

**The Effect of Corruption and Environmental Performance
on Economic Sustainability,
and the Role of Social Networking
in a Vision for a Sustainable Future**

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I. Introduction

In an age of uncertainty, marked by the end of a superpower's economic hegemony, rebellions in the Middle East, and natural disasters worldwide, there are very few things that are definite and unchanging. What is becoming even more certain, however, is that we are living in an increasingly globalized society, where political and economic events that originate in one nation can have ramifications for, or may very well resurface, in another. A rebellion against a dictatorship in Tunisia flamed into a series of protests and uprisings throughout the Middle East, which came to be known as the Arab Spring.¹ The 2007 financial crisis, whose early signs were first seen with the collapse of a United Kingdom bank, but whose effects were felt across the globe,² illustrates the hyper-connected, interdependent nature of our nations' economies. And the recent downgrade of the United States' credit rating is a matter of great concern not only for the U.S., but for the numerous countries that hold U.S. debt.³

The hyper-connected nature of our present-day society exacerbates the issue of natural resource depletion. We have a "finite resource pie" that must be divided among an exponentially growing population,⁴ and the rate at which the population consumes these resources cannot be sustained.⁵

Faced with these two certainties, it is clear that the pursuit of a sustainable future is not a luxury, but a necessity for the global community. But sustainability is a broad concept, so specification in the definition and scope of sustainability must be detailed prior to proposing and taking action in pursuit of a sustainable future. In this paper, I define a sustainable future as not simply an environmental issue, but as the long-term maintenance of economic wellbeing, and I analyze two key factors in this definition of sustainability.

The first factor is environmental performance, or a nation's level of success in utilizing and adapting to environmentally sustainable practices. A great deal of literature about environmental sustainability, which ensures that the use of natural resources today does not negatively affect the ability of future generations to use those resources,⁶ already exists. The focus of this paper, therefore, will not be on the environmental factor in and of itself, but rather the effect that a nation's environmental performance has on its economic performance, specifically the overall revenue of the nation.

The second factor is corruption, which I identify as a major hindrance to the success of both environmental sustainability and the overarching goal of economic wellbeing. The substantial focus of this paper lies in addressing issues of corruption, and how they impact a nation's economic wellbeing.

Additionally, I discuss whether there is a correlation between a nation's environmental performance and its level of corruption. Furthermore, I examine how environmental performance and corruption in concert impact the economy, therefore, the economic sustainability, of a nation. In order to examine these impacts, I analyze the relationships between the following variables: the relationship between Corruption Perception Index (CPI) and Gross Domestic Product per Capita (GDPPC); the relationship between Environmental Performance Index (EPI) and GDPPC; and the relationship between CPI and EPI.

Afterwards, I explore the role that Web-based resources, particularly social media, can play in combating corruption, promoting environmental performance and disseminating a sustainable vision for the future, and how they can be utilized by today's youth. Finally, I discuss the crucial role of education and nongovernmental organizations (NGOs) in teaching and

promoting the utilization of the Web and in instilling the importance of political participation in today's youth.

II. The Relationship between Corruption and Economic Wellbeing

To prove that corruption is directly related to a country's economic sustainability, Corruption Perception Index (CPI) compiled by Transparency International (TI) and Gross Domestic Product per Capita (GDPPC) compiled by the International Monetary Fund (IMF) for the year 2010 were used to produce a scatter diagram that depicts the relationship between the two variables.

TI defines corruption as "the abuse of entrusted power for private gain" which "encompasses corrupt practices in both the public and private sectors."⁷ There are 178 countries evaluated under the CPI, which measures the perceived level of public corruption.⁸ Each country was given a score of 1 to 10, with 1 being the lowest possible score reflecting the worst, or highest amount of perceived public corruption, while 10 is the highest possible score which could be attained for least corruption.⁹

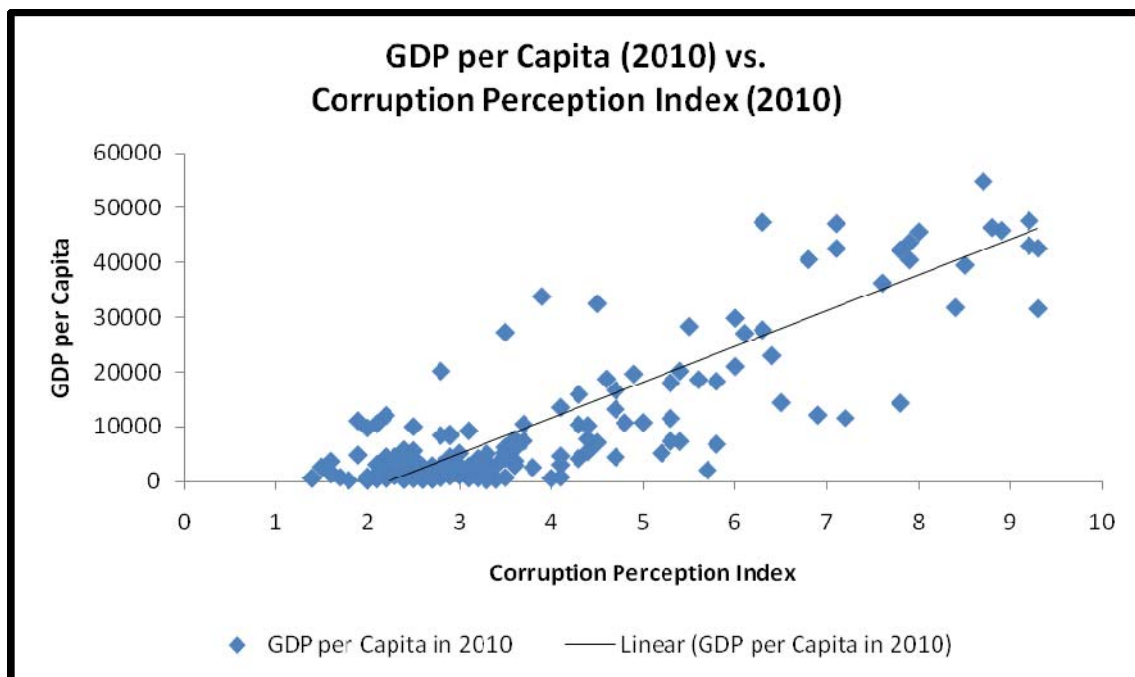
The CPI is an aggregate of various factors indicating corruption, such as the extent to which public employees can be held accountable for the use of funds.¹⁰ After gathering nation-specific data based on these factors, each country was ranked from 1 to 178, with 1 representing the country with the least corruption and 178 representing the nation with most corruption.¹¹

According to TI, the 2010 CPI relies on assessments by ten reputable independent institutions.¹² These assessments, given in response to questionnaires regarding bribery kickbacks and embezzlement, among other topics that shed light on the effectiveness of public sector anti-corruption efforts, encompass administrative and political aspects of corruption.¹³ For a nation to be included in the CPI list of countries, a minimum of three reliable sources must

have been used in determining its CPI score, as the extent or level of detail in the compilation of CPI depends on the availability of or access to these and other sources.¹⁴ The access or lack thereof to these resources may reflect upon such factors as freedom of the press and the integrity of the judicial system in the country being assessed, although it would not necessarily serve as evidence of the existence of corruption.

When creating the scatter diagram-below (Figure 1) comparing countries' 2010 GDPPC with 2010 CPI, countries for which data was available in the CPI index but not in the IMF's compilation of GDPPC were eliminated from the scatter-diagram. Likewise, those countries whose 2010 GDPPC were reported by the IMF but for which data could not be found in the 2010 CPI index were eliminated from the scatter-diagram.

Figure 1



Notes: GDPPC is in U.S. dollars

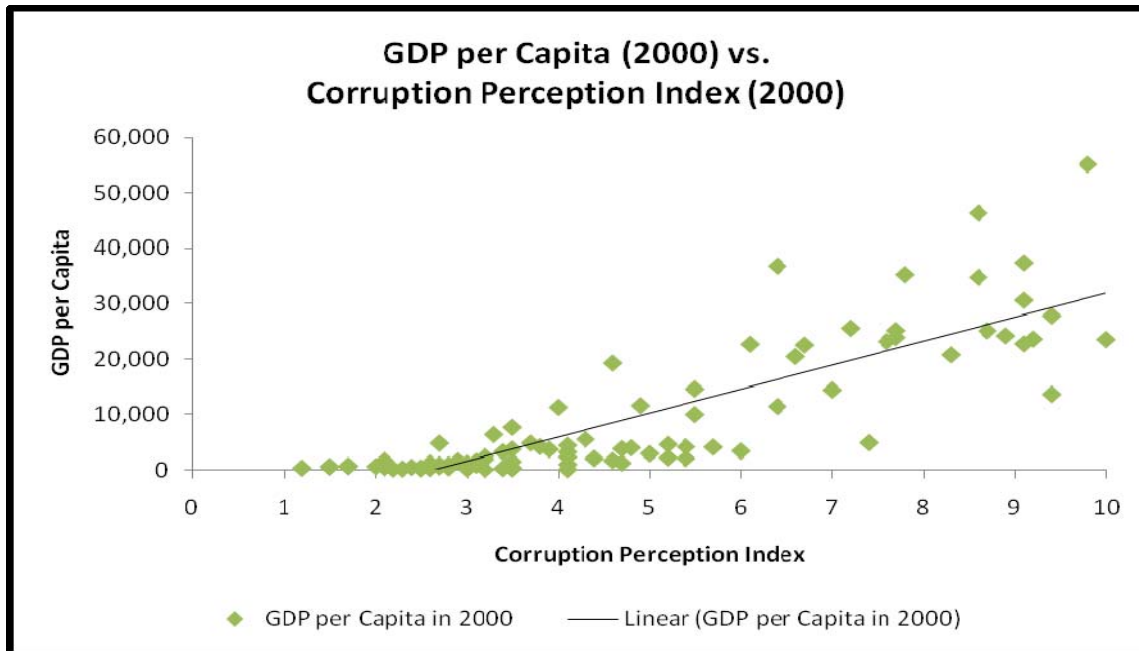
For exact numbers for the data in Figure 1, see Table 1 in the Appendix

The slope of Figure 1 represents an upward trend, indicating that on the whole, the higher the CPI score (a high CPI score representing *low* corruption), the higher the GDPPC, and thereby shows a positive correlation between these two variables. The degree of correlation, however, is ambiguous, because it may be influenced by culture- or system-specific factors. For example, modesty and filial piety may discourage certain cultures from speaking out publicly, but this does not necessarily mean that there is no transparency; or a nation could be so underdeveloped it does not have an extensive network of communication, but again, this is not necessarily a sign of corruption. Also, figures for GDPPC do not take into account the differences in the cost of living between nations.

Although further study is needed for the degree of correlation to be assessed, the trend indicates that the increase in corruption inversely correlates with the level of GDPPC, thus representing the negative impact of corruption on the economic wellbeing of a nation.

To address whether the positive correlation of CPI score and GDPPC can be affirmed in the long run, a scatter-diagram (Figure 2) referencing these two variables for 2000, once again using data from TI and the IMF, is presented below.

Figure 2



Notes: GDPPC is in U.S. dollars

For exact numbers for the data in Figure 2, see Table 2 in the Appendix

The earliest available CPI dates back to 1995.¹⁵ While the first CPI surveyed only 41 countries, the 2000 CPI includes 90 countries.¹⁶ Furthermore, in the 1990s, TI was still finding ways of developing a uniform and unbiased methodology in calculating the composite index.¹⁷ Taking into consideration the stability in the methodology of calculating CPI, the year 2000 was chosen as a decade of comparison for the CPI.

Like the 2010 scatter-diagram (Figure 1), the 2000 scatter-diagram (Figure 2) also shows a positive correlation between a nation's CPI score and its GDPPC, i.e. a higher GDPPC corresponds to a higher CPI score. In addition to the depiction of this trend presented by the scatter-diagrams, previously established literature establishes that corruption tampers with the nature of competition in the free market, and thereby hurts the quality of goods and services, and empirical evidence suggests that corruption is an impediment economic growth.¹⁸ A recent

study of the North African region posits that nearly 70 percent of potential investors in renewable energy resources believed that corruption is a major deterrent to investment.¹⁹

Without analyzing the political, economic, historic, and cultural dynamics, as well as idiosyncratic tendencies, that affect daily life and the practices of each nation and its people, it is difficult to assess the degree and intensity of the effect of corruption on GDPPC. Gathering from the Figures 1 and 2, however, it can be loosely stated that higher corruption generally correlates with lower GDPPC.

III. The Relationship between Corruption and Environmental Sustainability

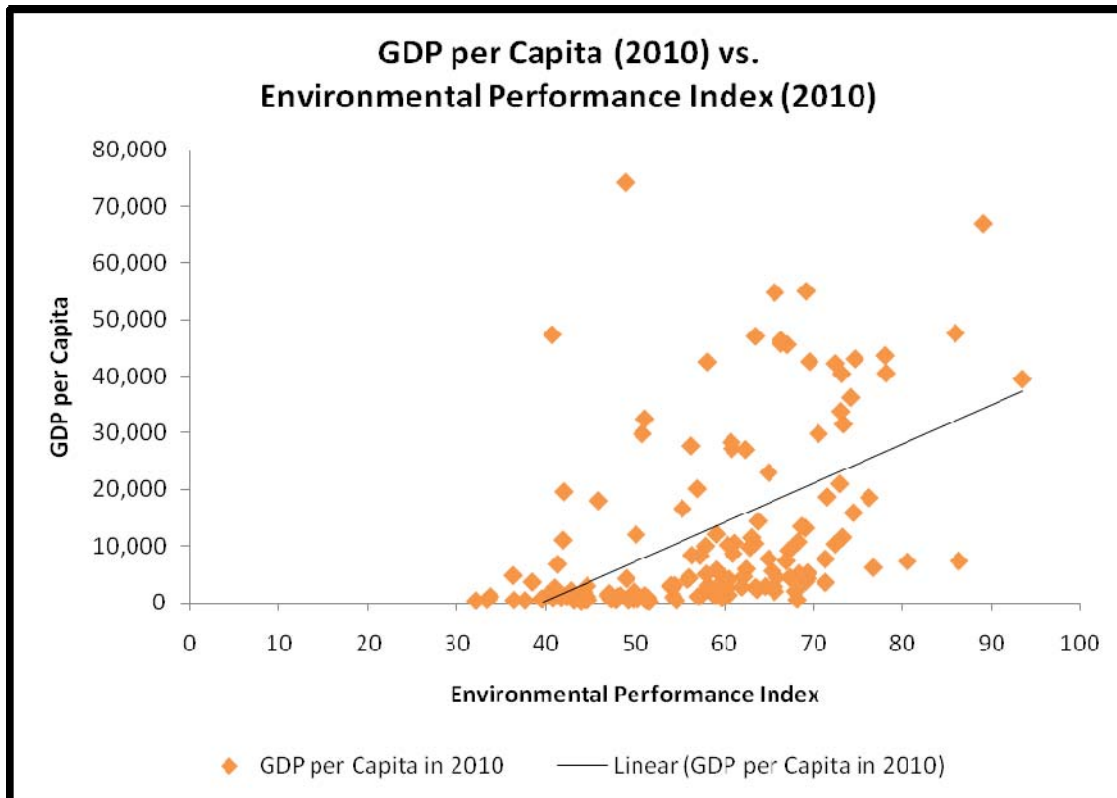
The 2010 Environmental Performance Index (EPI) was developed by the Yale Center for Law and Policy and the Center for Earth Science Information Network at Columbia University, in collaboration with the World Economic Forum and the Joint Research Center, European Commission.²⁰ The EPI ranks 163 countries on 25 performance indicators among ten policy categories, including ecosystem vitality and environmental public health. These indicators can be used to show how close a country is to meeting their established environmental policy goals.

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Prior to the establishment of the EPI, the Environmental Sustainability Index (ESI), which was developed by the first three groups in the preceding paragraph, was used to measure each nation's sustainability of natural resources, ability to control pollution, and maintenance of global commons and raising its environment performance, among other criteria.²² This composite index, which was used to measure the environmental performance of a nation relative to other nations, was replaced by the EPI, which relies on outcome-related indicators.²³

The scatter-diagram below (Figure 3) of 2010 GDPPC vs. EPI supports the premise that higher the EPI, greater the GDPPC.

Figure 3



Notes: GDPPC is in U.S. dollars

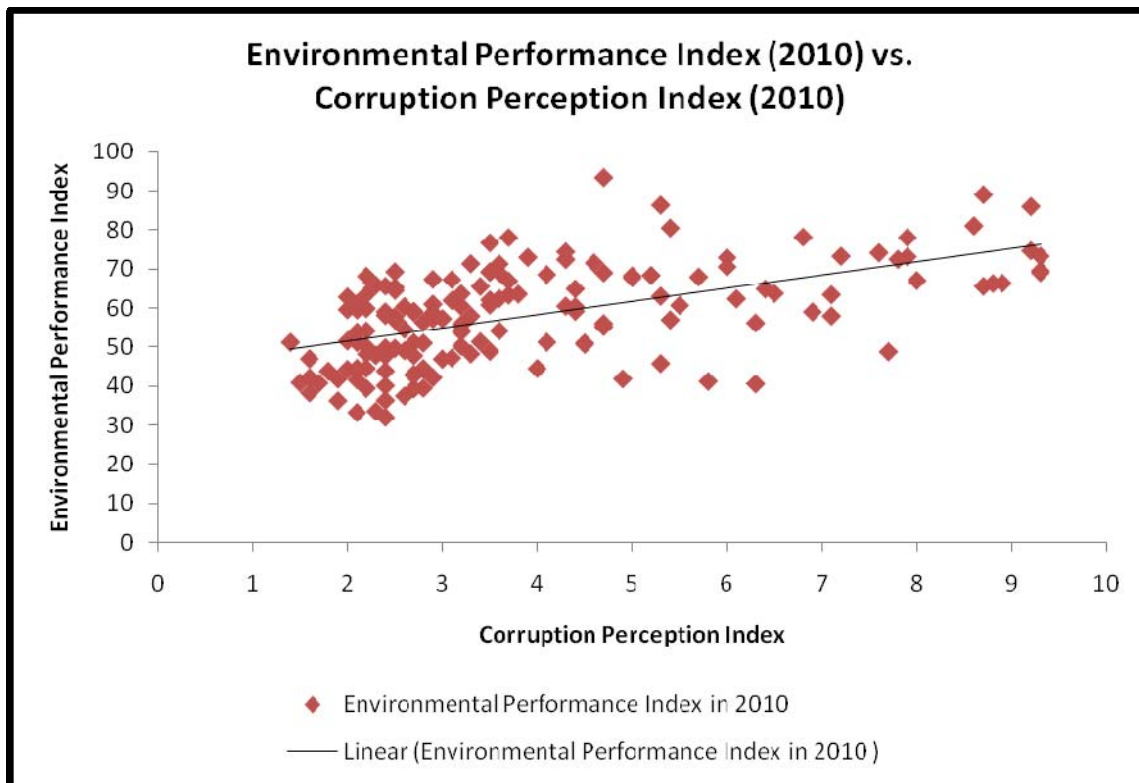
For exact numbers for the data in Figure 3, see Table 3 in the Appendix

The upward sloping trend in Figure 3 represents the positive correlation between a high EPI score and a high GDPPC. In the 2000 and 2010 data analyses from Section II, it can be seen that countries with higher GDPPC overall tend to fare better in CPI scores.

Because there is no EPI index for 2000, the historical trend in the relationship between EPI and GDPPC cannot be presented in this paper. This unavailability of data may indicate that measuring environmental performance relative to gross domestic product is a relatively new arena. More research in the future may answer whether the correlation represented by the scatter diagram created using 2010 data will continue over time.

Using the 2010 EPI data and the 2010 CPI data, I created the scatter-diagram below (Figure 4).

Figure 4



Notes: For exact numbers for the data in Figure 4, see Table 4 in the Appendix

Figure 4 shows a positive correlation between CPI and EPI. More specifically, the greater the corruption in a nation, the poorer its environmental performance. The strength of the relationship between these two variables is not yet known, since there has been little research in this area. Also, due to the fact that there is no EPI index for the year 2000, this paper cannot present a scatter-diagram depicting the relationship between 2000 EPI and 2000 CPI, so whether the correlation represented in Figure 4 is historical is still uncertain. Nonetheless, it can be concluded from Figure 4's upward slope that corruption tends to impede environmental performance.

From the overall trend represented by the data in the 2010 EPI vs. GDPPC scatter-diagram (Figure 3), and by the data analysis conducted in Section II regarding the trend over

time in the GDPPC vs. CPI relationship (Figures 1 and 2), it can be asserted that impoverished nations are particularly susceptible to corruption and environmental degradation. Furthermore, considering the scatter-diagram of Figure 4 which depicts a positive relation between CPI and EPI, it could be rationally inferred that nations with low scores in these two areas generally have lower GDPPC while the higher scorers have corresponding high GDPPC. Again, without further study over time, which would reveal the intensity of the relationship between these variables, the analysis must be considered within the context of this limited available data.

IV. Summarizing the Relationship between Corruption, Economic Wellbeing and Environmental Sustainability

The trends depicted by the data analysis in Sections II and III indicate that overall, poorer nations tend to be particularly susceptible to corruption and perform worse environmentally. Because of human frailty, no nation is completely sanitized against corruption, and corruption is not a phenomenon that is unique to impoverished nations. However, poor and developing nations can be breeding grounds for corruption because they often lack sufficient regulatory systems and citizens are uneducated about their rights. African nations are among the most susceptible; approximately \$40 billion is stolen annually by corrupt African leaders, resulting in a loss of 25 percent of the Gross National Product (GNP) in many African countries.²⁴

Corruption occurs where the public sector and the private sector meet—if a government official has control over the distribution of a benefit or cost to the private sector, private firms or individuals may be “willing to pay to obtain these benefits and avoid the costs.”²⁵ Many developing nations have a great deal of natural resource wealth, but due to the absence of transparency and accountability measures, resource revenue is stolen and diverted away from the citizens, who are shut off from dealings between the private sector (resource extraction companies) and the public sector (the government).²⁶

For example, at peak production, Uganda's oil reserves could produce up to \$2 billion yearly in revenue, but more than 7 million citizens still living in poverty have yet to benefit from its oil wealth. The Ugandan government has refused to disclose oil production contracts with oil companies, in spite of the efforts of journalists and MPs to reveal these agreements, keeping its citizens in the dark and thereby relieving the government of accountability in its resource exploitation and revenue management.²⁷

Similarly, in Nigeria, natural resource revenues have "induced rent-seeking and corruption on a massive scale,"²⁸ and a recent study found that the majority of public sector and private sector organizations "never really considered sustainability of the resources they exploit" despite supposedly being knowledgeable in the subject of resource sustainability.²⁹

Poorer nations are overall more likely to perform worse environmentally. Not only does an impoverished nation lack the funds to pursue more expensive sustainable practices, but poverty can lead to the overharvesting of the nation's natural resources.³⁰ Many developing countries try to enhance their economic development at the cost of environmental considerations because of the expense or the unavailability of clean technology. In nations like Nigeria, where the population is growing faster than the economy, the rural poor tend to over-exploit natural resources just to survive, while governments mismanage natural resource revenue.³¹

The difficulty of balancing environmental sustainability and economic development is magnified by foreign investment in developing countries, which is drawn by not only the offer of cheap labor but also by fewer environmental regulations. Works that are considered too hazardous for the environment and for human health in the U.S. are routinely outsourced to developing nations.³² Wealthy countries need to invest more responsibly and set an example for developing countries, instead of taking advantage of them, exacerbating their environmental

problems, and then complaining that they do not do enough to reduce fossil fuel consumption and greenhouse gas emissions.

V. Combating Corruption, Promoting Environmental Performance, and Reframing Sustainability through Web-Based Resources

The Internet is a valuable tool that encourages participation and collaboration between people from all over the world, and enables them to work for greater transparency through investigation and dissemination of information. The young people of this generation can lead the way for an Internet-based transparency movement by promoting the open exchange of ideas through social networking. Through the outlets of social media, they can also help reframe sustainability as a matter of economic importance, not simply an environmental issue, and widely disseminate this reframed image.

Technology is revolutionizing the ordinary citizen's opportunities and abilities to contribute to society by "allow[ing] access to facilities round-the-clock, permitting global operation across multiple time zones [...] and permitting citizens to access...services at their convenience, both in temporal and spatial terms."³³ This generation's youth has the privilege of being the most technologically-savvy and intimately familiar with instant communication and social media. This media culture has fostered an obsession with sharing their thoughts with online peers, and learning what their peers think.³⁴ Young people can utilize this passion for documentation and feedback to disseminate the vision of a sustainable future and promote transparency.

By posting about sustainability through social media, young people spread the message of responsible living and make it a "cool" issue for their followers. Environment-related topics "trend" (rise in popularity) on websites such as Twitter, a social media platform that encourages sharing other people's posts (known as "retweeting"). Social media users can also receive

feedback on their posts from followers, who may share their opinions and ideas regarding sustainability projects and issues. Similarly, young people can use social media to promote the use of Web-based pro-transparency resources.

Young people must also utilize Web-based resources such as social media in reframing sustainability as a priority, rather a luxury. In times of financial hardship, it is hard to convince both the government and the public that sustainability is a priority, especially when sustainability is viewed strictly as an environmental matter. The environmental factor of sustainability is a particularly divisive issue. In the U.S., environmental sustainability advocates have been labeled anti-business, anti-agriculture, elitist, and, in the increasingly vitriolic American political climate, socialist.³⁵

Some forms of environmentalism do have undertones of snobbery, and are too inaccessible to the general public.³⁶ But many who hurl accusations of elitism are being misleading, deceptive, or outright hypocritical about their own positions. For example, large agricultural firms and their lobbyists, in attacking sustainable agriculture, hide the financial benefits they reap from an iron grip on the agricultural market, and shutting out sustainable food growers and small farmers, many of whom resort to second jobs just to keep their land.³⁷

The Yale Rudd Center for Food Policy & Obesity notes that the accusations of elitism sound more like fears of change instead of legitimate worries about snobbery: “What we [...] deem necessary, vital, and worth paying for, is surprisingly fluid and dynamic. In the last ten years we have collectively added cell phone bills and cable bills into our monthly balance [...] We would never think to claim that cell phones or cable are elitist.”³⁸

It is essential to convince both the government and the public that sustainability is necessary and vital, and not a luxury for elitists. Politicians will not act on, and the public will

not support, a long-term sustainable vision for the future, unless the image of sustainability is directly tied to economic prosperity.³⁹ In the words of Richard Locke, professor of entrepreneurship at the MIT Sloan School of Management, “The best way to get people to take sustainability seriously is to frame it as [...] not only a challenge [...] but, for first movers, a source of enormous competitive advantage.”⁴⁰ Some environmental economists even assert that the exhaustion of natural resources and other environmental damage stems from “the failure of the market system to put any value on the environment.”⁴¹ Therefore, the government should take a market-based approach to sustainability policy, and clearly outline incentives for businesses that implement sustainable practices. Incentives can include tax breaks or credits for businesses that significantly reduce their carbon footprint, and government promotion for ecofriendly products.

Another incentive for change is ecotaxes, which “shift the tax burden from good things like employment to bad things like pollution and excessive resource use.”⁴² Market-based approaches will reward businesses that invest more in corporate social responsibility (CSR), encourage competition between businesses, and lead to further clean tech innovation. The results will benefit consumers and the economy as a whole, in addition to the environment.

In today’s globalized market, the private sector is the primary driver of economic growth in developing nations.⁴³ Multinational enterprises (MNEs) yield considerable influence over a host government’s policies because local economies rely on the “unique resources” that the MNEs provide.⁴⁴ Xerox, Nokia, Motorola, and Cisco are all examples of MNEs that “aggressively and successfully persuaded the Chinese government to change the old technical standard in their respective industries.”⁴⁵ Therefore, the private sector—particularly MNEs that

invest in developing countries—can play an important role in promoting and continuing sustainable practices in developing countries.

But there are potential dangers in reframing sustainability as a matter of economic wellbeing and pushing the market-based approach to sustainability so heavily. Corruption is a problem that will not simply go away in a market-based economy. Rather, corruption will find ways to persist through the actions of influential corporations and unscrupulous lobbyists, who may resort to bribery to avoid the costs of sustainability policies.

In order to combat the persistence of corruption, youth must take an active role in fostering transparency through technology. Both the private sector and the public sector must be monitored and made accountable for their actions, such as the transfer and receipt of funds, and this information should be readily made accessible to the general public via Web-based resources. In order to ensure objectivity and accuracy, monitoring should take place through nonpartisan groups.

For example, the Sunlight Foundation is a non-profit, nonpartisan organization that maintains and promotes online tools such as the Lobbyist Registration Tracker, a searchable database which shows which U.S. special interest groups have hired new lobbyists within the past 45 days, and includes all registrants since 2008.⁴⁶

Subsidyscope.org by the Pew Economic Policy Group is another online resource that “aggregates information on [U.S.] federal spending and subsidies from multiple government sources, serving as a gateway for press, policymakers, advocates and the public.”⁴⁷

Bribespot, a smartphone app created by an international team of people from Estonia, Finland, Iran, and Lithuania, utilizes the technology behind the social media activity of “checking into” locations via mobile devices.⁴⁸ The app (which is currently only available for

Android phones) and the Bribespot website can be used to report and view locations where bribes have been requested and paid, the size of the bribes, and the area of government affected by the bribes. Bribespot stresses the anonymity of reports and the “great lengths” it goes to in order to prevent the collection of personally identifying information about users.⁴⁹ Questions still remain about the safety and accuracy of Bribespot, although the company “says it guards against malicious or fraudulent campaigns in various ways, like limiting the number of check-ins daily from the same phone.”⁵⁰

Nonetheless, tools like Bribespot that employ social media techniques are examples of the resources that the youth of this generation can help create and endorse in an Internet-based movement for increased government transparency. These resources are also very significant because they rely heavily on the participation and collaboration of members of the public, who take responsibility for gathering and reporting information about the goings-on of government so that it may be accessible to other citizens.

Social networking can enable youth to take a proactive role in developing a sustainable future and embracing their responsibility as citizens—of their own nations, and of the international community—to contribute to a greater vision. Through networking, young people can promote the use of Web-based resources that monitor the public and private sectors and reframe sustainability as a matter of economic wellbeing, in addition to the more traditionally recognized definition of environmental sustainability.

VI. The Role of Education and Nongovernmental Organizations

For young people to truly harness the power of technology and the benefits of transparency, however, they must be taught how to use it. Education and technology must be used in tandem, because one tool cannot yield lasting results without the other. Education can

open the minds of students, but without the use of the Internet and social media, education is limited to the confines of a school building, instead of reaching the minds of people around the world. Technology can make sustainability seem cool, but unless education is used to reinforce the scientific and economic facts behind sustainability, and to instruct young people in how to utilize the vast amounts of information at their hands, sustainability will simply be fad, ready to be replaced by another trendy issue. Without technology, youth cannot have a voice; without education, youth will only have a superficial understanding of sustainability.

Young people should be educated in technology classes about the purpose and uses of social media and other Web resources. For example, in class, students can research, compare, and recommend what they consider to be the most accurate, innovative, accessible pro-transparency Web resources. Using instant communication services such as video-calling, students can then share their analyses with their international peers. By sharing various resources, these resources will become better known and more competitive with one another, driving each other to become more accurate, innovative, and accessible.

Young people must also know how to distinguish between accurate and unreliable information. The open nature of the World Wide Web, which allows anyone to contribute and transmits information instantly, is both a boon and a danger. While the communication may be instantly gratifying, there is always the risk that inaccurate information, especially information from those who intend to destroy good works, will seep into open forums. Once again, monitoring by non-partisan groups is required to ensure transparency in the gathering and exchange of information, with support from already-established, reputable media moguls, since self-promotion can only go so far.

Most importantly, young people must be taught to think critically about and apply the vast amount of information in their hands by voting. Accountability is not a one-way street; young people must also be taught the responsibility of participating in the political process. Only then can the seemingly abstract concept of the “future” be realized.

When young people are educated in how to best utilize the numerous forms of technology and information available in this age, they can in turn use the very technology they have been studying to educate their peers around the globe.

But there are limitations to the effectiveness of technology in education and in forging international connections, because the people of developing or impoverished nations may lack the means to access technology classes. Also, impoverished nations may be more susceptible to corruption, and statistical analysis shows that “government spending on education as a ratio to GDP is negatively and significantly correlated with corruption”—that is to say, the more corruption, the less money goes into education.⁵¹

Nongovernmental organizations (NGOs) can play an extremely valuable role in making education and technology accessible to these nations, and disseminating a vision for a sustainable future. However, there are myriad NGOs that address overlapping or related issues, but operate separately from one another. The efficiency and effectiveness of their work can be increased by collaboration between NGOs.

Consider the following three NGOs: EarthRights International, the International Cultural Youth Exchange (ICYE), and the Internet Society (ISOC). EarthRights International documents and publicizes abuses of both the environment and human rights, promotes environmental and human rights accountability for corporations, and through its EarthRights Schools, “enhances the capacity of human rights and environmental leaders to defend their rights and homelands from

abuses associated with unsustainable development projects.”⁵² The ICYE is an international, youth-volunteer program that encourages social development, intercultural understanding, equality of opportunity, and awareness of issues in local and national communities “in order to better understand world-wide socio-economic-political issues and problems.”⁵³ The ISOC advocates Web-related standards and education, and through their Enabling Access Initiative, seeks to improve Internet accessibility by focusing on “fundamental impediments to Internet growth and usability,” especially in developing countries.⁵⁴ If these three NGOs were to collaborate and operate joint projects that educate populaces in matters of Internet technology and Web navigation skills, their rights in the face of corruption, and sustainability, the impact of these NGOs would be magnified, as well as their impact.

VII. Conclusion

The vision for a sustainable future must emphasize the definition of sustainability as long-term wellbeing, not only in economic terms but in terms of integrity of the political system in addition to the environmental factor. This vision cannot hinge on how we should be altruistic and lead green lives just for the sake of it, but should instead focus on how sustainable policies, reforms, and living can yield us economic advantages and result in a more prosperous future.

Environmental sustainability is an emerging, evolving arena, where research, technology, ideas, and trends are in constant development. Clean-tech and other sustainability-related markets will yield the next wave of job creations,⁵⁵ much like Silicon Valley. However, unlike the high-tech revolution that was centered in Silicon Valley, the clean-tech revolution is “a highly dispersed phenomenon.”⁵⁶

For example, centers for solar PV manufacturing are as far-flung as Kansai, Japan; Freiberg, Germany; Toledo, Ohio, United States; Wuxi, China; and Singapore.⁵⁷ From 2003 to 2010, the United States clean-tech economy grew 8.3%, almost twice as much as the overall U.S.

economy during that time, and in the U.S. alone, the clean-tech sector employs 2.7 million workers.⁵⁸ Nearly half of these workers have a high school diploma or less.⁵⁹ In a time when workers without college degrees are battling increasing difficulty in finding jobs, the clean-tech sector can help combat unemployment.

In addition to emphasizing the economic side, a vision for a sustainable future must account for the pitfall of corruption. In order to bridge the gap between the public and the government, there must be greater government transparency, so that the public can see how its input is considered in the decision-making of political representatives. The private sector must be monitored by a series of checks and balances to ensure that the rules of free market competition are enforced, and the public sector must likewise be made more transparent. Citizens can become discouraged by a seeming lack of insight into the workings of their governments when determining policies, and feel less inclined to participate in the political process. Increased transparency will require the government to be held accountable for its actions, and improve communication between the public and the government. The public must also take responsibility by contributing to society by voting, and by using and improving Web-based transparency and educational resources.

International collaboration is crucial to the globalization of sustainability. Many innovations in clean-tech are “isolated from those who might best use it” and “compartmentalized into niche areas.”⁶⁰ Writes Irv Beiman, “Projects funded by national governments tend to restrict their geographic dispersion beyond the borders of a single country. Projects funded by universities tend to restrict the commercial benefits of success that might otherwise flow to the scientist-inventor-innovator. Projects that are self-funded tend to be limited in scale, scope and cross-sector applicability.”⁶¹ Essentially, there is too little collaboration, and

too much focus on being the lone winner, the one that gets the largest share of the pie. This type of attitude is fast becoming antiquated, now that today's market is more open and inclusive than ever. Through trade and collaboration, we can more easily commercialize innovative technology, which will create new jobs and revenue. Collaboration increases the size of the pie, thereby increasing the benefits that every participating nation reaps.

Likewise, through the international collaboration of various NGOs that promote education and technology, the youth of the world can unite in disseminating and fulfilling a vision for a sustainable future. Education is a type of intangible capital.⁶² Education is not the hard cash needed to fund sustainable practices and policies, but all the same, it is a type of capital, because unless the public is educated about sustainability, its rights to transparency, and the available resources, it cannot unite in the name of a sustainable future. With the help of NGOs, technology can be used in conjunction with education, enabling young people to learn and form international connections and teach beyond the boundaries of the classroom. Together, education and technology can develop and maintain a sustainability-minded culture that is not tied to any particular region or nationality, but whose influence and values are global.

Appendix

Tables 1 through 4 in the Appendix contain the data used to create Figures 1 through 4 (the graphs in the body of the paper).

Table 1: Corruption Perception Index (2010), GDP per Capita (2010)

The nations with the highest CPI scores are mostly European nations with stable governments and relatively high GDPPC.

Rank	Nation	CPI in 2010	GDP per Capita in 2010 (U.S. dollars)
1	Denmark	9.3	55,112.71
1	New Zealand	9.3	31,588.78
1	Singapore	9.3	42,652.76
4	Finland	9.2	43,134.00
4	Sweden	9.2	47,667.02
6	Canada	8.9	45,887.74
7	Netherlands	8.8	46,418.33
8	Australia	8.7	54,868.92
8	Switzerland	8.7	67,074.31
10	Norway	8.6	84,543.44
11	Iceland	8.5	39,562.89
11	Luxembourg	8.5	104,390.27
13	Hong Kong	8.4	31,798.74
14	Ireland	8	45,642.49
15	Austria	7.9	43,723.32
15	Germany	7.9	40,511.83
17	Barbados	7.8	14,307.67
17	Japan	7.8	42,325.23
19	Qatar	7.7	74,422.60
20	United Kingdom	7.6	36,298.39
21	Chile	7.2	11,587.09
22	Belgium	7.1	42,596.55
22	United States	7.1	47,131.95
24	Uruguay	6.9	12,129.72
25	France	6.8	40,591.43
26	Estonia	6.5	14,416.52
27	Slovenia	6.4	23,008.59
28	Cyprus	6.3	27,721.84
28	United Arab Emirates	6.3	47,406.66

30	Israel	6.1	27,085.13
30	Spain	6	29,875.09
32	Portugal	6	21,030.61
33	Botswana	5.8	6,795.93
33	Taiwan	5.8	18,303.60
36	Bhutan	5.7	2,042.17
37	Malta	5.6	18,586.23
38	Brunei	5.5	28,340.04
39	Korea (South)	5.4	20,164.85
39	Mauritius	5.4	7,303.32
41	Costa Rica	5.3	7,350.24
41	Oman	5.3	18,040.54
41	Poland	5.3	11,521.64
44	Dominica	5.2	5,147.81
46	Lithuania	5	10,765.34
48	Bahrain	4.9	19,641.19
49	Seychelles	4.8	10,713.72
50	Hungary	4.7	13,210.40
50	Jordan	4.7	4,434.86
50	Saudi Arabia	4.7	16,641.41
53	Czech Republic	4.6	18,721.63
54	Kuwait	4.5	32,530.48
54	South Africa	4.5	7,100.81
56	Malaysia	4.4	7,754.99
56	Namibia	4.4	5,454.39
56	Turkey	4.4	10,206.79
59	Latvia	4.3	10,377.78
59	Slovakia	4.3	15,906.38
59	Tunisia	4.3	4,159.92
62	Croatia	4.1	13,527.66
62	FYR Macedonia	4.1	4,633.97
62	Ghana	4.1	761.978
62	Samoa	4.1	3,023.24
66	Rwanda	4	569.389
67	Italy	3.9	33,828.55
68	Georgia	3.8	2,559.69
69	Brazil	3.7	10,470.90
69	Romania	3.7	7,390.71
73	Bulgaria	3.6	5,954.72
73	El Salvador	3.6	3,717.06
73	Panama	3.6	7,712.00
73	Vanuatu	3.6	2,916.96
78	China	3.5	4,282.89

78	Colombia	3.5	6,220.60
78	Greece	3.5	27,264.83
78	Lesotho	3.5	707.956
78	Peru	3.5	5,195.98
78	Serbia	3.5	5,262.19
78	Thailand	3.5	4,620.71
85	Malawi	3.4	354.271
85	Morocco	3.4	2,868.15
87	Albania	3.3	3,616.10
87	India	3.3	1,176.06
87	Jamaica	3.3	5,055.00
87	Liberia	3.3	226.683
91	Bosnia and Herzegovina	3.2	4,157.51
91	Djibouti	3.2	1,382.13
91	Gambia	3.2	605.872
91	Guatemala	3.2	2,839.03
91	Kiribati	3.2	1,522.13
91	Sri Lanka	3.2	2,364.62
91	Swaziland	3.2	3,072.83
98	Burkina Faso	3.1	590.072
98	Egypt	3.1	2,771.41
98	Mexico	3.1	9,243.03
101	Dominican Republic	3	5,152.05
101	Sao Tome and Principe	3	1,132.74
101	Tonga	3	2,907.10
101	Zambia	3	1,286.13
105	Algeria	2.9	4,477.80
105	Argentina	2.9	8,662.99
105	Kazakhstan	2.9	8,326.45
105	Moldova	2.9	1,503.16
105	Senegal	2.9	964.133
110	Benin	2.8	673.439
110	Bolivia	2.8	1,839.75
110	Gabon	2.8	8,395.30
110	Indonesia	2.8	2,963.28
110	Kosovo	2.8	20,164.85
110	Solomon Islands	2.8	1,269.19
116	Ethiopia	2.7	364.872
116	Guyana	2.7	2,844.30
116	Mali	2.7	649.264
116	Mongolia	2.7	2,111.26
116	Mozambique	2.7	473.098
116	Tanzania	2.7	542.555

116	Vietnam	2.7	1,155.57
123	Armenia	2.6	2,676.52
123	Eritrea	2.6	423.498
123	Madagascar	2.6	391.082
123	Niger	2.6	382.961
127	Belarus	2.5	5,606.78
127	Ecuador	2.5	4,295.64
127	Lebanon	2.5	10,019.03
127	Nicaragua	2.5	1,096.13
127	Syria	2.5	2,892.02
127	Timor-Leste	2.5	536.024
127	Uganda	2.5	503.89
134	Azerbaijan	2.4	5,764.70
134	Bangladesh	2.4	640.847
134	Honduras	2.4	2,014.70
134	Nigeria	2.4	1,324.34
134	Philippines	2.4	2,011.00
134	Sierra Leone	2.4	324.996
134	Togo	2.4	441.429
134	Ukraine	2.4	3,002.80
134	Zimbabwe	2.4	475.154
143	Maldives	2.3	4,478.09
143	Mauritania	2.3	1,096.34
143	Pakistan	2.3	1,049.31
146	Cameroon	2.2	1,071.41
146	Cote d'Ivoire	2.2	1,016.26
146	Haiti	2.2	659.058
146	Iran	2.2	4,484.44
146	Libya	2.2	12,062.37
146	Nepal	2.2	536.031
146	Paraguay	2.2	2,681.64
146	Yemen	2.2	1,230.56
154	Cambodia	2.1	795.034
154	Central African Republic	2.1	468.846
154	Comoros	2.1	819.77
154	Congo-Brazzaville	2.1	3,074.99
154	Guinea-Bissau	2.1	497.656
154	Kenya	2.1	887.923
154	Laos	2.1	984.153
154	Papua New Guinea	2.1	1,358.43
154	Russia	2.1	10,521.79
154	Tajikistan	2.1	732.137
164	Democratic Republic of Congo	2	188.869

164	Guinea	2	420.52
164	Kyrgyzstan	2	816.22
164	Venezuela	2	9,773.21
168	Angola	1.9	4,812.23
168	Equatorial Guinea	1.9	11,080.86
170	Burundi	1.8	177.663
171	Chad	1.7	742.642
172	Sudan	1.6	1,642.75
172	Turkmenistan	1.6	3,663.40
172	Uzbekistan	1.6	1,335.55
175	Iraq	1.5	2,625.50
176	Afghanistan	1.4	560.673
176	Myanmar	1.4	582.581

Sources: CPI from Transparency International (TI), GDP per Capita from International Monetary Fund (IMF)

Nations for which both 2010 CPI and 2010 GDP per Capita information are available are included.

Table 2: Corruption Perception Index (2000), GDP per Capita (2000)

Similar to 2010, in 2000 data it can be seen that nations with high CPI scores are generally European nations with stable governments and relatively high GDPPC.

Rank	Nation	CPI in 2000	GDP per Capita (U.S. dollars)
1	Finland	10	23,561.05
2	Denmark	9.8	55,112.71
3	New Zealand	9.4	13,708.73
4	Sweden	9.4	27,841.74
5	Canada	9.2	23,653.36
6	Iceland	9.1	30,620.91
7	Norway	9.1	37,390.55
8	Singapore	9.1	22,790.80
9	Netherlands	8.9	24,249.91
10	United Kingdom	8.7	25,142.25
11	Luxembourg	8.6	46,360.39
12	Switzerland	8.6	34,786.15
13	Australia	8.3	20,800.18
14	United States	7.8	35,251.93
15	Austria	7.7	23,935.54
16	Hong Kong	7.7	25,198.71
17	Germany	7.6	23,220.16
18	Chile	7.4	4,943.71
19	Ireland	7.2	25,607.31
20	Spain	7	14,464.24
21	France	6.7	22,574.15
22	Israel	6.6	20,504.11
23	Japan	6.4	36,800.44
24	Portugal	6.4	11,511.28
25	Belgium	6.1	22,716.46
26	Botswana	6	3,440.89
27	Estonia	5.7	4,139.67
28	Slovenia	5.5	10,045.00
29	Taiwan	5.5	14,641.41
30	Costa Rica	5.4	4,185.33
31	Namibia	5.4	2,139.67
32	Hungary	5.2	4,626.82
33	Tunisia	5.2	2,245.36
34	South Africa	5	2,986.45
35	Greece	4.9	11,661.88
36	Malaysia	4.8	4,029.68

37	Mauritius	4.7	3,864.51
38	Morocco	4.7	1,300.58
39	Italy	4.6	19,293.34
40	Jordan	4.6	1,741.93
41	Peru	4.4	2,115.87
42	Czech Republic	4.3	5,548.48
43	Belarus	4.1	1,042.82
44	El Salvador	4.1	2,399.39
45	Lithuania	4.1	3,267.38
46	Malawi	4.1	153.332
47	Poland	4.1	4,453.74
48	South Korea	4	11,346.66
49	Brazil	3.9	3,750.70
50	Turkey	3.8	4,245.22
51	Croatia	3.7	4,870.09
52	Argentina	3.5	7,735.45
53	Bulgaria	3.5	1,546.08
54	Ghana	3.5	270.627
55	Senegal	3.5	453.777
56	Slovak Republic	3.5	3,788.10
57	Latvia	3.4	3,294.83
58	Zambia	3.4	322.485
59	Mexico	3.3	6,419.10
60	Colombia	3.2	2,491.52
61	Ethiopia	3.2	124.791
62	Thailand	3.2	1,966.75
63	China	3.1	945.597
64	Egypt	3.1	1,566.42
65	Burkina Faso	3	233.154
66	Kazakhstan	3	1,229.36
68	Romania	2.9	1,664.36
69	India	2.8	460.269
70	Philippines	2.8	986.557
71	Bolivia	2.7	998.101
72	Cote-d'ivoire	2.7	624.304
73	Venezuela	2.7	4,845.03
74	Ecuador	2.6	1,261.24
75	Moldova	2.6	353.556
76	Armenia	2.6	593.451
77	Tanzania	2.5	303.148
78	Vietnam	2.5	401.567
79	Uzbekistan	2.4	550.72
80	Uganda	2.3	253.586

81	Mozambique	2.2	236.455
82	Kenya	2.1	409.175
83	Russia	2.1	1,793.52
84	Cameroon	2	655.49
85	Angola	1.7	684.808
86	Indonesia	1.7	806.898
87	Azerbaijan	1.5	647.837
88	Ukraine	1.5	642.401
90	Nigeria	1.2	389.951

Sources: CPI from Transparency International (TI), GDP per Capita from International Monetary Fund (IMF)

Nations for which both 2000 CPI and 2000 GDP per Capita information are available are included.

Table 3: Environmental Performance Index (2010), GDP per Capita (2010)

On the whole, the nations with the highest EPI scores are European nations with relatively high GDPPC, although there are exceptions such as Costa Rica, Mauritius, and Colombia. High-scoring nations tend to invest in environmental infrastructure like air pollution control and water pollution control and to adapt policy measures “to mitigate the pollution harms caused by economic activities.”⁶³

Rank	Nation	EPI in 2010	GDP per Capita in 2010 (U.S. dollars)
1	Iceland	93.5	39,562.89
2	Switzerland	89.1	67,074.31
3	Costa Rica	86.4	7,350.24
4	Sweden	86.0	47,667.02
5	Norway	81.1	84,543.44
6	Mauritius	80.6	7,303.32
7	France	78.2	40,591.43
8	Austria	78.1	43,723.32
10	Colombia	76.8	6,220.60
11	Malta	76.3	18,586.23
12	Finland	74.7	43,134.00
13	Slovakia	74.5	15,906.38
14	United Kingdom	74.2	36,298.39
15	New Zealand	73.4	31,588.78
16	Chile	73.3	11,587.09
17	Germany	73.2	40,511.83
18	Italy	73.1	33,828.55
19	Portugal	73.0	21,030.61
20	Japan	72.5	42,325.23
21	Latvia	72.5	10,377.78
22	Czech Republic	71.6	18,721.63
23	Albania	71.4	3,616.10
24	Panama	71.4	7,712.00
25	Spain	70.6	29,875.09
28	Singapore	69.6	42,652.76

29	Serbia and Montenegro	69.4	5,262.19
30	Ecuador	69.3	4,295.64
31	Peru	69.3	5,195.98
32	Denmark	69.2	55,112.71
33	Hungary	69.1	13,210.40
34	El Salvador	69.1	3,717.06
35	Croatia	68.7	13,527.66
36	Dominican Republic	68.4	5,152.05
37	Lithuania	68.3	10,765.34
38	Nepal	68.2	536.031
40	Bhutan	68.0	2,042.17
41	Luxembourg	67.8	104,390.27
42	Algeria	67.4	4,477.80
43	Mexico	67.3	9,243.03
44	Ireland	67.1	45,642.49
45	Romania	67.0	7,390.71
46	Canada	66.4	45,887.74
47	Netherlands	66.4	46,418.33
48	Maldives	65.9	4,478.09
50	Philippines	65.7	2,011.00
51	Australia	65.7	54,868.92
52	Morocco	65.6	2,868.15
53	Belarus	65.4	5,606.78
54	Malaysia	65.0	7,754.99
55	Slovenia	65.0	23,008.59
56	Syria	64.6	2,892.02
57	Estonia	63.8	14,416.52
58	Sri Lanka	63.7	2,364.62
59	Georgia	63.6	2,559.69
60	Paraguay	63.5	2,681.64
61	United States of America	63.5	47,131.95
62	Brazil	63.4	10,470.90
63	Poland	63.1	11,521.64
64	Venezuela	62.9	9,773.21
65	Bulgaria	62.5	5,954.72
66	Israel	62.4	27,085.13
67	Thailand	62.2	4,620.71

68	Egypt	62.0	2,771.41
69	Russia	61.2	10,521.79
70	Argentina	61.0	8,662.99
71	Greece	60.9	27,264.83
72	Brunei Darussalam	60.8	28,340.04
74	Tunisia	60.6	4,159.92
75	Djibouti	60.5	1,382.13
76	Armenia	60.4	2,676.52
77	Turkey	60.4	10,206.79
78	Iran	60.0	4,484.44
79	Kyrgyzstan	59.7	816.22
80	Laos	59.6	984.153
81	Namibia	59.3	5,454.39
82	Guyana	59.2	2,844.30
83	Uruguay	59.1	12,129.72
84	Azerbaijan	59.1	5,764.70
85	Viet Nam	59.0	1,155.57
86	Moldova	58.8	1,503.16
87	Ukraine	58.2	3,002.80
88	Belgium	58.1	42,596.55
89	Jamaica	58.0	5,055.00
90	Lebanon	57.9	10,019.03
91	Sao Tome and Principe	57.3	1,132.74
92	Kazakhstan	57.3	8,326.45
93	Nicaragua	57.1	1,096.13
94	South Korea	57.0	20,164.85
95	Gabon	56.4	8,395.30
96	Cyprus	56.3	27,721.84
97	Jordan	56.1	4,434.86
98	Bosnia and Herzegovina	55.9	4,157.51
99	Saudi Arabia	55.3	16,641.41
100	Eritrea	54.6	423.498
101	Swaziland	54.4	3,072.83
102	Côte d'Ivoire	54.3	1,016.26
104	Guatemala	54.0	2,839.03
105	Congo	54.0	3,074.99
106	Dem. Rep. Congo	51.6	188.869

107	Malawi	51.4	354.271
108	Kenya	51.4	887.923
109	Ghana	51.3	761.978
111	Tajikistan	51.3	732.137
112	Mozambique	51.2	473.098
113	Kuwait	51.1	32,530.48
114	Solomon Islands	51.1	1,269.19
115	South Africa	50.8	29,875.09
116	Gambia	50.3	605.872
117	Libyan Arab Jamahiriya	50.1	12,062.37
118	Honduras	49.9	2,014.70
119	Uganda	49.8	503.89
120	Madagascar	49.2	391.082
121	China	49.0	4,282.89
122	Qatar	48.9	74,422.60
123	India	48.3	1,176.06
124	Yemen	48.3	1,230.56
125	Pakistan	48.0	1,049.31
126	Tanzania	47.9	542.555
127	Zimbabwe	47.8	475.154
128	Burkina Faso	47.3	590.072
129	Sudan	47.1	1,642.75
130	Zambia	47.0	1,286.13
131	Oman	45.9	18,040.54
132	Guinea-Bissau	44.7	497.656
133	Cameroon	44.6	1,071.41
134	Indonesia	44.6	2,963.28
135	Rwanda	44.6	569.389
136	Guinea	44.4	420.52
137	Bolivia	44.3	1,839.75
138	Papua New Guinea	44.3	1,358.43
139	Bangladesh	44.0	640.847
140	Burundi	43.9	177.663
141	Ethiopia	43.1	364.872
142	Mongolia	42.8	2,111.26
143	Senegal	42.3	964.133
144	Uzbekistan	42.3	1,335.55

145	Bahrain	42.0	19,641.19
146	Equatorial Guinea	41.9	11,080.86
148	Cambodia	41.7	795.034
149	Botswana	41.3	6,795.93
150	Iraq	41.0	2,625.50
151	Chad	40.8	742.642
152	United Arab Emirates	40.7	47,406.66
153	Nigeria	40.2	1,324.34
154	Benin	39.6	673.439
155	Haiti	39.5	659.058
156	Mali	39.4	649.264
157	Turkmenistan	38.4	3,663.40
158	Niger	37.6	382.961
159	Togo	36.4	441.429
160	Angola	36.3	4,812.23
161	Mauritania	33.7	1,096.34
162	Central African Republic	33.3	468.846
163	Sierra Leone	32.1	324.996

Sources: EPI from Yale Center for Environmental Law & Policy, Columbia University's Center for International Earth Science Information Network, World Economic Forum, Joint Research Center (JRC); GDP per Capita from International Monetary Fund (IMF)

Nations for which both 2010 EPI and 2010 GDP per Capita information are available are included.

Table 4: Corruption Perception Index (2010), Environment Performance Index (2010)

With the exception of Singapore, Canada, and Australia, the nations with the highest CPI scores are European nations, and generally have EPI scores within the top third tier.

Rank	Nation	CPI in 2010	EPI in 2010
1	Denmark	9.3	69.2
1	New Zealand	9.3	73.4
1	Singapore	9.3	69.6
4	Finland	9.2	74.7
4	Sweden	9.2	86.0
6	Canada	8.9	66.4
7	Netherlands	8.8	66.4
8	Australia	8.7	65.7
8	Switzerland	8.7	89.1
10	Norway	8.6	81.1
11	Ireland	8	67.1
12	Austria	7.9	78.1
12	Germany	7.9	73.2
14	Japan	7.8	72.5
15	Qatar	7.7	48.9
16	United Kingdom	7.6	74.2
17	Chile	7.2	73.3
18	Belgium	7.1	58.1
18	United States of America	7.1	63.5
20	Uruguay	6.9	59.1
21	France	6.8	78.2
22	Estonia	6.5	63.8
23	Slovenia	6.4	65.0
24	Cyprus	6.3	56.3
24	United Arab Emirates	6.3	40.7
26	Israel	6.1	62.4
27	Portugal	6	73.0
27	Spain	6	70.6
29	Botswana	5.8	41.3
30	Bhutan	5.7	68.0
31	Brunei Darussalam	5.5	60.8

32	Mauritius	5.4	80.6
33	South Korea	5.4	57.0
34	Costa Rica	5.3	86.4
34	Oman	5.3	45.9
34	Poland	5.3	63.1
37	Dominican Republic	5.2	68.4
38	Lithuania	5	68.3
38	Luxembourg	5	67.8
40	Bahrain	4.9	42.0
41	Hungary	4.7	69.1
41	Iceland	4.7	93.5
41	Jordan	4.7	56.1
41	Saudi Arabia	4.7	55.3
45	Czech Republic	4.6	71.6
46	Kuwait	4.5	51.1
46	South Africa	4.5	50.8
48	Malaysia	4.4	65.0
48	Namibia	4.4	59.3
48	Turkey	4.4	60.4
51	Latvia	4.3	72.5
51	Slovakia	4.3	74.5
51	Tunisia	4.3	60.6
54	Croatia	4.1	68.7
54	Ghana	4.1	51.3
56	Rwanda	4	44.6
57	Italy	3.9	73.1
58	Georgia	3.8	63.6
59	Brazil	3.7	63.4
59	Cuba	3.7	78.1
59	Romania	3.7	67.0
62	Bulgaria	3.6	62.5
62	El Salvador	3.6	69.1
62	Panama	3.6	71.4
62	Trinidad and Tobago	3.6	54.2
66	China	3.5	49.0
66	Colombia	3.5	76.8
66	Greece	3.5	60.9

66	Peru	3.5	69.3
66	Serbia and Montenegro	3.5	69.4
66	Thailand	3.5	62.2
72	Malawi	3.4	51.4
72	Morocco	3.4	65.6
74	Albania	3.3	71.4
74	India	3.3	48.3
74	Jamaica	3.3	58.0
77	Bosnia and Herzegovina	3.2	55.9
77	Djibouti	3.2	60.5
77	Gambia	3.2	50.3
77	Guatemala	3.2	54.0
77	Sri Lanka	3.2	63.7
77	Swaziland	3.2	54.4
83	Burkina Faso	3.1	47.3
83	Egypt	3.1	62.0
83	Mexico	3.1	67.3
86	Sao Tome and Principe	3	57.3
86	Zambia	3	47.0
88	Algeria	2.9	67.4
88	Argentina	2.9	61.0
88	Kazakhstan	2.9	57.3
88	Moldova	2.9	58.8
88	Senegal	2.9	42.3
93	Benin	2.8	39.6
93	Bolivia	2.8	44.3
93	Gabon	2.8	56.4
93	Indonesia	2.8	44.6
93	Solomon Islands	2.8	51.1
98	Ethiopia	2.7	43.1
98	Guyana	2.7	59.2
98	Mali	2.7	39.4
98	Mongolia	2.7	42.8
98	Mozambique	2.7	51.2
98	Tanzania	2.7	47.9
98	Vietnam	2.7	59.0
105	Armenia	2.6	60.4

105	Eritrea	2.6	54.6
105	Madagascar	2.6	49.2
105	Niger	2.6	37.6
109	Belarus	2.5	65.4
109	Ecuador	2.5	69.3
109	Lebanon	2.5	57.9
109	Nicaragua	2.5	57.1
109	Syria	2.5	64.6
109	Uganda	2.5	49.8
115	Azerbaijan	2.4	59.1
115	Bangladesh	2.4	44.0
115	Honduras	2.4	49.9
115	Nigeria	2.4	40.2
115	Philippines	2.4	65.7
115	Sierra Leone	2.4	32.1
115	Togo	2.4	36.4
115	Ukraine	2.4	58.2
115	Zimbabwe	2.4	47.8
124	Maldives	2.3	65.9
124	Mauritania	2.3	33.7
124	Pakistan	2.3	48.0
127	Cameroon	2.2	44.6
127	Côte d'Ivoire	2.2	54.3
127	Haiti	2.2	39.5
127	Iran	2.2	60.0
127	Libyan Arab Jamahiriya	2.2	50.1
127	Nepal	2.2	68.2
127	Paraguay	2.2	63.5
127	Yemen	2.2	48.3
135	Cambodia	2.1	41.7
135	Central African Republic	2.1	33.3
135	Congo	2.1	54.0
135	Guinea-Bissau	2.1	44.7
135	Kenya	2.1	51.4
135	Laos	2.1	59.6
135	Papua New Guinea	2.1	44.3
135	Russia	2.1	61.2

135	Tajikistan	2.1	51.3
144	Dem. Rep. Congo	2	51.6
144	Guinea	2	44.4
144	Kyrgyzstan	2	59.7
144	Venezuela	2	62.9
148	Angola	1.9	36.3
148	Equatorial Guinea	1.9	41.9
150	Burundi	1.8	43.9
151	Chad	1.7	40.8
152	Sudan	1.6	47.1
152	Turkmenistan	1.6	38.4
152	Uzbekistan	1.6	42.3
155	Iraq	1.5	41.0
156	Myanmar	1.4	51.3

Sources: CPI from Transparency International, EPI from Yale Center for Environmental Law & Policy, Columbia University's Center for International Earth Science Information Network, World Economic Forum, Joint Research Center (JRC)

Nations for which both 2010 CPI and 2010 EPI information are available are included.

Footnotes

- ¹ Gilligan
- ² Stewart
- ³ “World Reacts to U.S. Credit Downgrade”
- ⁴ Fitzpatrick
- ⁵ Wenner
- ⁶ Ibeawuchi et al., page 225
- ⁷ “CPI 2010 in Detail”
- ⁸ ibid
- ⁹ ibid
- ¹⁰ ibid
- ¹¹ ibid
- ¹² ibid
- ¹³ ibid
- ¹⁴ ibid
- ¹⁵ ibid
- ¹⁶ ibid
- ¹⁷ ibid
- ¹⁸ Mauro
- ¹⁹ “Global Corruption Report: Climate Change.”
- ²⁰ Environmental Performance Index 2010
- ²¹ “Switzerland Tops 2008 Environmental Scorecard at World Economic Forum.”
- ²² Environmental Performance Index 2010
- ²³ ibid
- ²⁴ Makuni
- ²⁵ Rose-Ackerman
- ²⁶ “Oil and mining transparency: call for urgent UK Government action.”
- ²⁷ Ngabiiwe, Winnie and Joe Powell
- ²⁸ Ibeawuchi, et al., page 220
- ²⁹ Ibeawuchi, et al., page 228
- ³⁰ Ibeawuchi, et al., page 226
- ³¹ ibid
- ³² “Pollution”
- ³³ Venkataraman, page 93
- ³⁴ Reisinger
- ³⁵ Schlosser
- ³⁶ ibid
- ³⁷ ibid
- ³⁸ Yale Sustainability Food Project FAQ
- ³⁹ Hopkins
- ⁴⁰ “The Business of Sustainability: Findings and Insight from the First Annual Business of Sustainability Survey and the Global Leaders’ Research Project,” page 10
- ⁴¹ Beder
- ⁴² Agyeman et al., page 39
- ⁴³ Jochnick

- ⁴⁴ Yadong, page 751
- ⁴⁵ *ibid*
- ⁴⁶ The Sunlight Foundation
- ⁴⁷ Subsidyscope.org
- ⁴⁸ Carrns
- ⁴⁹ Bribespot
- ⁵⁰ Carrns
- ⁵¹ Mauro
- ⁵² EarthRights International
- ⁵³ Intercultural Youth Exchange (ICYE)
- ⁵⁴ Internet Society (ISOC)
- ⁵⁵ Beiman, "A Modest Proposal, Part I," page 10
- ⁵⁶ Pernick, Ron, Clint Wilder, Dexter Gauntlett and Trevor Winnie
- ⁵⁷ *ibid*
- ⁵⁸ Lacey, Steven
- ⁵⁹ *ibid*
- ⁶⁰ Beiman, "A Modest Proposal, Part I," page 13
- ⁶¹ Beiman, "A Modest Proposal, Part I," page 14
- ⁶² Beiman, "A Modest Proposal, Part II," page 27
- ⁶² "Switzerland Tops 2008 Environmental Scorecard at World Economic Forum"

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