

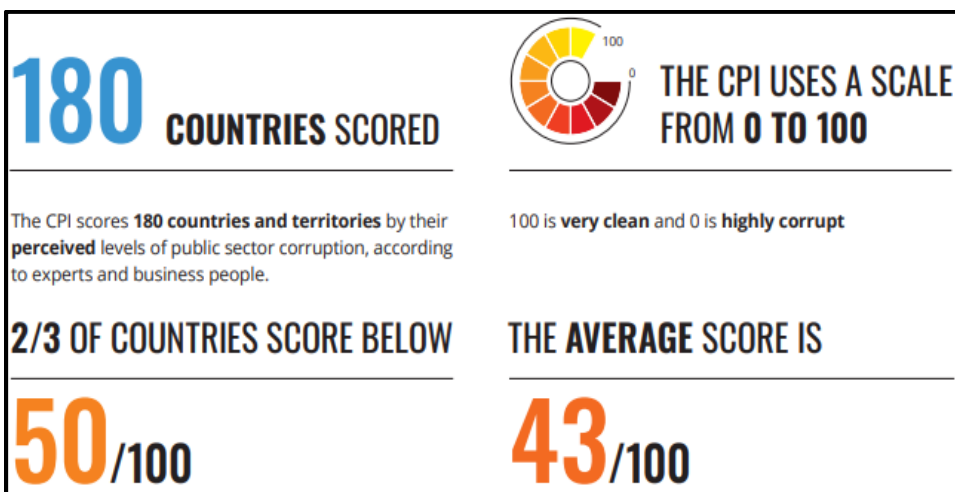
Is Corruption Perception Index Biased? An Ethnicity Based Analysis

ABIDA NAURIN

1. INTRODUCTION

Corruption is a widespread problem that affects many countries across the world. The broad definition of it is the misuse of public authority for personal benefit, which results in an allocation of resources that is less efficient than would occur in a corruption-free environment. Corruption has a negative impact on economic growth, investment, and social development in several ways. First, corruption reduces the efficiency of public institutions and distorts resource allocation. Second, it discourages foreign investment and can lead to capital flight. Third, corruption undermines the rule of law, which is essential for economic growth.

Ethnicity and economic growth are two important factors influencing corruption levels in a country. Therefore, understanding the factors contributing to corruption is essential for policymakers to develop effective measures to combat it. This research report investigates the relationship between economic growth, ethnicity, and panel-country corruption levels. Specifically, it seeks to answer the question: do economic growth and ethnicity explain the differences in panel-country corruption levels?

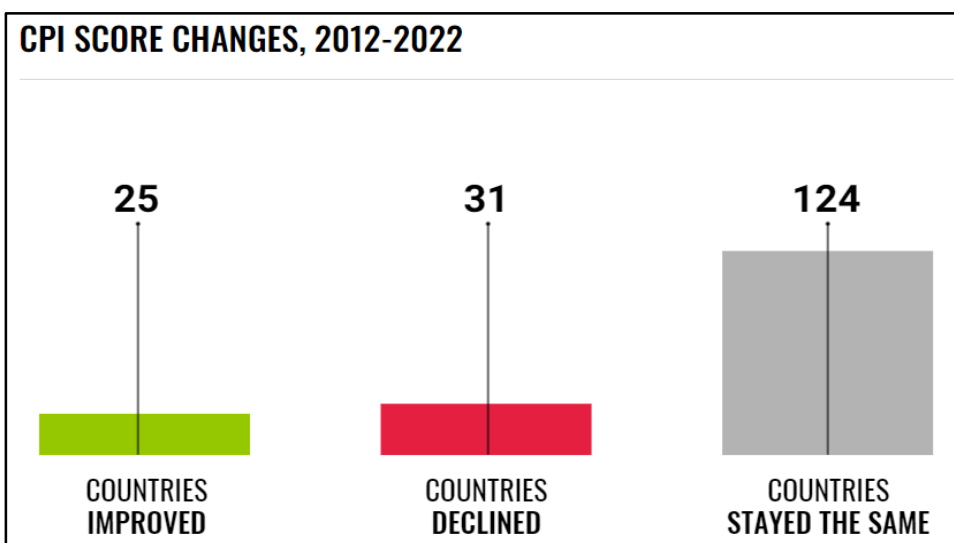


Source: Transparency International, CPI 2022 Report.

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1.1. Corruption Perception Index (CPI)

Transparency International published the first-ever Corruption Perception Index (CPI) in its history in 1995; since then, Governments, Politicians, Civil Society, and Institutions anxiously wait for the new issue every year. Transparency International divides countries into six regions, Americas (AME), Asia Pacific (AP), Eastern Europe & Central Asia (ECA), Western Europe & European Union (WE-EU), Middle Eastern & North Africa (MENA) and Sub-Saharan Africa (SSA). This year about 2/3 of countries scored below 50, and only 33 percent scored 50 and above. The CPI uses opinion polls of businesses and professionals to assess perceptions of public sector corruption in 180 nations and territories. Due to the fact that the CPI is a composite index that incorporates information from 16 various surveys and evaluations from 13 independent organisations, including the African Development Bank, the Economist Intelligence Unit, the World Economic Forum, and the Political and Economic Risk Consultancy; we prefer CPI data over other indices.



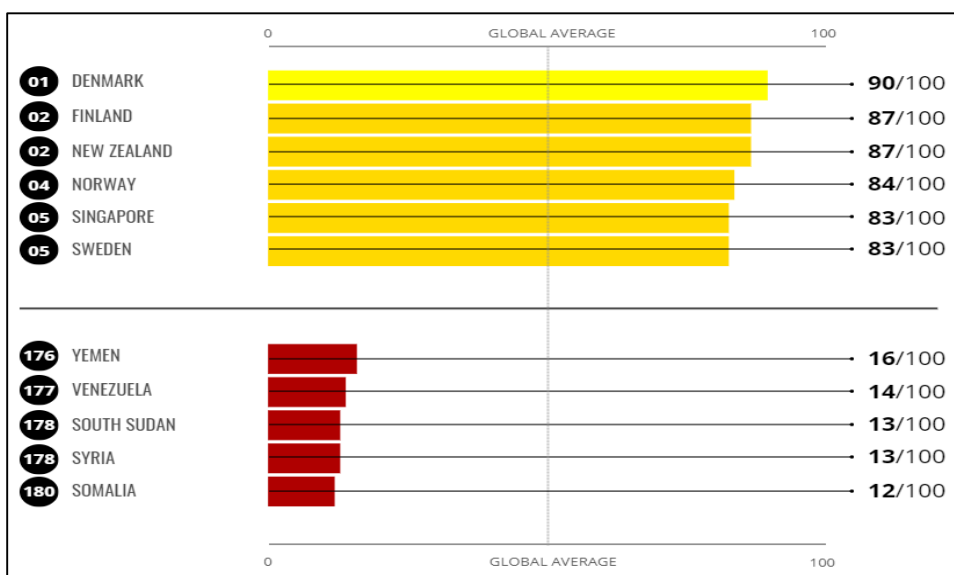
Source: Transparency International, CPI 2022 Report.

Transparency International has released the Corruption Perception Index (CPI) database each year since 1995 (Transparency International, 2022). It rates corruption from zero to one hundred, with one hundred being the cleanest possible. The average worldwide Score, which has remained constant at 43, is below 50 for more than two-thirds of the world's nations (68 percent). Twenty-five countries have seen a substantial improvement in their rankings since 2012, while 23 significantly decreased. (Transparency International, 2022).

1.1.2. Best and Worst Performers by Transparency International, 2022

The top of the Index is frequently occupied by countries with sound institutions and functioning democracies. Denmark is ranked first overall with a score of 90. With scores of 87, Finland and New Zealand are close behind. The top 10 this year is completed by

Norway (84), Singapore (83), Sweden (83), Switzerland (82), the Netherlands (80), Germany (79), Ireland (77), and Luxembourg (77).



Source: Transparency International, CPI 2022 Report.

On the other hand, conflict-ridden countries, or those whose fundamental political and personal liberties have been severely restricted, tend to get the lowest ratings. South Sudan (13), Syria (13), and Somalia (12) are the three countries at the bottom of the ranking in 2022. The lowest 10 countries are Burundi (17), Venezuela (14), Yemen (16), Libya (17), North Korea (17), Haiti (17), Equatorial Guinea (17), and North Korea (17).

2. CORRUPTION AND ECONOMIC GROWTH

A substantial body of literature has examined the relationship between economic growth and corruption. Overall, the literature on corruption and economic growth suggests that corruption has a negative impact on economic growth, particularly in developing countries with weak institutions. However, the relationship between corruption and economic growth may be more complex than previously thought. Some studies suggest that corruption can have a positive effect on economic growth in certain circumstances, such as in countries with a high level of institutional development. Several theories suggest that corruption can impede economic growth by reducing foreign investment, hindering the functioning of the legal and regulatory systems, and increasing transaction costs.

In contrast, few studies have explored the relationship between ethnicity and corruption. Some scholars argue that ethnicity can affect corruption levels, as it can create a sense of social identity and reduce the willingness to cooperate with people from different ethnic backgrounds. However, other studies suggest that ethnic diversity can foster accountability and transparency in the political and economic systems. Further research is needed to better understand the complex relationship between corruption and economic growth and to develop effective anti-corruption policies.

CPI has been used by the international agencies (who remain outside the CPI system) as well as the moralistic advanced countries most of which are white to beat on the poor corrupt countries. Most recently the IMF in its conditionality has used the CPI to put conditions that are non-economic on Pakistan. This is why we will attempt to understand the biases in the CPI and its meaning.?

We are particularly curious about whether race matters. Is there a racial bias in the CPI? In addition, CPI measures anything other than underdevelopment. Is that rich countries always show up as clean and poor not?

Box 1: Literature Review on “Corruption and Economic Growth”

- ❖ Corruption has a negative effect on economic growth, with each unit increase in corruption reducing the rate of economic growth by 0.5 percent and this effect is particularly strong in developing countries by Mauro (1995).
- ❖ Similarly, Tanzi and Davoodi (1997) found that corruption reduces economic growth and investment, particularly in countries with weak institutions.
- ❖ Bardhan (1997) argued that corruption can have a positive effect on economic growth by facilitating transactions in countries with weak institutions.
- ❖ Ades and Di Tella (1997) argued that corruption can be a rational response to inefficient government regulations, and in such cases, corruption can enhance economic efficiency and growth.
- ❖ Similarly, Wei (2000) found that corruption can have a positive effect on economic growth in countries with a high level of institutional development.
- ❖ A study by Gupta, Davoodi, and Alonso-Terme (2002) found that corruption has no direct effect on economic growth, but it does indirectly affect growth by reducing investment and human capital accumulation.
- ❖ Lambsdorff (2006) found that corruption had a negative impact on the efficiency of public procurement, which in turn had a negative impact on economic growth.
- ❖ Campos and Pradhan (2007) found that corruption had a negative impact on the efficiency of public investment in infrastructure, which in turn had a negative impact on economic growth.
- ❖ Awan et al. (2018) highlighted the importance of good governance in promoting economic growth and suggests that reducing corruption can have significant benefits.
- ❖ The findings suggested that globalisation has a positive effect on economic development, which in turn has a negative effect on corruption by Aïssaoui, R., & Fabian, F. (2021).

3. THEORETICAL FRAMEWORK

The perception of corruption in a nation's public sector is measured by the Corruption Perception Index (CPI), a tool that is frequently used. On the other hand, economic growth describes an increase in a nation's real GDP over time. In academic literature, there has been discussion on the link between the CPI and economic growth. We will examine the numerous theories and empirical research that look at the relationship between CPI and economic growth within this theoretical framework.

3.1. Agency Theory

According to the agency theory, corruption occurs when people work for a company or a government and put their personal interests ahead of those of the company or the public. In this situation, corruption may be perceived as an opportunity for people to earn the most for themselves. This behaviour may cause public institutions to function less effectively, which will slow economic growth. Therefore, it is predicted that high levels of corruption will have a negative effect on economic growth.

The agency theory is supported by several research that shows a negative correlation between corruption and economic growth. For instance, corruption, according to Mauro (1995), has a negative effect on investment, which lowers the growth of the economy. Similarly, to this, Wei (2000) discovered that a 1.7 percent increase in economic growth is connected to a CPI score increase of one point.

3.2. Political Economic Theory

According to political economics theory, the absence of checks and balances in the political and economic system causes corruption to develop. Rent-seeking behaviour, in which people or organisations utilise their political authority to collect economic rents, can result from a lack of accountability. This conduct may result in inefficient resource allocation, less investment, and slower growth in the economy.

The political hypothesis is supported by empirical research that show a negative correlation between corruption and economic growth. Ades and Di Tella (1997) discovered, for instance, that corruption has a detrimental effect on investment and growth in the economy. Similarly, Mauro (1998) discovered that an increase in corruption of one standard deviation lowers economic growth by 0.5 to 0.9 percentage points annually.

3.3. Institutional Theory

According to institutional theory, an important factor influencing economic growth is the efficiency of institutions. The legitimacy and efficacy of institutions are undermined by corruption, which results in a breakdown of the rule of law, a slowdown in economic growth, and other negative effects. Therefore, it is expected that nations with strong institutions and low levels of corruption will experience faster economic growth.

The institutional hypothesis is supported by empirical research that shows a negative correlation between corruption and economic growth. For instance, Knack and Keefer (1995) observed that nations with greater levels of corruption also had lower rates of investment and economic expansion. Similar findings were made by Kaufmann and Wei (1999), who discovered that a one-point rise in the CPI score is linked to a 35 percent rise in foreign direct investment.

In conclusion, both theoretical and empirical data point to the fact that corruption hinders economic progress. Economic growth rates are predicted to be greater in nations with solid institutions, efficient government, and low levels of corruption. Further study is required to fully comprehend the underlying mechanisms, as the relationship between corruption and economic growth may be more complex.

4. DATA AND VARIABLES

This research is based on panel data using 169 countries (available data for the variables) considered by Transparency International (TI) for the Corruption Perception Index (CPI) Score. These 169 countries are the only ones with sufficient data on the corruption perception index (CPI) score and GDP per capita (constant 2015 US dollars) over the period 2012–2022. The corruption perception index (CPI) is used as a measure of corruption levels. GDP per capita income for the abovementioned countries, which was obtained from the data bank of the World Bank’s World Development Indicators (WDI) online database. Further, this analysis used a binary dummy for white-race countries, while the rest of the countries were kept as a reference attribute.

The data is analysed using panel data regression analysis, which allows for the examination of the relationship between corruption, GDP per capita, and ethnicity while controlling for other factors that may affect corruption levels.

Table 4.1

Descriptive Statistics

Variable	Obs.	Mean	Std. dev.	Min	Max
CPI_Score	1671	44.10	18.95	8	92
LnGDP_PC	1690	8.62	1.40	5.56	11.59
White Race Dummy	1690	.2840	.4510	0	1
Lngdp~d	1690	2.82	4.49	0	11.59

Annual data for the period 2012–2021; sample, 169 countries. GDP per capita is expressed in logarithmic form.

Table 4.1 displays the descriptive statistics of variables under study, which contains the observation, mean, minimum, maximum, and standard deviation of CPI, GDP per capita, and white race dummy. Our data sample has 28 percent white race countries that lie at the highest level in the Score of CPI, and the remaining are non-white countries that lie at the bottom level in the CPI Scores. Further, we can investigate and quantify it with multiple regression analysis.

First, we applied pooled OLS regression and random effect model¹ in this paper and then applied the LM test that decides which of the two models is the best fit for this data. The LM test concludes that the random effect model is appropriate. Furthermore, to test whether the residuals are correlated across entities applied the Pesaran cross-sectional dependence (CD) test as a diagnostic tool. Pesaran CD test concludes that there is a problem of cross-sectional dependence and serial correlation in the model. To address these issues, we examined the Panel corrected standard error (PCSE) model.

¹ To save on space, we do not report the results of Pooled regression, random effect model, LM Test, and Pesaran CD test in the main text which are available in the Appendix. For this see Appendix 1.

Table 4.2

Panel Corrected Standard Error (PCSE) Model

CPI-Score	Coefficients	Robust Std.		P> z	[95% conf.
		errs.	z-stat		Interval]
Lngdp_pc	8.74***	(.2795)	31.27	0.000	8.19 9.29
White Race Dummy	7.42***	(.8840)	8.40	0.000	5.69 9.15
Cons_	-33.07	(2.0940)	-15.79	0.000	-37.17 - 28.96
	Number of obs.	1671	Number of groups	169	
	R-Squared	0.7778			

Notes: *, **, *** denote significance at the 10 percent, 5 percent, and 1 percent levels, respectively. Robust standard errors are in parentheses.

5. RESULTS AND DISCUSSION

The analysis is carried out by Panel Corrected Standard Error (PCSE) regression to establish a relationship explaining better scores in CPI by race (White Countries) and GDP per capita income. Table 4.2 presented the full results of PCSE model for our interest variables including dummy depending upon white race countries.

The results of PCSE model indicate a positive statistically significant impact of GDP per capita and white race dummy on CPI score at the 1 percent significance level. It is found that if there is a 1 percent increase in GDP per capita, it leads to raise significantly difference from zero in the score of CPI by 8.74. This can be explained by the fact that income per capita leads to greater transparency, accountability, and more efficient governance. Further, it concludes that a white race country can get 7.42 more points in the CPI score than a non-white country at the 1 percent level of significance. It means being white race and rich, a country can get 7.42 score more transparent in the corruption perception index.

The regression's reported R^2 is .7778, which is excellent it means 78 percent of the variations in CPI score is explained by only two variables i.e., white race dummy and per capita income. Consequently, when all other unknown variables are held constant, approximately 78 percent of fluctuations of GDP per capita and the white race explain the effects of corruption.

This is generally typically the case with micro econometric models, the time dimension T of our panel is less than its cross-sectional dimension N. Therefore, PCSE model is appropriate for this case. Further, the PCSE model itself tackles the problem of heteroscedasticity, cross sectional dependence and serial correlation of AR (1). This thing confirms the model's validity to ensure homoscedastic and normally distributed residuals. To adjust a possible un-equal variance problem, we employed robust (Heteroscedasticity Consistent) Standard Errors to calculate t-stats and corresponding p-values. The residuals are Normal and identically distributed, confirming the model's validity and reliability.

6. CONCLUSION

Our analysis provides PCSE regression of income per capita and race on CPI Scores. The study employed a contemporaneous econometric technique to tackle the problem of outliers and the misspecification of the error term. This analysis uses a binary dummy for white-race countries, while the rest are kept as reference attributes.

In conclusion, this report shows that economic growth and ethnicity both have a positive and significant impact on corruption levels in panel-country analysis. Countries with higher per capita income and white race tend to have lower corruption levels at the 1 percent significance level.

It was found that white race countries (West Europe/EU) have scored higher (above median) in CPI than other regions. Another connotation is observed between CPI score and per capita income; the countries with good per capita income also scored well in CPI. We call a country “Best Performer”, having a good score and higher per capita income. Most European countries (white race) fall in the “Best Performing Group.” It is also observed that USA and Canada (from the Region Americas) and Australia & New Zealand (from the region Asia and Pacific) also fall in the best-performing group.

Surprisingly, it is observed that better CPI scores and good per capita income have a strong positive relationship with white-race countries in empirical analysis. The results suggest that economic growth can be an effective tool for reducing corruption in countries with diverse ethnic populations. However, other factors such as political stability, rule of law, and government effectiveness should also be considered when developing anti-corruption strategies.

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