

Transparency International (TI) 1998 Corruption Perceptions Index - Framework Document -

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Transparency International's **Corruption Perceptions Index** (CPI) has assumed a central place in debates about corruption. It is used by economists, academics, business people and journalists. The growing importance of the CPI has stimulated interest in the methods used to compile it each year. This document, complementing the publication of the 1998 CPI and the press materials¹ published with it, provides an in-depth explanation of the methodology.

Basic Methodology

The goal of the CPI is to provide data on extensive perceptions of corruption within countries. This is a means of enhancing understanding of levels of corruption from one country to another. It does not attempt to assess the degree of corruption practiced by nationals outside their own countries. This is a separate phenomenon and a separate instrument is being developed to measure this. Since unbiased, hard data is difficult to obtain and usually raise severe questions with respect to validity, international surveys serve as the most credible means to compile a ranking of nations.

In an area as complex and controversial as corruption, no single source, or polling method, has yet been developed that combines a perfect sampling frame, large enough country coverage, and a fully convincing methodology to produce comparative assessments. This is why the CPI has adopted the approach of a composite index. It is a "poll of polls". It consists of credible surveys using different sampling frames and varying methodologies and is the most statistically robust means of measuring perceptions of corruption.

Sources in 1998

The 1998 CPI includes data from the [Economist Intelligence Unit](#) (Country Risk Service and Country Forecasts), Gallup International (50th Anniversary Survey), the [Institute for Management Development](#) (World Competitiveness Yearbook), the [Political & Economic Risk Consultancy](#) (Asian Intelligence Issue), the [Political Risk Services](#) (International Country Risk Guide), [World Development Report](#) (Private Sector Survey) and the World Economic Forum (Global Competitiveness Survey).

A number of other possible sources have been considered for inclusion and rejected. Some on the grounds that their data has been poorly documented and others because insufficient data was made available to enable a considered judgement to be made as to their reliability.

The 1998 CPI combines assessments from the past three years to reduce abrupt variations in scoring. Such changes might be due to high-level political scandals that affect perceptions, while not reflecting actual levels of corruption. While this averaging is valuable for the inclusion of surveys, it is inappropriate for application to the data compiled by country experts. Such assessments as compiled by PRS and EIU are conducted by a small number of country experts who regularly analyze a country's performance, counterchecking their subjective impressions with peer discussions. Following this systematic evaluation, they then consider a potential upgrading or downgrading. As a result, a country's score changes rather seldom and the data shows little year-to-year variation. Changing scores in this case are the result of a considered judgement by the organization in question. To then go back and average the assessments over a period of time would be inappropriate.

On the other hand in the case of elite or general public surveys an averaging over various years brings about a useful smoothing effect: While each annual data main contain random errors, these do not necessarily carry over to the next year, and their impact is lowered by the averaging procedure.

These considerations yield the following list of sources for inclusion in the 1998 CPI.

Sources for the 1998 CPI

Number	Source	Year	Who was surveyed?	Subject Asked	Number of Replies	Number of Countries
1	Political & Economic Risk Consultancy (Asian Intelligence Issue)	1997	Expatriate Business executives	Extent of corruption in a way that detracts from the business environment for foreign companies	280	12
2		1998				
3	Gallup International (50 th Anniversary Survey)	1997	The General Public (internal)	A lot, many, few or no cases of corruption for the following groups of people: politicians, public officials, policeman and judges.	> 34000 (almost 1000 per country)	44
4	Institute for Management Development (World Competitiveness Yearbook)	1996	Business Executives in Top and Middle Management (internal)	Improper practices (such as bribing or corruption) in the public sphere	3102	46
5		1997			2515	
6		1998			4314	
6						
7	World Economic Forum & Harvard Institute for International Development (Global Competitiveness Survey)	1996	Business Executives (internal)	Irregular, additional payments connected with import and export permits, business licenses, exchange controls, tax assessments, police protection or loan application.	1537	40 ²⁾
8		1997			2778	56
9		1998 ³⁾			Ca. 3500	68
9						
10	Political Risk Services (International Country Risk Guide)	1998	Assessment by Staff (expatriate)	Assessment of "Corruption in Government"	-	135
11	World Bank, World Development Report (Private Sector Survey)	1997	Business Executives (internal)	Irregular, additional payments are common and represent an obstacle to doing business.	> 3500	73
12	Economist Intelligence Unit (Country Risk Service and Country Forecast)	1998	Assessment by Staff (expatriate)	Assessment of the pervasiveness of corruption among politicians and civil servants	-	115

From the sources in the table we can determine the countries to be included this year. The number of sources has increased considerably in 1998, so we are able to raise the number of countries in the CPI considerably. The increase in the number of sources on the other hand allows us to keep a high level of reliability.

Year-to-year comparisons

The CPI incorporates as many reliable and up-to-date sources as possible. One of the drawbacks to this approach is that year-to-year comparisons of a country's score do not only result from a changing perception of a country's performance but also from a changing sample and methodology. This is comparable to the problem of designing a price index of a basket of goods when the ingredients are constantly changing: The price index of one period cannot be fully compared to that of the next since the underlying basket has changed.

A similar problem can arise with the CPI: Some sources are not updated and must be dropped as a result, while new, reliable sources are added. With differing respondents and slightly differing methodologies a change in a country's score cannot be attributed solely to actual changes in a country's performance. ⁴⁾

Accordingly, TI repeatedly stresses that each year's index must be seen as the result of the sum of all reputable sources available at that time. Comparisons with the views collected in previous years can be misleading. In order to reduce the number of misleading interpretations of the CPI scores, the official CPI table will not include the scores from the previous year. Overall, however, the sources continue to show a high degree of correlation. So, in practice the impact of differing samples and methodologies on the outcome appears to be rather small.

Validity

All sources generally apply a definition of corruption such as the misuse of public power for private benefits, e.g., bribing of public officials, kickbacks in public procurement, or embezzling public funds. Each of the sources also assesses the "extent" of corruption among public officials and politicians in the countries in question:

- The World Competitiveness Yearbook (WCY) asks to assess whether "Improper Practices (such as bribing and corruption) prevail or do not prevail in the public sphere."
- The same question was posed in the Global Competitiveness Survey (GCS) in 1996. In 1997 the question changed to "Irregular, additional payments connected with import and export permits, business licenses, exchange controls, tax assessments, police protection or loan application are common/ not common."
- The Political and Economic Risk Consultancy (PERC) in Hong Kong asks "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?"
- Gallup International asks "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.
- The Economist Intelligence Unit (EIU) defines corruption as the misuse of public office for personal (or party political) financial gain and aims at measuring the pervasiveness of corruption. Corruption is one of over 60 indicators used to measure "country risk" and "forecasting."
- The World Development Report of the World Bank asks two related questions with respect to corruption: first, "Please judge on a six point scale how problematic [corruption is] for doing business"; second, "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 or never."

With the focus on problem, prevalence, pervasiveness, commonality, extent and the number of cases of corruption, all these sources refer to some kind of "degree" of corruption, which is the also aim of the CPI.

This common feature of the various sources is particularly important when one considers that corruption comes in different forms. It has been suggested in a multitude of publications that one should endeavor to differentiate between petty and grand corruption, frequency and price of corruption, etc. Yet, none of these special forms of corruption have been found to dominate in one source and be less important in another. The sources can be said to aim at measuring the same phenomenon.

It is important to note that none of the sources differentiates between administrative and political

corruption, and that both types of corruption are addressed equally by the various questions posed. WCY asks about corruption in the public sphere. This inevitably includes both corruption in administration and in politics, as they both constitute the public sphere. GCS in 1997 addressed only particular areas where corruption occur, and in each of these either politicians or administrators can be the relevant actors. Political corruption, like administrative corruption, requires additional payments and may represent an obstacle to doing business - the topic of the WDR. Similarly, corruption in government as assessed by PRS includes also both types of corruption, since administration and politics are each parts of government structures. The EIU explicitly notes that its assessments include corruption among public servants and politicians alike. The Gallup International data provides the only differentiation between political and administrative corruption. It is noteworthy in this respect to report a correlation of 0.88 between the assessment of politicians and that of administrators (an average of judges, policemen and public servants) in their data, pointing to a high correlation between the two aspects of the corruption phenomenon. This further justifies a blending of political and administrative corruption, since there is no strong evidence that countries differ by the prevalence of the one type of corruption against the other.

Reliability

The strength of the CPI is based on the concept that a combination of sources into a single index increases the reliability of each individual figure. This approach has been widely endorsed, see e.g. (Lancaster and Montinola, 1997). The reliability of each figure is improved by including only countries that have been included into three polls at the minimum. ⁵⁾ The idea of combining data implies that a malperformance of one source can be smoothed by the inclusion of at least two other sources. This way the probability of misrepresenting a country is seriously lowered. An indicator for the overall reliability of the 1998 CPI can be drawn from the high correlation between the sources. This data is presented in the following table.

	WCY 1997	WCY 1996	PRS 1998	PERC 1998	PERC 1997	Gallup Int. 1997	GCS 1996	GCS 1997	GCS 1998	WDR 1997	EIU 1998
WCY 1998	0,98	0,94	0,69	0,95	0,92	0,89	0,91	0,89	0,86	0,93	0,85
WCY 1997		0,97	0,68	0,96	0,95	0,89	0,94	0,93	0,91	0,93	0,88
WCY 1996			0,66	0,95	0,93	0,82	0,98	0,94	0,92	0,92	0,87
PRS 1998				0,58	0,49	0,67	0,67	0,59	0,70	0,59	0,72
PERC 1998					0,96	0,92	0,83	0,94	0,90	0,97	0,93
PERC 1997						0,88	0,85	0,89	0,87	0,94	0,93
Gallup Int. 1997							0,78	0,79	0,78	0,82	0,77
GCS 1996								0,91	0,90	0,90	0,84
GCS 1997									0,94	0,84	0,85
GCS 1998										0,84	0,82
WDR 1997											0,76

Sample Design

While the sources all aim at measuring the degree of corruption, the sample design differs considerably. With the exception of PERC, EIU and PRS the sources mostly sample residents, who must rely on their internal viewpoint (as opposed to an expatriate's external viewpoint) towards the degree of corruption and the meaning of the term in their own cultural context.

Whether this difference may lead to different outcomes still requires scientific research. For the purposes of the CPI it added to the robustness of the resulting figures, since the data - particular those provided by PERC and EIU - correlate well with other data. This correlation suggested that there is no great difference accorded by there being different samples. ⁶⁾

Of higher importance is the difference between expert polls and the poll of the general public provided by

Gallup International. Whereas the general public may tend to form views from the corruption (or lack of it) experienced in daily life, businesspeople and risk analysts are usually close enough to high-level incidents of corruption and may be in a better position to assess grand corruption.

Furthermore, elites may have a biased viewpoint towards corruption insofar as they might be less negative about forms of corruption which favor their own group. Similarly, the general public may be less negative about petty forms of corruption. To what extent the general public deviates in its assessment of corruption compared to an elite sample has not yet been the subject of investigation and must be an important area for future research. The relatively high correlation of the Gallup International data with the other sources does not clearly suggest a significant difference between these viewpoints.⁷⁾

Each country reported in the CPI has been included into at least one of the surveys by Gallup International, WCY, GCS or WDR. This implies that no country is assessed by expatriates only: local residents have contributed to the assessment of all of the countries included in 1998. Overall, the 1998 CPI contains the perceptions of nationals from at least 85 countries. These are people from all continents and regions of the world.

Interpreting Perceptions

As the data collected relates to perceptions rather than to real phenomena, it has to be considered whether such perceptions improve our understanding of what real levels of corruption may be. This is needed for the CPI to be a fruitful contribution to political debate, investment decisions, and academic research. Since actual levels of corruption cannot be determined directly, perceptions may be all we have to guide us. However, this approach is to some extent at least undermined if the perceptions gathered are biased. Such a potential bias might originate from the particular cultural background of respondents. The cultural background might influence the relationship between perceptions and real levels of corruption. Depending on whether the sample consist of locals or expatriates, two potential biases may emerge.

Imagine that being asked to assess the level of corruption a local assigns a high value to the country of residence. Such an assessment would be a valid contribution to the CPI only if the respondent derives the assessment as a result of comparisons to the level of corruption perceived in other countries. But this is not necessarily the viewpoint taken by the respondent. A respondent may also assign high levels by comparing corruption to other (potentially less pressing) problems facing the country, or by evaluating it according to a high ethical standard (e.g. which assumes any kind of gift giving to a public official to be corrupt and not culturally accepted). In case of such a viewpoint a high degree of observed corruption may reflect a high standard of ethics rather than a high degree of real misbehavior. In this case perceptions would be a misleading indicator for providing an insight into real levels of corruption. This bias can occur particularly in case only locals are surveyed, each assessing only the levels of perceived corruption in their own countries. In case respondents are asked to assess foreign countries or to compare between a variety of countries this bias should not be obtained. Respondents will in this case compare a foreign country with their home country or with an even larger set of countries. They will be forced to apply the same definition of corruption and make use of the same ethical standard for different countries, bringing about valid comparative assessments. Yet, in that case a second type of bias might arise, originating from the potential dominance of a particular cultural heritage in the sample questioned. In this case comparative assessments might reflect disproportionately the perceptions of a particular culture, while cultures may differ in their perceptions of precisely where the dividing line between corruption and legitimate and approved social interaction with officials may lie. Such culturally driven perceptions would only to a limited degree help our understanding of real levels of corruption.⁸⁾ While such samples which are dominated by a particular cultural heritage are particularly susceptible to this kind of bias, surveys which question local residents clearly avoid this kind of bias.

The strength of the CPI rests with the idea that we include surveys which are not susceptible to the first type of bias. Particularly these are EIU, PRS and PERC. Since the data provided by these sources refer to assessments by expatriates, they are subject to a homogeneous definition of corruption and a consistent ethical standard. The CPI also incorporates the data by WCY, GCS, Gallup International and WDR. Since these refer to assessments made by local residents, they are not susceptible to represent the perception of a certain cultural heritage. The second type of bias can clearly be rejected for these sources.

Since the data by EIU, PRS and PERC correlate well with the other data, there seems to be no support for the suggestion that they might be influenced by the second type of bias. Similarly, since the data by WCY, GCS, Gallup International and WDR correlate well with the other three sources, the notion that the first type of bias might be present is clearly not supported. The validity of the sources is mutually confirmed and prevalence of the potential biases mentioned before rejected by their high correlation. The approach clearly suggests that the perceptions gathered are a helpful contribution to the understanding of real levels of corruption.⁹⁾

Weighting the Sources

With the various sources showing some differences with respect to sample and date, a number of possibilities have been considered to weight the sources before aggregating them. One possibility was to weight according to the number of replies captured by each source. However, this would mean that the Gallup International data would dominate the results, particularly as compared to the expert assessments conducted by PRS and EIU. This, in turn, would suggest that the views of an individual selected at random would have the same quality as an expert assessment made after country-specific analysis and peer review. This viewpoint did not appear convincing.

We also explored the possibility of assigning a higher weight to more recent data and lower weights to older data. An index which is weighted with such a technique (e.g. taking the weights 3,2,1 for 1998, 97, 96 respectively) correlates 0.998 with an unweighted index, indicating that the differences are negligible.

In such circumstances it remains preferable to adopt the simple approach of assigning equal weights to those sources which have been judged to have met the criteria of reliability and professionalism. Other procedures can be justified, but this simple averaging system is easiest to explain to a broad public.

Standardizing Procedure

Since each of the sources uses its own scaling system, aggregation requires a standardization of the data before the mean value for each country can be determined. The 1997 CPI was the starting point for this process. It had a mean value of 5.67 and a standard deviation of 2.53. Each of the sources naturally had different means and standard deviations. Yet, standardization does not mean that each source is given the same mean and standard deviation, since each source covers a different subset of countries. Instead, the aim of the standardization process is to ensure that the 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 reason is that the aim of each source is to assess countries relative to each other, and not relative to countries not included in the source. This includes the idea that a country must 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. In order to achieve this, the mean and standard deviation of this subset of countries must take the same value as the respective subset in the 1997 CPI.

This can be illustrated by taking an example from the 1997 CPI, where the starting point for standardization was the 1996 CPI. In 1997, for example, WCY assessed France with a value of 5.63 on a scale between 0 and 10. At first, we determined a common subset of countries who belong to both, the WCY 1997 and the 1996 CPI and determine the means and standard deviations in each of these. In the WCY 1997, these countries had a mean value of 5.11 and a standard deviation of 2.72, while in the 1996 CPI, these countries had a mean of 5.98 and a standard deviation of 2.41. Standardizing the value for France thus required subtracting 5.11 from the 5.63,¹⁰⁾ multiplying the result by 2.41, dividing by 2.72 and adding 5.98. The result turns out to be 6.44, the standardized value for France. Applying this to all countries in the subset, the standardized values had a mean of 5.98 and a standard deviation of 2.41, the same values this subset of countries had in the 1996 CPI. The same formula is then applied to all countries included in the WCY, including those that do not belong to the subset described above. After this is done for all countries and all sources, the index is determined by computing the simple mean for each country.¹¹⁾

For WCY and PERC, this standardization procedure did not change the values significantly, since the data was already delivered on a scale between 0 and 10. This contrasts to the values provided by GCS and WDR who report the data on a scale between 1 and 7. Likewise PRS and EIU provide assessments ranging between 0 and 6 and between 0 and 4, respectively. The Gallup International data was obtained in

raw format and processed with the help of correspondence analysis prior to applying the outlined standardization procedure, see (Lambsdorff 1998).

Presentation

As a measure of reliability for individual country scores we reported the variance between sources in the past along with the number of sources available for each country. This is repeated in 1998, yet, to facilitate interpretation, the new CPI includes the square root of the variance, known as the standard deviation. Not all sources provide the same assessment for a country with some reporting lower and others reporting higher values. The standard deviation indicates the extent to which the standardized values provided by the sources deviate from the mean value.

There has been considerable debate about the presentation of country scores which go to two decimal places. We acknowledge that two decimal places suggest a degree of precision and accuracy which it is beyond the capacity of the CPI to deliver. It was decided to report only one decimal point from now on. While this better represents the precision of the index, dropping also this one decimal points would result in clusters of countries. This would cause even more problems, particularly when a country is moved from one cluster and another. To illustrate the precision of the CPI we will produce a graphics which includes the standard deviation along with the actual scores and allows readers to assess the significance of individual scores when comparing between countries. [12\)](#)

From 1999, the CPI will also include countries that could not be reassessed because they were not surveyed by a minimum number of sources. In 1997, for example, we were unable to reassess Jordan, Ecuador, Egypt, Uganda, Cameroon, Bangladesh and Kenya. Their omission in the 1997 CPI created confusion and misleading interpretations in these countries. To avoid this we can repeat the old scores and indicate this accordingly in the presentation. In the 1998 CPI, because of the extensive new coverage provided by the sources, none of the countries surveyed in 1997 dropped out. If a country cannot be reassessed over a period of three years, we will regard the data as outdated and omit it. This way we hope to have a more satisfactory continuity in the index in the years to come.

Literature

Lambsdorff, J. Graf (1997), Press Release to the Empirical Investigation of Bribery in International Trade, <http://www.gwdg.de/~uwvw/bribery.htm> .

- , - (1998), Corruption in Comparative Perception. In: Economics of Corruption, ed. by A.K. Jain, Kluwer Academics.

Lancaster T. and G. Montinola (1997), "Toward a Methodology for the Comparative Study of Political Corruption". Forthcoming in: Crime, Law and Social Change. Special Issue on "Corruption and Reform".

Footnotes

* "I would like to thank members of the TI Index Steering Committee for invaluable and extensive inputs into this document. [Back to main text](#)

See <http://www.uni-goettingen.de/~uwvw> and <http://www.transparency.org> . [Back to main text](#)

² The number of countries covered with sufficient replies was 40 in 1996 and 56 in 1997. These numbers may not necessarily correspond with the numbers reported by the Global Competitiveness Survey of the World Economic Forum, since we compiled the averages from the raw data and left out countries with insufficient replies. [Back to main text](#)

³ Including the data from the African Competitiveness Report. [Back to main text](#)

⁴ Changing price indices of a basket of goods are still commonly determined by artificially assuming a constant basket of goods. A similar attempt could also be undertaken for the CPI 1998. This requires determining a common sample of sources for both the CPI 1997 and 1998 (that is WCY, PERC and PRS).

A changing performance could thus be related to annual changes in these sources. However, this common sample of sources is very small and does not allow for statistically robust conclusions. Also, this methodology is not adequate: Also individual sources do not fully control for their respondents - they drop some and incorporate others. On occasions, sources even adjust their methodology. [Back to main text](#)

⁵ In 1997 four polls were required for inclusion. The increasing quality of the sources as expressed by their high correlation in 1998 has been a strong statistical argument to report also country's scores where only three sources were available. [Back to main text](#)

⁶ The partly lower correlation of the PRS data with other data seems to reflect the limited number of experts contributing to the compilation of this source and does not necessarily suggest an expatriate's viewpoint as deviating from a resident's viewpoint. [Back to main text](#)

⁷ Even when elite and general public viewpoints show some differences, an aggregation of these data still makes sense, just like price levels for various goods can be aggregated to form some combined price index. While the idea of creating a price index would be to value a complete basket of goods, the idea of aggregating subjective data would then be to obtain an assessment of the level of corruption as seen by a broad and possibly heterogeneous sample of respondents. [Back to main text](#)

⁸ Less sophisticated viewpoints towards the CPI alleged in the past that it was driven by the viewpoints of western oriented businesspeople. Such interpretations are certainly wrong and misleading. [Back to main text](#)

⁹ A method for rejecting both biases at the same time has been developed and tested on the internet and will be applied for future CPIs. Between January 1997 and May 1998 we obtained 540 replies to an interactive questionnaire via internet. Users of the internet with an interest in corruption have been asked to approach an interactive questionnaire, where the following question has been posed: *"You enter a public office which is authorised to grant licenses and permits (e.g. the license to conduct business). After you waited for a long time you are expected to pay a bribe and are told that otherwise you will not receive the license. According to your perception, in which countries may this (i.e. the asking for bribes by public officials) happen? On the other hand, where do you consider it to be unlikely?"* Three alternatives "often", "sometimes" and "rarely" are given thereafter, which are supposed to be filled with country names.

Each respondent is supposed to assess all countries where he or she obtained first hand experience (the resulting index correlates 0.93 with the TI-CPI 1998). Thus, the first bias is not likely to occur. The second potential bias can be checked by constructing sub-samples of respondents, dependent on their residence, origin or profession. The resulting index of such a subgroup can be correlated with that of the full sample of respondents, indicating potential differences. Since the resulting correlation for non-western residents and that of people with non-western origin are all higher than 0.95, there are no indications that the cultural heritage is a crucial determinant for the assessment of levels of corruption. The assessments by business people correlate 0.98 with the full sample, indicating no impact of profession on the assessment of corruption.

Since this type of sample design is not a statistically robust approach, this validation step must be seen to be experimental at this stage. This is also the reason for not including these data into the 1998 CPI nor to claim statistical robustness of the results. We report the results here so as to give a first impression of the necessary methodology and to provide first insights into the suggestive results. [Back to main text](#)

¹⁰ With some sources (WDR) assigning higher values to more corrupt countries, this value must be multiplied by -1. [Back to main text](#)

¹¹ A final standardization must be undertaken, since the aggregate may again differ with respect to mean and standard deviation as compared to the previous years index. [Back to main text](#)

¹² A first example of such a graphics was developed in (Lambsdorff 1997). [Back to main text](#)

