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Does the corruption index have international trends?

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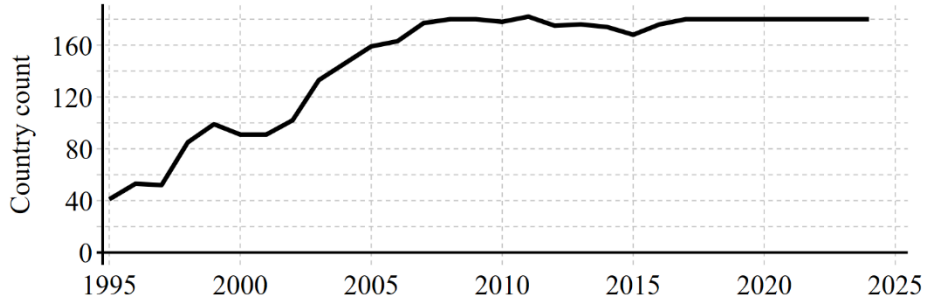
The corruption index from transparency international index is constructed as an average of a dozen corruption indices from many sources. They cover different country samples, are compiled by different methods, and use different scales. Thus, a complex calibration technique is used. This means that it is dubious if trends are observed in the index it is a problem what they show.

1. Measuring honesty or corruption: *TI* and *T*, where *T* = 10 - *TI*

It is a well-known paradox that the *TI* corruption index from Transparency International measures honesty, so the most corrupt countries have a low score. *TI* is turned into the *T* corruption index by: $T = 10 - TI$. Both indices are defined on the open interval]0, 10[and given with 1 decimal. as shown by Figure 1 the index started in 1995 for 40 countries. The coverage grew to 180 countries in 2007 and have stayed about that since then. There are data for 188 countries, but some countries are covered for a few years only.

Figure 1. The annual number of countries covered by *T*, the corruption index



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Figures 2 and 5 have lines for two samples. The black line is for the sample of 40 countries that are covered every year. One missing observation has been interpolated. The gray line is the sample for all observations, and hence it an average of a changing – mostly growing – sample.

Figure 2 looks at the trends in the T-index over the 30 years for the two samples. The curve for the black sample is virtually trendless; see Table 1. From 2007 when the number of countries has stabilized the curve for the gray sample becomes trendless as well.

Figure 2. The path of the average *T*, corruption index over time

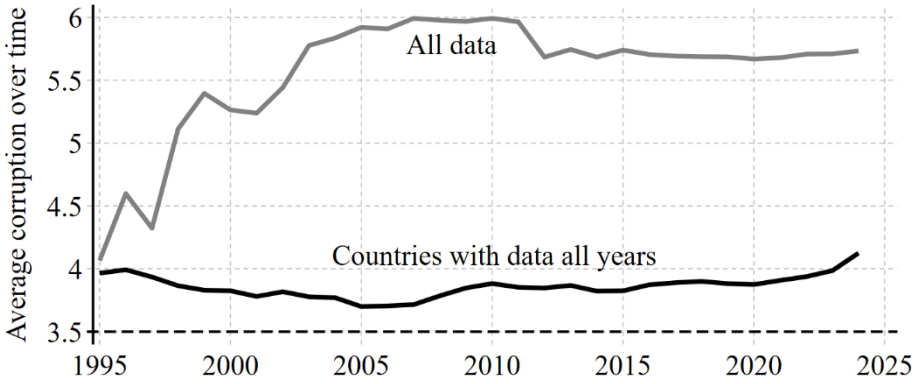
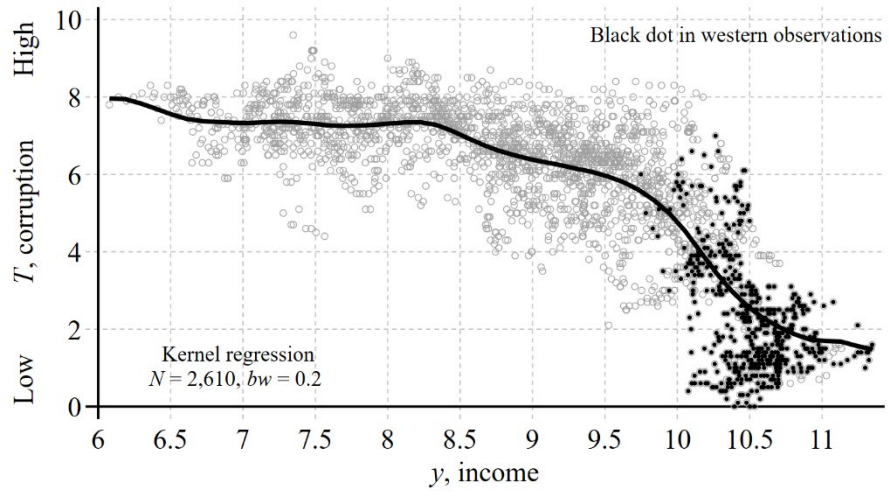


Table 1. Tests for trends in Figure 2

	Years		Constant		
	Estimate	t-ratio	Estimate	t-ratio	R^2 adj
Black sample	0.0035	(1.9)	-3.12	(-0.9)	0.083
Gray sample	0.0321	(3.9)	58.99	(3.5)	0.326

The t-ratio of 1.9 for $N = 30$ has a p-value of 6.7%.

Figure 3. The transition of the *T*-index discussed elsewhere, *ibid*



As shown by Figure 3, corruption has a strong, but late transition. In the 30 years covered world GDP per capita has doubled. So, the level of corruption in the world should have fallen substantially, but it increased marginally. The reason that the *T*-index has not fallen must be the complex calibration that is made to allow the primary indices to be averaged.

2. The main country groups – the great deviation of the West

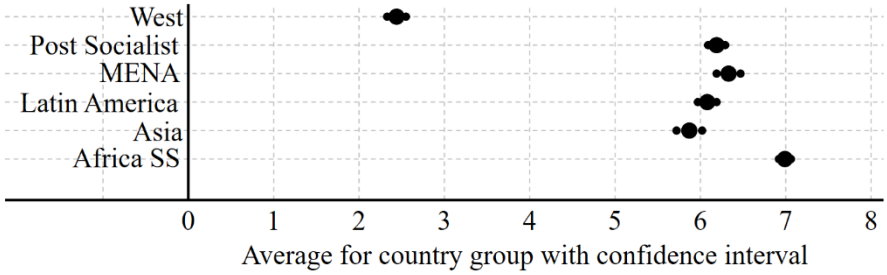
Table 2 shows the levels of corruption in the main country-groups. The five groups follow the World Bank classification. The Post Socialist countries will soon need another name.

Table 2. The average corruption for country groups

Country group	Av.	2se	Nc	N	Missing
Africa	6.99	±0.07	47	1050	25.5%
Asia	5.87	±0.14	34	728	28.4%
Latin America	6.08	±0.11	33	738	25.5%
MENA	6.20	±0.14	19	427	25.1
Post-Socialist	6.19	±0.10	30	750	16.7
West	2.44	±0.11	25	727	3.1%
All	5.69	±0.06	188	4419	21.6%

The two numbers Nc and N are for countries and observations. Note that Nc adds to 188, while the high value in Figure 1 is only 180, as some countries are covered for a few years only.

Figure 4. Illustration of Table 2



The West stands out. Half of the 40 countries in the black sample are western, so the average is relatively low. The Av (average) and 2se (confidence intervals) columns from Table 2 are depicted in Figure 4. Both the poorest and richest country group – Africa and (especially) West – differ from the other groups. The other four groups overlap.

We must interpret Figure 2 as saying the *T*-index is relative to a constant level. The story told by Figure 4 is surely true, especially as the pattern found is so strong.

3. The convergence of the standard deviations in the two samples

While the *T*-index is virtually trendless, Figure 5 shows that its standard deviation has a strong trend that is similar in the two samples. As the average of the two samples have no trends, the std can be seen as the σ-measure of convergence. Thus, Figure 5 says that corruption in the world has converged

Figure 5. The standard deviations of corruption in the two samples

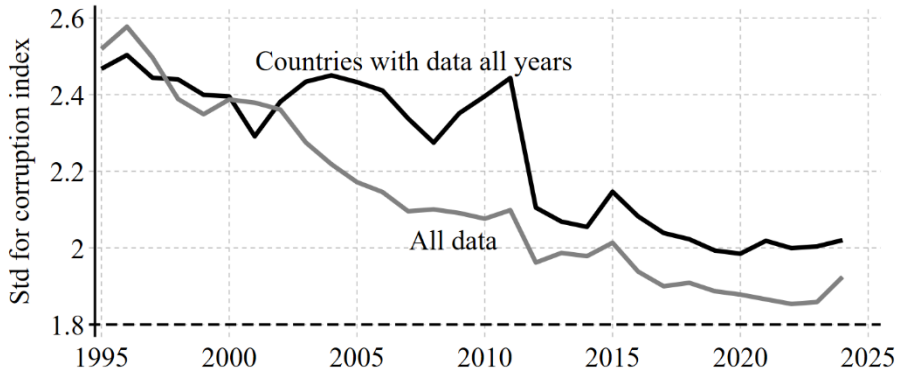
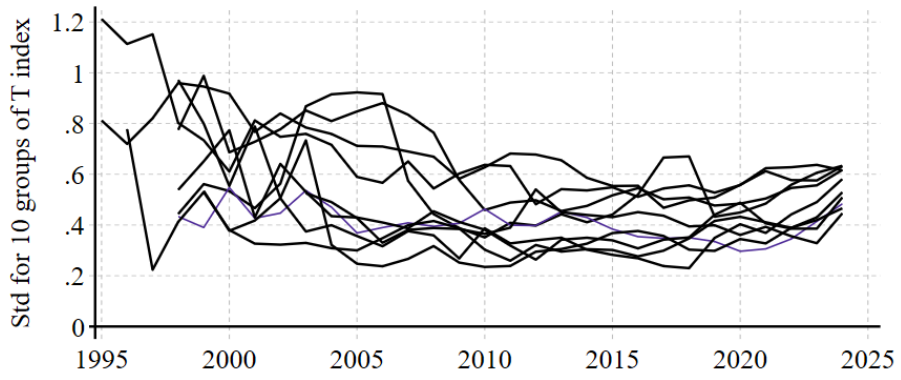


Table 3. Tests for trends in Figure 5

	Years		Constant		
	Estimate	t-ratio	Estimate	t-ratio	R^2 adj
Black sample	-0.0195	(-11)	41.42	(11)	0.806
Gray sample	-0.0243	(-19)	50.96	(20)	0.927

Figure 6 further illustrates the convergence. The figure is made in four steps: (i) the T-matrix is sorted by the average corruption, (ii) the 188 country-rows in the sorted matrix is divided into 10 groups. (iii) The standard deviation every year for each group every year with more than 5 observations (iv) The resulting 10 rows are drawn on the figure. The vertical range of the lines are about 0.6 before 2005 and only 0.3 after 2020, so the lines move closer

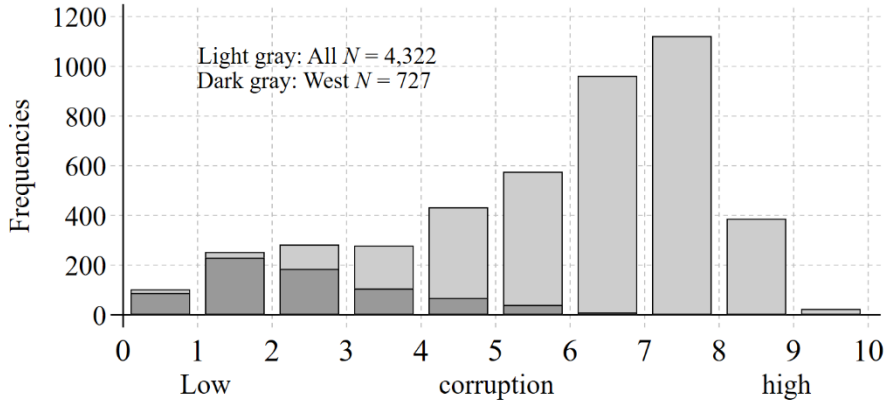
Figure 6. The convergence of the standard deviations of the 10 groups, see text



4. The distributions of the 4,522 observations for the T-index

As the data has no trend it makes sense to look at their distribution, as done in Figure 7: The distribution is quite skew with a peak at 7-8 and a long tail to the left, that contains the countries of the West. Elsewhere it is shown the corruption index has a strong transition that happens rather late. As more countries join the high-income group I predict that the frequency distribution will become two-topped, with a top between 1 and 2 as for the Western countries. This will probably be clear in 25 years and be prominent in 50 years.

Figure 7. The frequency distribution of the observations for the T-index



5. Conclusions

The pattern shown is mainly for documentation in other papers. It is important to note that the index is almost trendless. This is strange giving the strong transition in the index, which should give a falling trend, when income grows. It is also strange that there is a strong downward trend in the standard deviation.

References:

The papers are referred to with *ibid*. They have ample reference lists.

MP, 2002. The big pattern of corruption. Economics, culture and the seesaw dynamics. *European journal of Political Economy* 18,215-140

MP, 2001. Corruption and Religion. Adding to the economic model. *Kyklos* 54,383-414

MP, with Erich Gundlach, 2009. The transition of corruption: From poverty to honesty. *Economic Letters* 103, 146-47

MP, 2021. The Transition of Corruption. Institutions and dynamics. *European Journal of Political Economy* 67 paper 101952

MP, 2024. Can democracy and religiosity explain corruption? An empirical survey of cross-country data. P.t Working paper