	
2 – 9.99%	
10 – 12%	

13 – 25%
Over 25%
Don't know

Q.28 How often do firms like yours nowadays need to make extra, unofficial payments to public officials for any of the following?

	Always	Mostly	Frequently	Sometimes	Seldom	Never	Don't know/no answer
To get connected to public services (electricity, telephone	1	2	3	4	5	6	7
To get licenses and permits	1	2	3	4	5	6	7
To deal with taxes and tax collection	1	2	3	4	5	6	7
To gain government contracts	1	2	3	4	5	6	7
When dealing with customs/ exports	1	2	3	4	5	6	7
When dealing with courts	1	2	3	4	5	6	7
To influence the content of new laws decrees or regulations	1	2	3	4	5	6	7
Other (specify)	1	2	3	4	5	6	7

Q.29 Of the total unofficial payments that a firm like yours would make in any given year, can you please give me an estimate of what share/percentage of those payments would be spent on each of the following purposes. Show card and record a percentage for each purpose interviewer please advise respondent that what we need for this question are rough estimates

To get connected to and maintain public services (electricity and telephone)	%
To get licenses and permits	%
To deal with taxes and tax collection	%
To gain government contracts	%
To deal with customs/imports	%
To deal with courts	%
To deal with health/fire inspectors	%
To influence the content of new legislation rules decrees etc.	%
Other important unofficial/additional payments	%

Q.30 When firms in your industry do business with the government, how much of the contract value would they typically offer in additional or unofficial payments to secure the contract?

0%, up to 5%, 6 - 10%, 11 - 15%, 16 - 20%, Greater than 20%, Don't know, Don't do business with the government

Q.31 How often is the following statement true? "If a government agent acts against the rules I can usually go to another official or to his superior and get the correct treatment without recourse to unofficial payments."

Always, Mostly, Frequently, Sometimes, Seldom, Never, Don't know.

(note: Q.33 refers to the respondent's being a member of a trade association or lobby group) Q.33 If so, when a new law, rule, regulation, or decree is proposed that would have a substantial impact on your firm, which channel would you typically rely on to try to affect the outcome?

Trade association or lobby group, Your firm's direct ties to public officials, Other, Don't know/No answer

Q.34a When a new law, rule, regulation, or decree is being discussed that could have a substantial impact on your business, how much influence does your firm typically have at the national level of government to try to influence the content of that law, rule, regulation or decree?

Not applicable, never influential, seldom influential, influential, frequently influential, very influential

Executive	
Legislative	
Ministry	
Regulatory Agency	

Q.34b Same as Q.34a, except it concerns LOCAL government, and only posed to respondents in Russia

Q.41 Using this scale, can you tell me how problematic are these different financing issues for the operation and growth of your business.

Corruption of bank officials (No obstacle, minor obstacle, moderate obstacle, major obstacle, don't know/no answer)

There were other financing problems listed, but not included here to save space.

Q.42 And which of these would you say is the biggest obstacle for <u>your</u> business? ONE ANSWER ONLY

There were many financing problems listed, one of them being "corruption of bank officials".

World Economic Forum (WEF) Global Competitiveness Report 1997 (used 1998 – 1999 CPI)

8.03 Irregular additional payments are not common in business and official transactions. (1=strongly disagree, 7=strongly agree)

8.04 Additional payments to get around regulations have decreased in the past five years. (1=strongly disagree, 7=strongly agree)

8.08 Private businesses can readily file lawsuits at independent and impartial courts if there is a breach of trust on the part of government (1=strongly disagree, 7=strongly agree)

World Economic Forum (WEF) Global Competitiveness Report 1999 (used in 1999 – 2001 CPI)

Even though there were various questions concerning corruption, I believe only the second question was included in the CPI.

Rank 1 to 7 scale: (question numbering not that of Global Competitiveness Report) 1. Public sector officials tend to favor well-connected private firms and individuals

- 2. Irregular, additional payments connected with import and export permits, business licenses, exchange controls, tax assessments, police protection or loan applications are common.
- 3. The judiciary in your country is independent and not subject to interference by the government and/or parties to the dispute
- 4. Irregular payments to judges, court personnel or other officials involved in the enforcement and execution of judgements are very common and easily influence the outcome of court proceedings.
- 5. Personal bribes and kickbacks to senior politicians are high.

World Economic Forum (WEF) African Competitiveness Report (used in 1999 – 2001 CPI)

How problematic is corruption?

Irregular, additional payments are required and large in amount