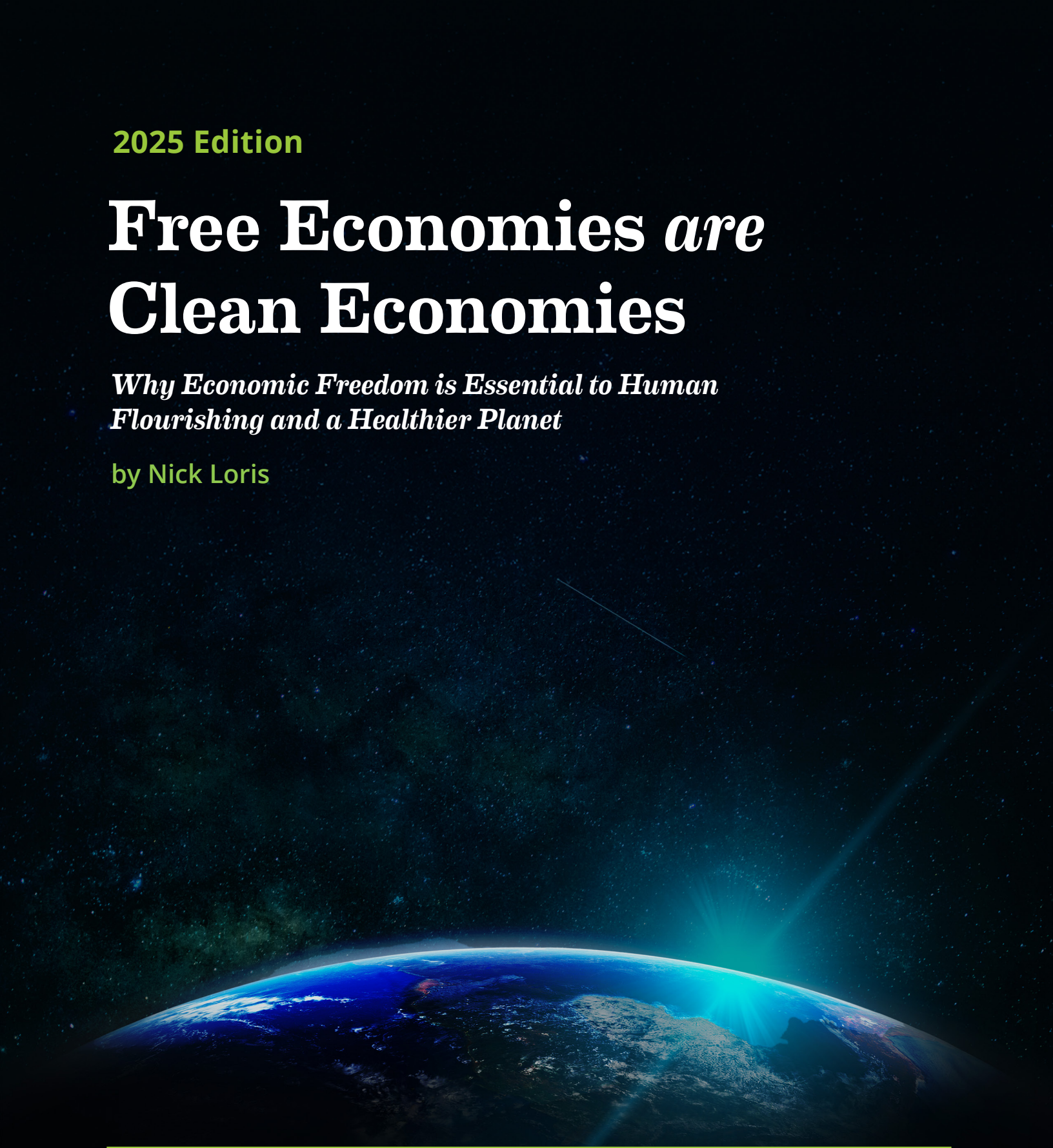
2025 Edition

Free Economies *are* Clean Economies

Why Economic Freedom is Essential to Human Flourishing and a Healthier Planet

by Nick Loris



CONSERVATIVE COALITION *for* CLIMATE SOLUTIONS

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AS GOES TEXAS, SO CAN THE WORLD

by Jodey Arrington

U.S. Representative for Texas' 19th Congressional District

The world needs more energy. Whether delivering electricity to a community in Africa for the first time or powering the data center revolution, energy access is essential for human flourishing. While many global politicians and business leaders talk about an energy transition, economic reality demonstrates that the world is headed for an energy expansion. We need energy of all kinds—above and below the ground.

As an energy powerhouse and home to some of the top innovative energy companies in the world, my home state of Texas has demonstrated how to produce affordable, reliable, and cleaner energy through market-based solutions. Following Texas's lead will require countries to embrace economic freedom in their policies.

Texas' 19th Congressional District, where I live and serve, covers a large section of western Texas. We call ourselves "the FOOD, FUEL, and FIBER Capital of the World!" and that word "fuel" covers all types of energy: oil and natural gas, but also wind, solar, nuclear, geothermal, and battery storage.

The energy boom in Texas is nothing short of remarkable. Since 2010, crude oil production has nearly quintupled, from 427,000 barrels of oil per day to more than 2 million barrels per day. Wind production has also increased nearly 200 percent over the last decade, and solar capacity has grown 6,900 percent over the same period. While their capacity factors are lower than those of conventional energy sources, the growth is impressive.

The Lone Star State ranks first in oil, natural gas, and wind production. We have the most refineries and produce more electricity than any other state. We're second in solar production, and our battery storage investment, which was virtually nonexistent in 2013, has grown to 3.42 gigawatts, also second in the country.

Newer, enhanced geothermal technologies are young in Texas but growing. Texas is home to 11 of the 27 geothermal startups in the country as of 2023. We've got significantly more potential thanks to our underground heat resources, and hard-earned expertise with drilling and fracking know-how.

Yes, Texas is a big state blessed with abundant natural resources and ideal conditions for renewable power. But these and other resources should ultimately thrive without government subsidies. Innovation, investment, and energy production thrive best in freer markets that encourage competition instead of having politicians pick winners and losers.

Our economy in Texas, for example, easily outshines that of other large states, such as California. This is evidenced by the massive migration of Americans from California to Texas. "When choosing where to move, Texas was the top destination for Californians," a Rice University report put it in 2023. "The Census Bureau indicates 102,442 people moved from California to Texas in 2022. No other state-to-state combo saw as much movement."

Californians come to Texas seeking freedom, especially freedom from the Golden State's harsh regulatory regime. They are drawn to Texas by "low taxes, cheap houses and a low-regulation lifestyle," as another Rice University report said.

Those same economic conditions are also crucial for businesses to grow and thrive. Like Texas, our country and the world need more pro-growth, pro-energy, and pro-innovation policies to help us build faster and cleaner.

The report you are about to read is based on a very important insight: it is possible to compare economies and determine which economic policies work and which do not. That is true on a state scale and a global scale.

Ask yourself: Would you rather have the U.S. economy or one like China, Russia, Mexico, or Haiti? Would you rather have the environmental quality of Switzerland or Venezuela?

Then ask: Why? What is it about the American and Swiss systems that fosters healthy economies and environments?

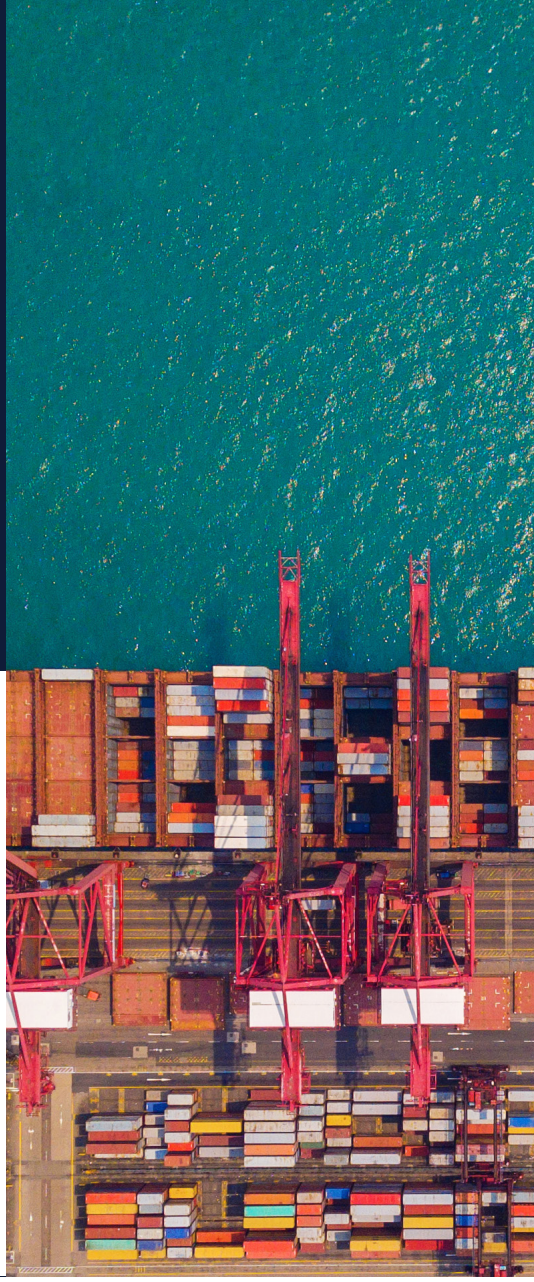
This report provides an answer: economic freedom. As this report will show, free economies are clean economies. Free economies produce the energy people need and deliver the clean environment that people demand.

In fact, generally, the more prosperous a society is, the cleaner its environment becomes. Prosperous economies have less pollution, and impoverished countries don't have the resources to invest in innovative technologies like small modular nuclear reactors. Freedom, economic success, and cleanliness go together. Therefore, we need to export pro-growth policies.

The U.S. is leading the race in supporting economic freedom, but some states are far ahead of others. Texas's success is in stark contrast to California's failures, and we can all see the results. Economic freedom produces economic prosperity. We need more of it everywhere, and the following report explains why.

Free economies produce the energy people need and deliver the clean environment that people demand.

Free Economies are Clean Economies



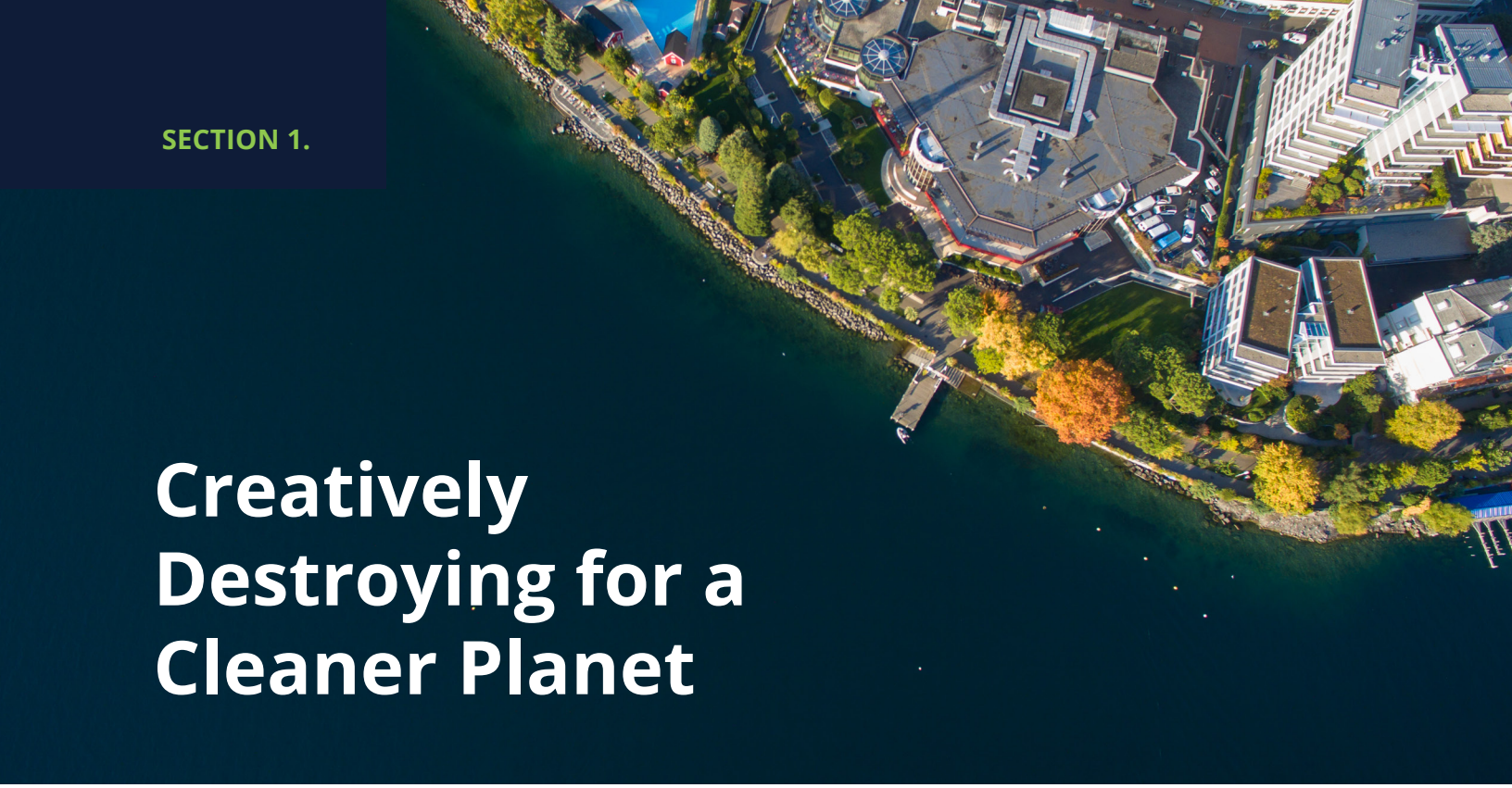
The market gives people what the people want instead of what other people think they ought to want. At the bottom of many criticisms of the market economy is really lack of belief in freedom itself.

Milton Friedman, *The Wall Street Journal*, May 18, 1961

The word "abundance" is having a moment right now. In recent years, books, podcasts, and organizations have embraced an abundance movement to improve the planet and the lives of its inhabitants. Across the ideological spectrum, people working in the private sector, government, academia, and journalism are convening to understand that we can get more: more affordable energy, food, and housing, more resilient and reliable infrastructure, and more innovation that spurs technological advancements for the betterment of society and a healthier, safer environment.

Critically, abundance is not synonymous with excess. It's about access. An abundance agenda seeks to understand and answer the policy questions about how to get more of these necessities faster and to the people who need it most. Policies embedded in economic freedom provide a policy foundation.

SECTION 1.



Creatively Destroying for a Cleaner Planet

I first began driving in 2000. As a directionally challenged adolescent, any drive not to a friend's house or McDonald's required directions. Hour-long trips to soccer games with somewhat familiar highways and far less familiar backroads were challenging. I had printed maps in the back pockets of the front seat, but my real saving grace was MapQuest.

MapQuest launched on the Internet in 1996 as a free online mapping tool. You could enter your destination, and MapQuest would give you turn-by-turn directions with how long you'd be on each road. A printed-out copy was my co-pilot on countless drives.

A quarter century later, MapQuest is a relic of the past—a "Remember when we printed out directions, rolled up our car windows, and played CDs—hoping they wouldn't skip because they were scratched?" With several apps to choose from, including navigation embedded in the vehicle, technological advancements have made navigation a near-thoughtless endeavor.

The progression from maps to MapQuest, and then to apps and voice navigation, is one of the countless ways technology and innovation improve our lives and make the planet a little cleaner. More precise navigation saves people time and money, and for those who hate getting lost, personal frustration. They can help drivers avoid tolls or find a more scenic route and have also positively impacted the environment. The fastest route saves gas and emissions from burning fuel and can optimize delivery routes for trucks and shipping services. Navigating away from traffic congestion helps to reduce the pollution from idled cars. Even showing directions by foot or bike incentivizes people to choose a greener mode of transportation.

Innovation is often beneficial for families, businesses, and the environment. When entrepreneurs have the freedom to experiment and profit from better solutions, they invent new technologies or find efficient processes that provide value to consumers and grow the economy. It is the evolution of capitalist progress

that Joseph Schumpeter described as "the perennial gale of creative destruction."[1]

Consumers are motivated by many factors, but most of them like saving money. The services and products that keep more money in families' bank accounts and enrich their lives are the ones that will drive environmental progress. Other consumers are willing to pay for environmental performance and can drive green premiums down to make those technologies economically advantageous.

Importantly, nearly everything we make and do has environmental impacts. Moving from MapQuest to Waze saves paper, gasoline consumption, and reduces congestion and pollution. However, the production of the app and materials used to manufacture devices like the iPhone still require energy. Some studies have shown that because digital navigation has made driving more convenient, people drive more. Further, the use of navigation apps can increase noise pollution in residential areas, as they reroute drivers away from congested highways.

This isn't a call to abandon modern conveniences or avoid innovation that has environmental effects. Rather, it highlights the economic and environmental tradeoffs policymakers must consider when shaping environmental policy. Further, curtailing economic freedom in the name of environmental protection often backfires, leaving both people and the planet worse off. In other instances, harnessing market forces with minimal government intervention often leads to the most cost-effective pollution reductions. Strengthening property rights, leveraging market forces, and unleashing human creativity are the most effective ways to enhance human and environmental well-being.

Curtailing economic freedom in the name of environmental protection often backfires, leaving both people and the planet worse off.

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Every day, people innovate to make the world a better place. The path to a cleaner, healthier planet isn't through less economic freedom – it's through more of it, properly structured. When people are free to innovate, create wealth, and demand better environmental quality, they tend to get all three. That's not just theory – it's the story of human progress over the past century, and it's our best hope for tackling environmental challenges in the century to come.

SECTION 2.

Economic Freedom and Environmental Performance

The Washington D.C.-based Heritage Foundation has published an Index of Economic Freedom for three decades. The Index measures economic freedom by scoring each country in the following categories.

1. **Rule of law:** property rights, judicial effectiveness, and government integrity;
2. **Government size:** fiscal health, government spending and tax burden;
3. **Regulatory efficiency:** business freedom, labor freedom, and monetary freedom; and
4. **Open markets:** trade freedom, investment freedom, and financial freedom.

Heritage compiles publicly available data from sources such as the African Development Bank, the Asian Development Bank, the European Commission, the Economist Intelligence Unit, the International Monetary Fund, the World Bank, various U.S. government agencies, Oxford University's World Economic Outlook, and the World Economic Forum.[2]

Countries earn aggregate scores and fall into one of five categories: Free, Mostly Free, Moderately Free, Mostly Unfree, and Repressed. In the 2024 Index, only four countries (Singapore, Switzerland, Ireland, and Taiwan) received the most elite designation of "Free" nations, while 22 others, including the United States, fall into the "Mostly Free" category. Another 55 countries are "Moderately Free," while 62 are "Mostly Unfree." 33 "Repressed" countries comprise the bottom quintile, with Venezuela, Cuba, and North Korea in the last three spots.

The principles that make a country economically free are also critical to a cleaner environment.

The principles that make a country economically free are also critical to a cleaner environment. One of the most comprehensive measurements of a country's environmental performance is Yale University's Environmental Performance Index (EPI). Produced every other year, the EPI similarly scores a country on a 0-100 scale and includes 180 countries in its 2024 report.[3]

The EPI gives a country a score based on 58 environmental indicators broken down into eleven issue categories. The report's technical appendix details how the authors weigh each of the eleven issue categories and how the authors weigh each of the environmental indicators.[4]

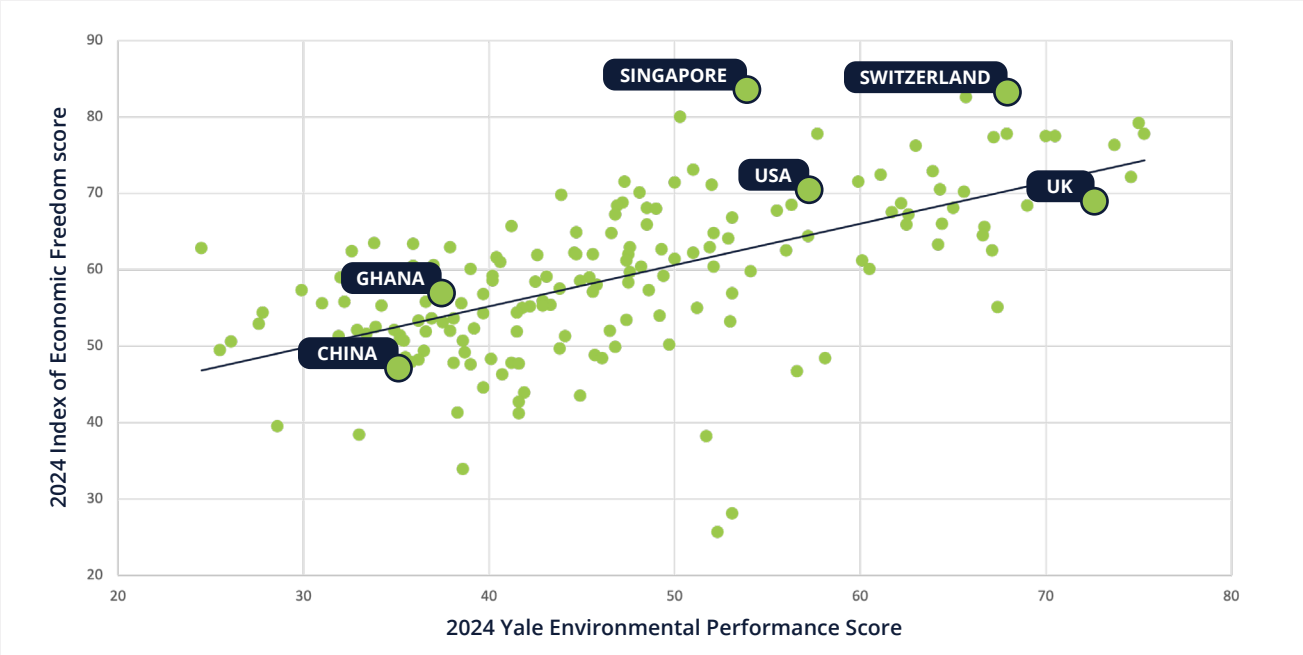
The 58 indicators fall into three broader categories consisting of:

1. **Climate change:** climate change mitigation
2. **Environmental health:** air quality, sanitation & drinking water, heavy metals, and waste management;
3. **Ecosystem vitality:** biodiversity & habitat, ecosystem services, fisheries, water resources, acid rain, and agriculture.

Figure 1.

Economic Freedom and Environmental Quality: A Strong Correlation

Countries with greater economic freedom tend to have stronger environmental protections, cleaner air and water, and better resource management, driven by higher wealth and market incentives.



Source: Yale University and The Heritage Foundation

Correlating the Index of Economic Freedom and the Environmental Performance Index reveals a strong, positive relationship between economically free economies and clean economies.

Free economies are clean economies for many reasons. Well-defined and legally protected property rights incentivize environmental stewardship. Amazing things happen when people have the freedom to own property, start businesses, and trade freely. They innovate. They create. They find better ways to solve problems. Economic freedom gives people more choices about their lives, from their careers to their living situations to their children's education. They demand cleaner air, cleaner water, and environmental stewardship. And crucially, with higher levels of wealth because of economic freedom, they have the means to make it happen.

SECTION 3.

More Economic Prosperity and Greater Knowledge Leads to Healthier Environments

Families have basic needs that must be met. They must put food on the table and keep the house warm in the winter. Many people have the good fortune to take food, shelter, water, clothing, and energy for granted, but the number of people worldwide without these necessities remains undesirably high.

Until those needs are met, the environment is far less of a priority. B. Kelsey Jack, associate professor at UC Berkeley, said, "In many instances, the immediate need to put food on the table outweighs all the benefits an individual could get from efforts to reduce pollution. This is because these benefits are usually delayed and shared by others – the environment is a public good. It is also, importantly, because the benefits of higher consumption are large and immediate when you have next to nothing."[5]

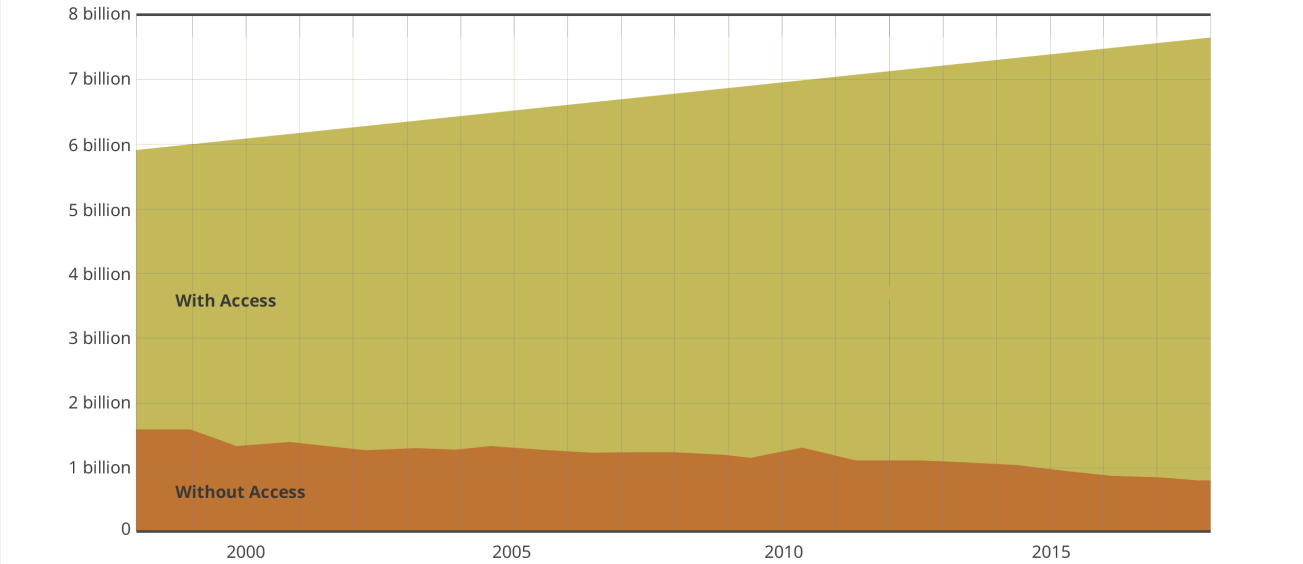
Many people have the good fortune to take food, shelter, water, clothing, and energy for granted, but the number of people worldwide without these necessities remains undesirably high.

In some parts of the world, those needs are met with low-cost, highly polluting fuel sources. The lack of reliable power results in families relying on charcoal, dung, and coal to meet heating and cooking needs, resulting in hazardous indoor air pollution and, consequently, a higher mortality rate. Other families face difficult tradeoffs. Higher energy bills mean fewer resources are available for food, clothes, and healthcare.

Figure 2.

Global Energy Access and Cleaner Fuel Adoption

As economies grow, electricity access expands while reliance on solid fuels declines, reducing indoor air pollution and improving public health, especially in developing nations.

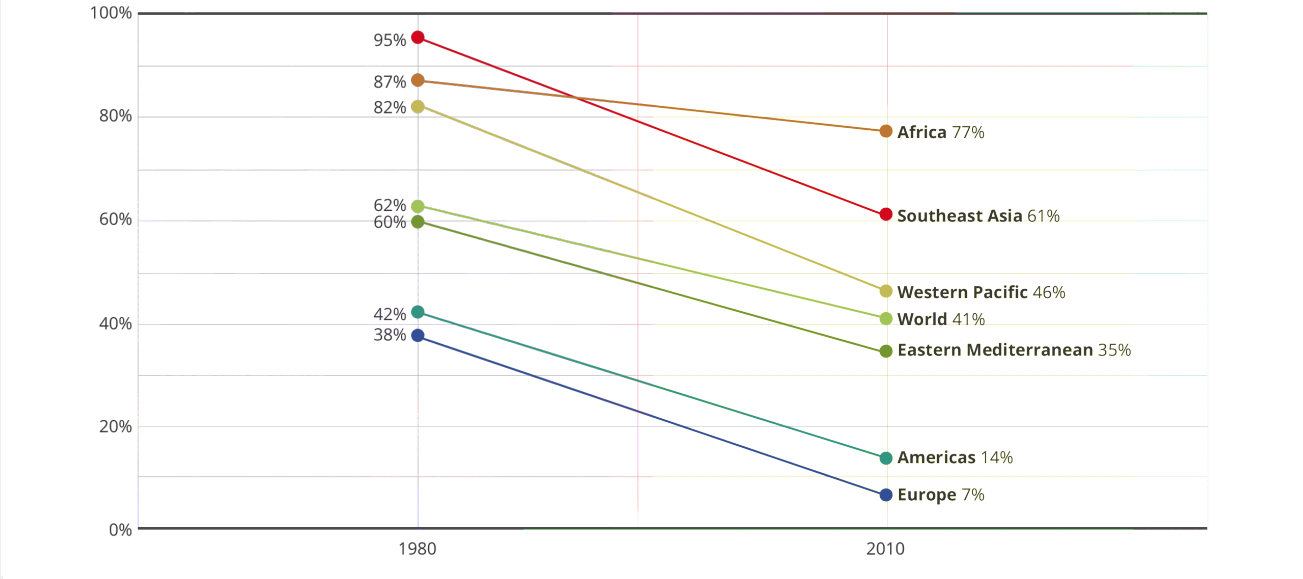


Source: Our World in Data

Figure 3.

Global Shift Away from Solid Fuels for Cooking (1980–2010)

The percentage of populations relying on solid fuels, such as wood and charcoal, has declined significantly across all regions, with an expecially pronounced decline in populous Southeast Asia.



Source: Our World in Data

Encouragingly, the number of households with access to electricity is rising, and the number of people relying on solid fuels for cooking is falling.[6] Greater levels of wealth and prosperity will further improve those stats, and greater levels of economic freedom will help achieve greater standards of living across the globe.

Economic freedom helps people achieve higher levels of wealth and prosperity faster, which, in turn, spurs more attention and dedication to environmental protection.

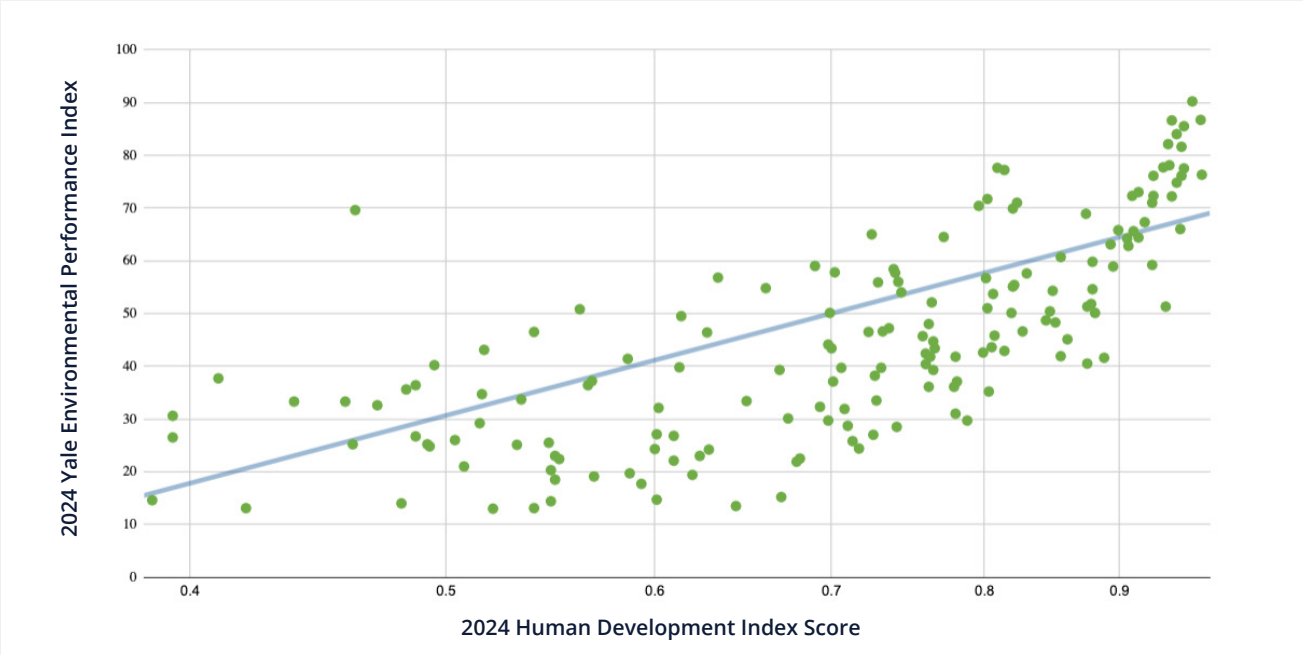
In fact, one primary reason economic freedom has a positive correlation with other important human and societal quality metrics is that economically free countries have higher levels of economic growth and more investment. Economic freedom helps people achieve higher levels of wealth and prosperity faster, which, in turn, spurs more attention and dedication to environmental protection.[7]

When higher-priority needs are met, there is a stronger demand from a country's citizens to tackle pollution – and the available resources to make it happen. Through policies and the accumulation of knowledge, the public and private sectors reduce unwanted environmental byproducts. However, countries at every income

Figure 4.

How Wealth and Development Improve Environmental Health

Countries with higher Human Development Index (HDI) scores have cleaner environments, better sanitation, and stronger public health systems, supported by economic growth.



Source: Yale University and United Nations Development Programme

level have different environmental scores, meaning some wealthy countries have better environmental outcomes than others. Therefore, human development, freedom to innovate, government integrity, and public policy play important roles. When countries are freer and wealthier, businesses have more resources to fund new technologies and cutting-edge research and to invest more in people through education and scientific institutions.

The United Nations Human Development Index (HDI) provides a composite score for each country based on a person's ability to live a long and healthy life, enjoy a good standard of living, and be knowledgeable. Economically free countries, on average, have much greater HDI scores than economically repressed countries. Further, there is a strong, positive correlation between HDI scores and environmental performance.

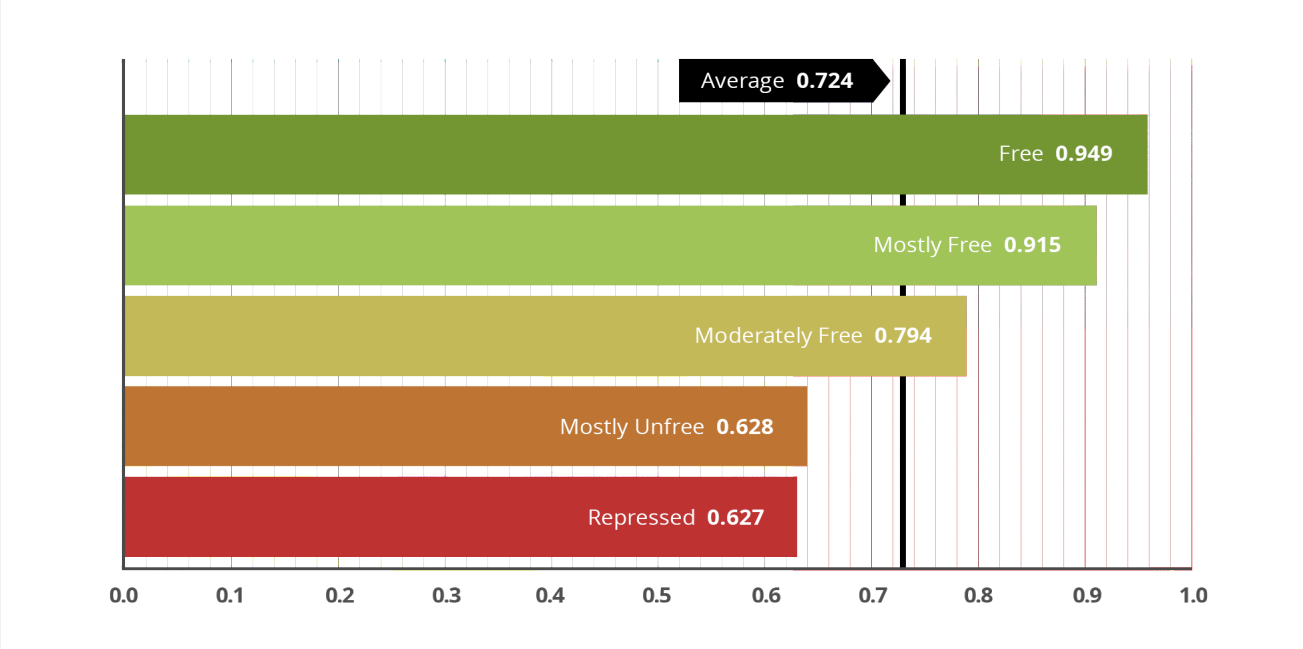
The Environmental Kuznets Curve (EKC) is a visual depiction of wealth's positive impact on the environment.[8] The EKC is an inverted-U relationship between pollution and economic development, where growth from industrialization initially results in higher levels of pollution. Over time, however, people spend their incomes cleaning up the environment and can more easily afford the compliance costs of environmental policies.

A similar curve, the environmental transition curve, emphasizes the role of innovation and technology in bending pollution curves backward.[9] In effect, technological progress more quickly offsets the higher emissions from economic growth, resulting in cleaner, stronger economies. These investments will help turn green premiums into economic advantages and help developing countries bend pollution curves back

Figure 5.

Higher Economic Freedom Leads to Longer, Healthier Lives

Freer markets drive innovation, job creation, and investment in healthcare and education, leading to longer life expectancy and greater overall prosperity.



Source: United Nations Development Programme and The Heritage Foundation

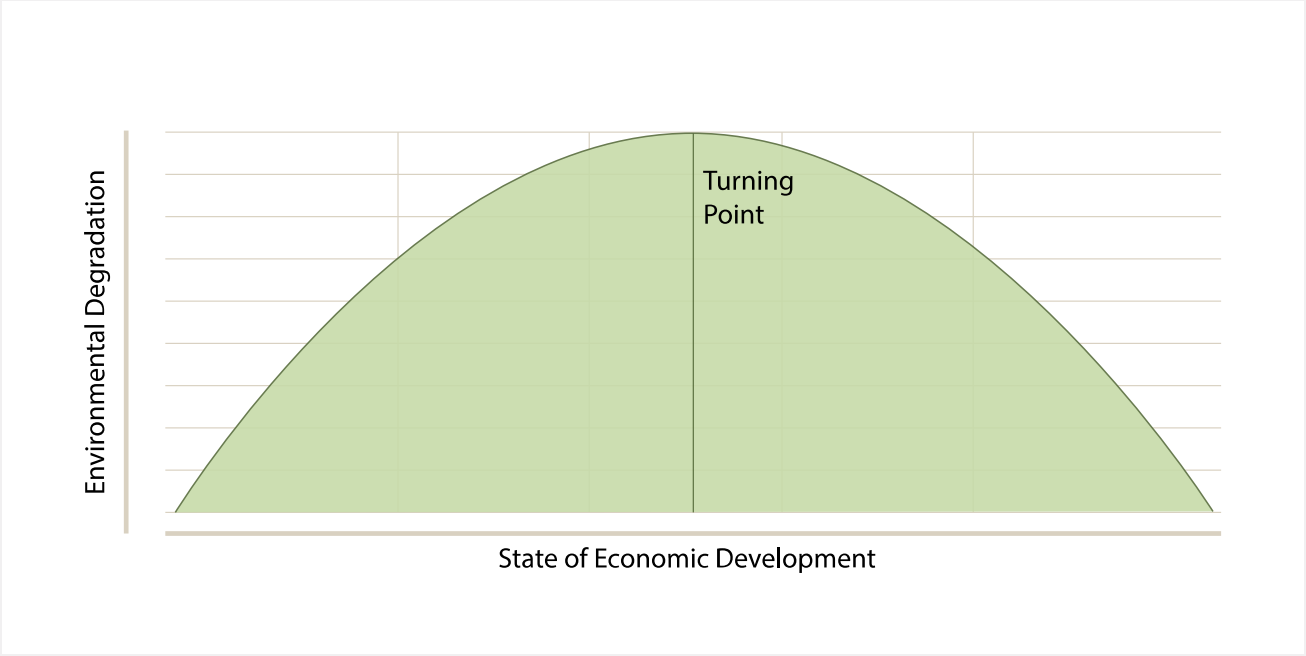
faster than it historically took more developed countries. Technological progress creates opportunities for low or even negative abatement costs for emissions.

Peer-reviewed literature has demonstrated the EKC exists for several ecological variables such as waste, waste emissions, sulfur dioxide, and suspended particulate matter.[10] Other literature has found insufficient evidence of an EKC.[11] The moment when the inverted U in the Kuznets curve starts bending downward depends on many factors and does not uniformly apply to all emissions or all countries.

Figure 6.

The Environmental Kuznets Curve: Wealth's Role in Pollution Reduction

Pollution rises in early industrialization but declines as wealth enables investment in cleaner technologies, stricter regulations, and public demand for environmental quality.



Source: The Property Environment and Research Center

SECTION 4.

Innovating and Adapting to a Cleaner Planet

Innovation triggers images of groundbreaking, transformational inventions. The Internet and online access, smartphones, CRISPR, and, most recently, artificial intelligence all come to mind. However, innovations, large and small, make the world a better, cleaner place. Hotels have found efficient ways to recycle water, reducing usage and cost.[12] Light-emitting diodes (LEDs) use 90 percent less energy and last 25 times longer than their incandescent counterparts.[13]

The availability of Wi-Fi, smartphones, and AI has spawned countless innovations that improved economic well-being and solved environmental challenges. AI has helped optimize building energy use based on weather, people in the building, and time of day.[14] At Princeton's Plasma Physics Laboratory, scientists and researchers are using AI to help with the viability of fusion power – a potentially massive innovation for nuclear energy.[15] Whether it is a digital sprinkler system controlled via an app[16] or advanced geothermal energy using hydraulic fracturing methods to unlock clean, dependable anywhere, innovation begets more innovation.

In comparing the Index of Economic Freedom with the World Intellectual Property Organization (WIPO)'s Global Innovation Index (GII),[17] one finds a strong, positive correlation (0.757). Furthermore, we find that a country's GII score has a strong, positive relationship with Yale's Environmental Performance Index (0.741).

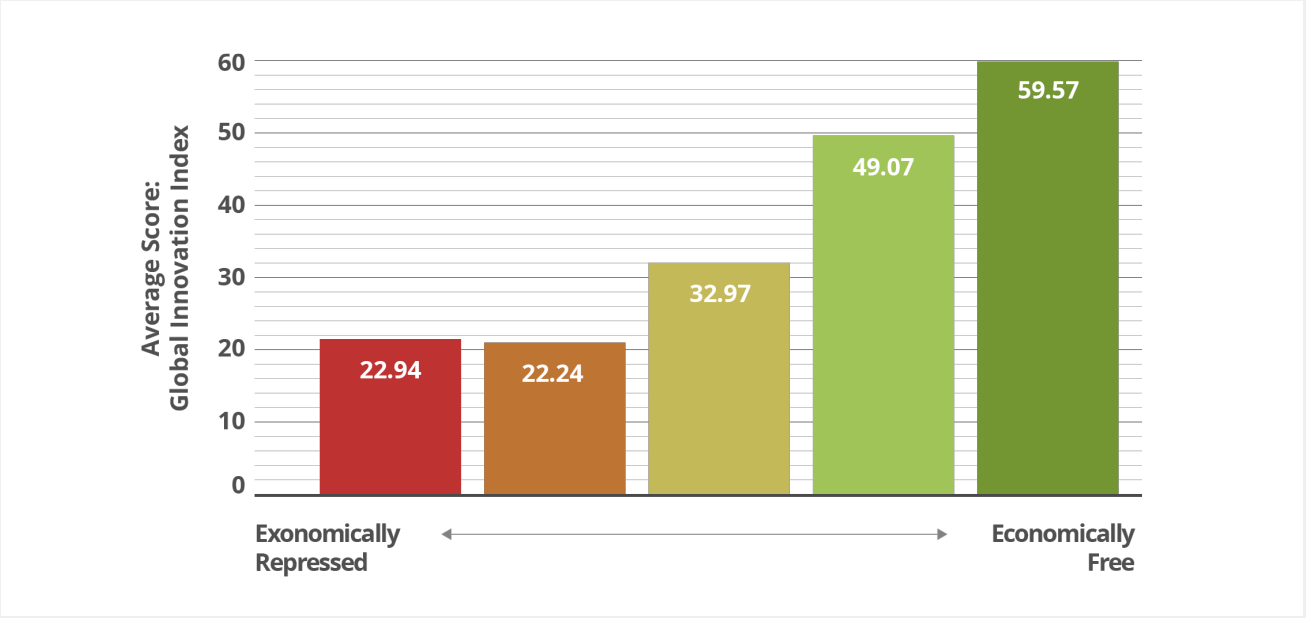
Economically free countries empower innovators to thrive. Business freedom, property rights, government integrity, and economic freedom broadly drive innovation, research and development, and technological breakthroughs. Innovation leads to cleaner energy sources, more efficient transportation modes, and more cost-effective emissions reductions.[18] These benefits, in turn, lead to higher economic growth and fewer pollution-related deaths.

On the other hand, restricting free-flowing commerce, however, drives up the cost to enter the market, shrinks competition, and entrenches leading businesses. Cronyism and preferential treatment between agencies

Figure 7.

Innovation as a Driver of Environmental Success

Nations with strong innovation policies achieve better environmental outcomes by developing cleaner energy, reducing emissions, and improving efficiency.



Source: The Heritage Foundation and World Intellectual Property Organization

Figure 8.

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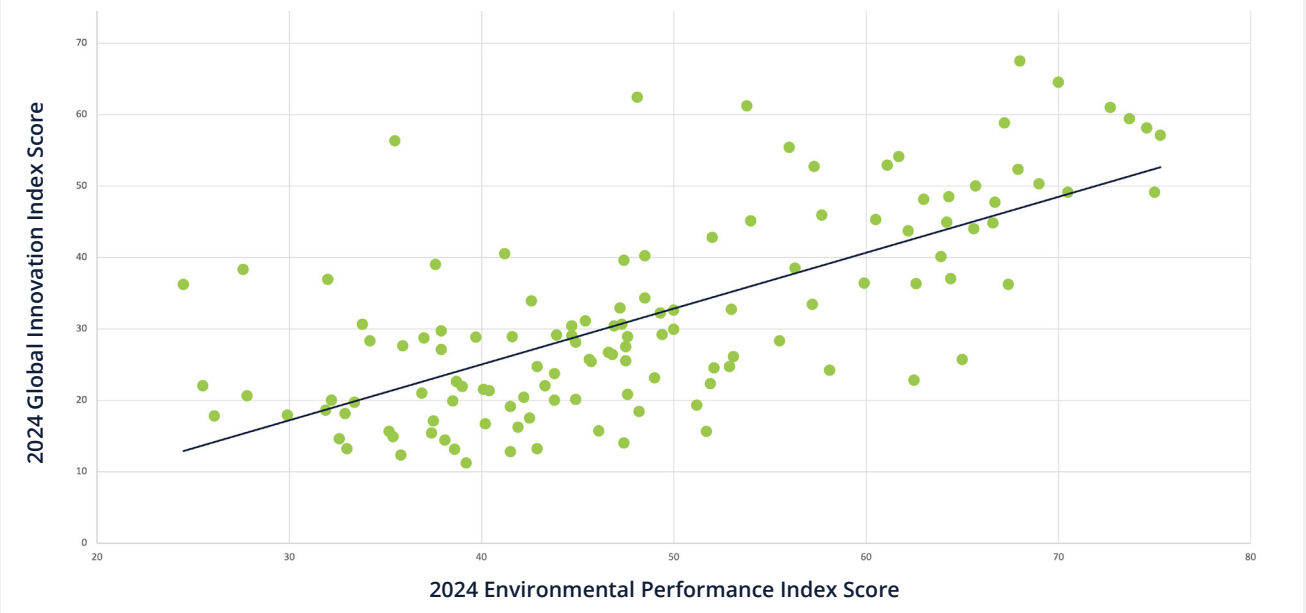


Source: Yale University and The Heritage Foundation

and private contractors or poor oversight of spending can lead to fraud, mismanagement, and abuse. This not only stalls innovation progress but also erodes public confidence in institutions and increases the cost of economic activity. There is also evidence that too much government spending and industrial policy can crowd out private investments, where companies redirect resources away from green innovation.[19]

Because free economies are wealthier, more innovative and have access to advanced technologies that enable people to better adapt to climate change. Having the economic means to construct stronger levees, sea walls, and more resilient infrastructure has helped save lives and protect communities. Advanced technologies such as early detection systems, visualization tools, up-to-date flood maps, computer modeling, satellites, and radar are several tools that scientists employ to track weather and storms. Researchers are developing crops that better withstand heatwaves and droughts.[20]

Open markets expand access to these products. Home builders in the U.S. can install more weather-resilient glass made by a French company with higher-performance concrete from Mexico.[21] Price signals and accurate risk assessment can help societies adapt to everything from food production to flood insurance.[22] The absence or distortions of those markets where prices do not reflect the true risk can weaken resiliency efforts.[23]

One way of measuring a country's resiliency is the Notre Dame Global Adaptation Initiative's Country Index. The index "uses 20 years of data across 45 indicators to rank over 180 countries annually based on their level of vulnerability, and their readiness to successfully implement adaptation solutions."[24] Unsurprisingly, there is also a strong, positive correlation between those countries that are most economically free and those countries that are the most resilient.[25]

Figure 9.

Economic Freedom Enhances Climate Resilience

Wealthier, freer economies are more resilient to climate challenges, investing in disaster preparedness, advanced infrastructure, and adaptive technologies.

Source: Notre Dame and The Heritage Foundation

SECTION 5.

Free Economies Provide Clean Air and Water

Air pollution is one of the highest causes of premature death in the world. The World Health Organization estimates that ambient air pollution and household air pollution cause 6.7 million premature deaths annually.[26] More than 2 billion people live in water-stressed countries where the demand for clean water outpaces supply because supplies or infrastructure are insufficient. [27]

Further, relying on dirty, contaminated water leads to outbreaks of many waterborne diseases, causing death or serious harm. Collecting safe drinking water is also a significant opportunity cost, as women and children can spend hours daily on trips back and forth. That is time that could be spent on education, leisure, or work elsewhere.

The Environmental Kuznets Curve of backward bending pollution curves applies to indoor and outdoor air pollution. When per capita GDP increases, death rates from outdoor pollution increase before falling dramatically.[28] Wealthier people living in more prosperous countries have much lower death rates from indoor air pollution.[29] Richer countries have more funds to invest in public services such as sanitation, garbage collection, and pollution abatement – all of which help improve air and water quality.

The principles of economic freedom and the application of markets play a significant role in reducing pollution and gaining access to clean water. Property rights incentivize stewardship because property owners benefit economically and environmentally from taking care of their assets and value. The application and legal protection of property rights help address pollution. For instance, a factory cannot dump waste into a stream when it adversely affects landowners living downstream. They must address the pollution, ensuring the water remains unpolluted.

In both developed countries and emerging economies, allocating and protecting property rights can help citizens attain clean water access. Establishing clearer water rights in drought-ridden areas can prevent overuse and encourage conservation.[30]

Figure 10.

Cleaner Air in Freer Economies

Wealth and market-driven innovations help economically free nations achieve lower air pollution, cleaner energy production, and more effective emissions controls.

Source: Yale University and The Heritage Foundation

Figure 11.

How Economic Freedom Expands Access to Clean Water

Stronger economies develop better water infrastructure, ensuring cleaner, more reliable drinking water while fostering innovation in sanitation and conservation.

Source: Yale University and The Heritage Foundation

Several smaller companies have implemented property rights, technology, and price signals to bring clean drinking water to rural communities in Africa. Water4 is an organization that installs water pumps in rural areas of Ghana, Sierra Leone, Uganda, and Zambia.[31] The company offers training the community to operate, maintain, and fix the pumping technology and charges a small fee for the clean water. This provides a revenue source and ensures that the community has ownership of the water infrastructure, which incentivizes upkeep and repairs. With more than 17,000 projects, Water4 has established market-based, privately run utilities that not only provide clean water access but also spur economic growth in the community.[32]

A similar company operating in Tanzania, Kenya, and The Gambia is eWATER services. Writing about the company his book *Time to Think Small*,[33] environmental analyst Todd Myers describes how private ownership, and relatively simple technologies, provide clean water access. People in these communities can buy credits (for $10 per year) and use a fob to gain access to operating solar-powered water pumps. Cloud technology records transactions to ensure proper payment, and eWATER services use the proceeds for infrastructure maintenance and improvement.[34] Sensors and remote software detect any problems with water flow or other operational problems. Critically, the technology works well in areas with very low data connectivity.[35] As shown on its real-time dashboard, the company has served more than 260,000 people and dispersed more than 375 million gallons of clean water.[36]

Market-driven solutions like Water4 and eWATER Services use private ownership and technology to expand clean water access in rural Africa, ensuring sustainability and economic growth.

In both developed countries and emerging economies, allocating and protecting property rights can help citizens attain clean water access. Establishing clearer water rights in drought-ridden areas can prevent overuse and encourage conservation

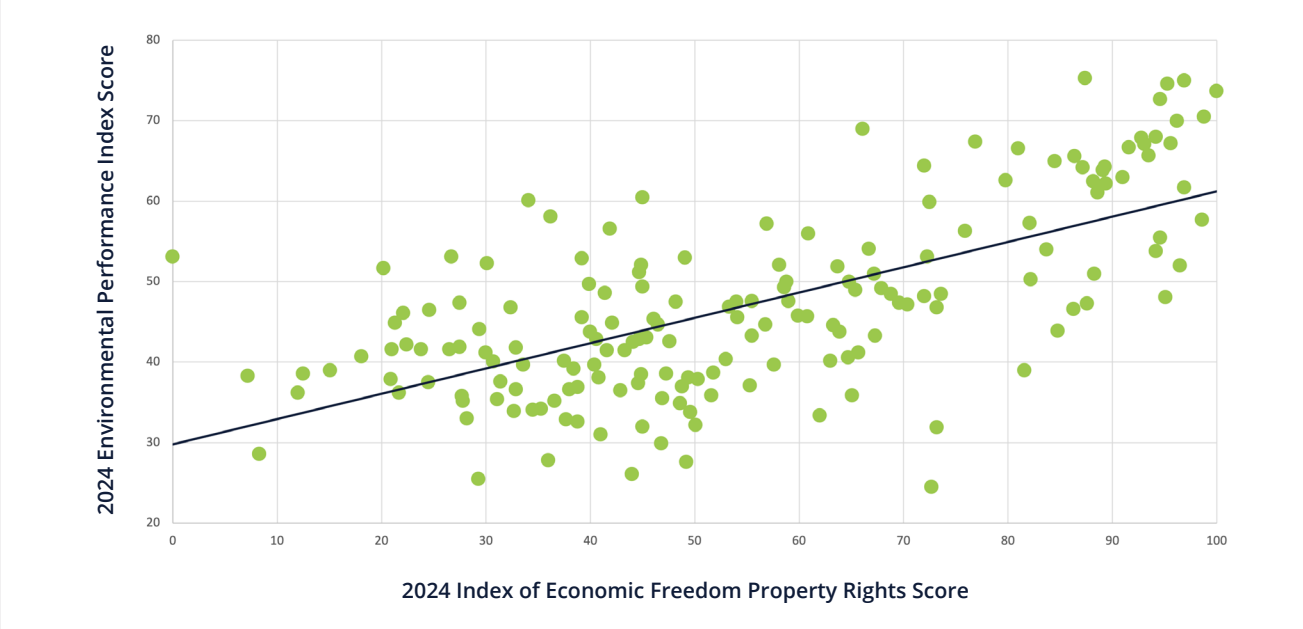
Property rights and markets work to solve environmental challenges in other ways, too. Emissions trading programs for air emissions and water discharges create property rights through tradeable permits. Rather than a top-down, command-and-control approach that imposes stringent regulations on industry, cap-and-trade programs can set emissions limits that are adequate to protect human health. The limit is divided into allowances for each affected industry to create a flexible, transparent market to buy and sell them. Companies that reduce their pollution more cheaply can sell excess permits to harder-to-abate sectors, with the price driven by the supply and demand of available allowances in the marketplace.

Creating a market incentivizes innovative solutions, reduces a firm's cost to meet emissions limits, and lowers the overall cost of reducing pollution. Though estimates of the savings vary, analysis of the U.S. acid rain cap-and-trade program found significant cost savings compared to a standard regulatory approach.[37]

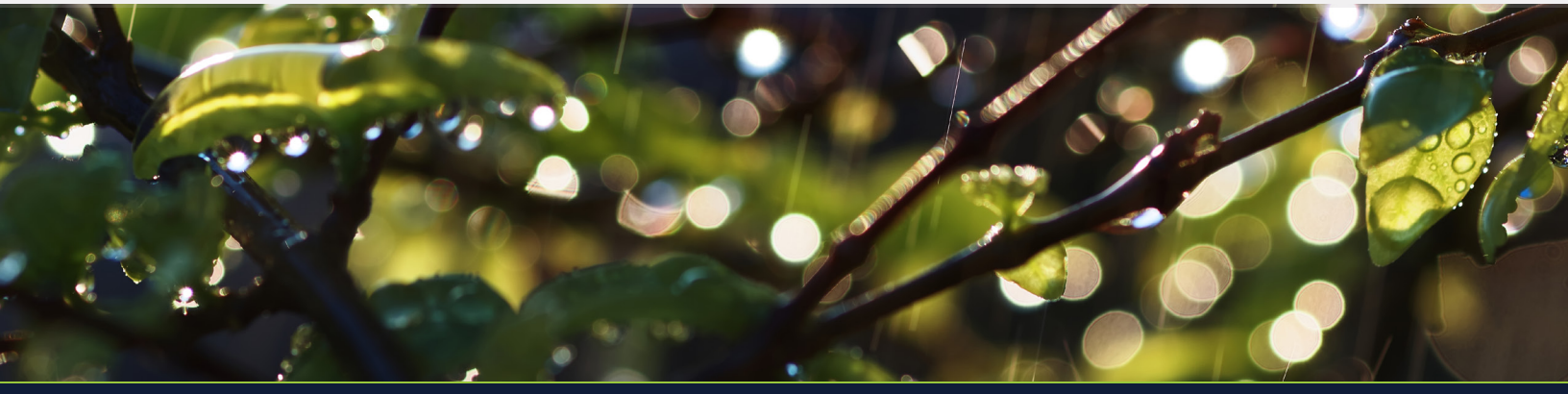
Figure 12.

Strong Property Rights Lead to Better Environmental Outcomes

Secure property rights encourage responsible resource management, reducing deforestation, preventing pollution, and promoting long-term environmental stewardship.



Source: Yale University and The Heritage Foundation



SECTION 6.

Sending Economic Growth and Emissions in Opposite Directions

Climate policy has been largely driven by two overarching narratives: decoupling vs degrowth. The degrowth mentality is that people consume too much, and restricting economic activity is a necessary means to combat climate change. Degrowth policies will trap people in poverty, restrict access to energy, and purposely constrain levels of prosperity and human well-being. That is not a viable option. It is also not a politically salient or durable strategy. It is worth remembering political scientist Roger Pielke Jr.'s iron law of climate policy: *when policies focused on economic growth confront policies focused on emissions reductions, it is economic growth that will win out every time.*[38]

The viable path forward is to decouple economic growth from emissions. Decoupling economic growth from emissions has occurred in many developed countries, and it can happen faster in developing countries as the cost of low—and zero-emission technologies declines. Green growth "win-win" scenarios will increase prosperity and economic growth while reducing emissions. The priority for policymakers, then, is to implement policies and reforms that will benefit the economy and the environment.

The effectiveness of economic freedom on climate mitigation and adaptation will depend on which policy lever increases or decreases economic freedom lawmakers use. More efficient tax policy or improving permitting processes could increase economic freedom, improving technological innovation and, therefore, increasing economic and environmental efficiencies, resulting in zero or negative emissions abatement costs.

On the other hand, regulations or taxpayer spending on deploying clean energy technologies could reduce emissions and economic freedom. As a matter of public policy, it is necessary to understand the trade-offs involved and properly consider the costs and benefits.

Several studies have examined the causal effects of economic freedom on CO2 emissions and environmental degradation using CO2 as a proxy, and the results have been mixed. Like other byproducts of industrial

activity, it stands to reason that if higher economic freedom results in higher economic growth, it will also lead to higher levels of greenhouse gas emissions.

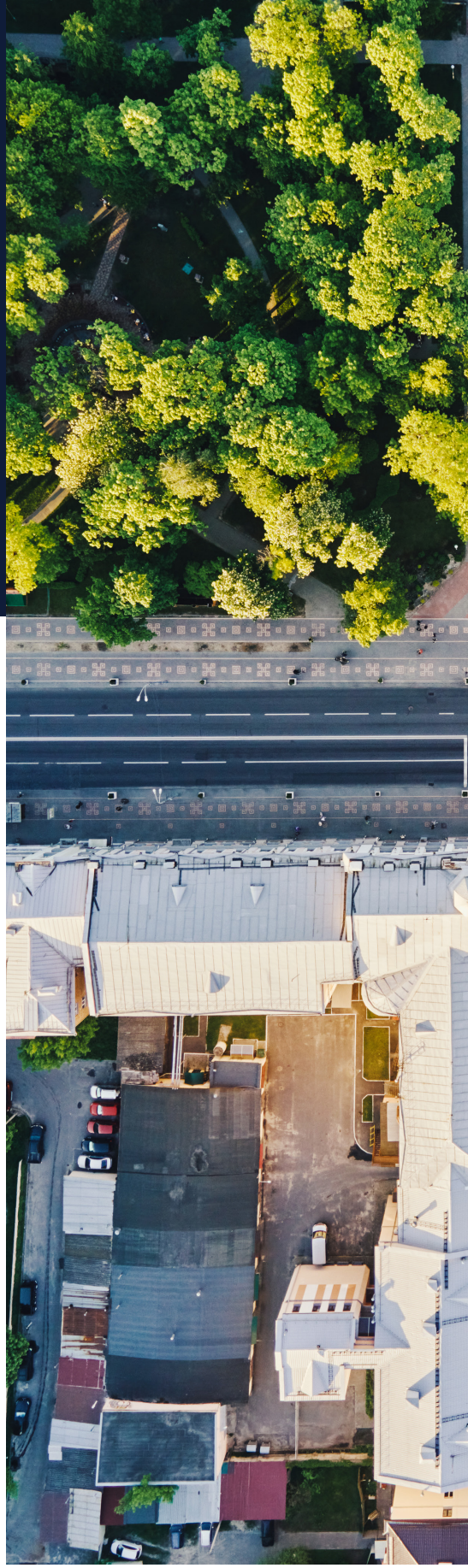
While it stands to reason that emissions increase as a country uses more energy and grows, it is also important to consider if the Environmental Kuznets Curve exists for CO2 emissions. If so, free market policies can help decouple and drive down emissions. A 2020 *Research of Industrial Economies* paper found encouraging results. The paper combines emissions growth, GDP per capita, and rankings on the Fraser Institute's Economic Freedom of the World Index to find that "available data from 155 countries observed in five-year periods between 1975 and 2015 indicate that economic freedom not only reduces overall CO2 emissions but also shifts the top point of the EKC to the left. As such, the evidence suggests that the transition to lower emissions technology appears at an earlier stage in economically free societies."[39]

If cleaner technologies, processes, and products are more cost-effective, developing countries will be incentivized to pursue those technologies as opposed to their higher-emitting counterparts. To the extent mature, clean energy sources (as well as all energy technologies) are unsubsidized, they will likely have a greater chance of long-term economic success because there will be more transparency regarding the price at which these technologies are competitive in the market.

Düsseldorf, a key economic hub near Germany's Ruhr region, exemplifies how market-driven innovation and economic freedom can lead to industrial transformation without sacrificing growth. Once reliant on heavy industry, the region has embraced clean energy, technology, and service-based sectors—proving that economic expansion and environmental progress can go hand in hand.

CONCLUSION

Toward a Freer, Cleaner Planet



The ability of individuals to make their own choices and operate in free societies has demonstrated significant benefits for human flourishing and environmental progress. Greater innovation and entrepreneurship create a dynamic environment where new solutions to problems can emerge organically. The private sector is best positioned to raise prosperity levels and lower pollution levels. Markets harness opportunities for voluntary exchange and align positive incentives that help people and the planet prosper.

Environmental challenges range in complexity, from addressing emissions at a factory to global climate change. Policymakers must look to the fundamentals of economic freedom (private property rights, strong institutions, regulatory efficiency, and open markets) to advance practical and effective solutions.

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