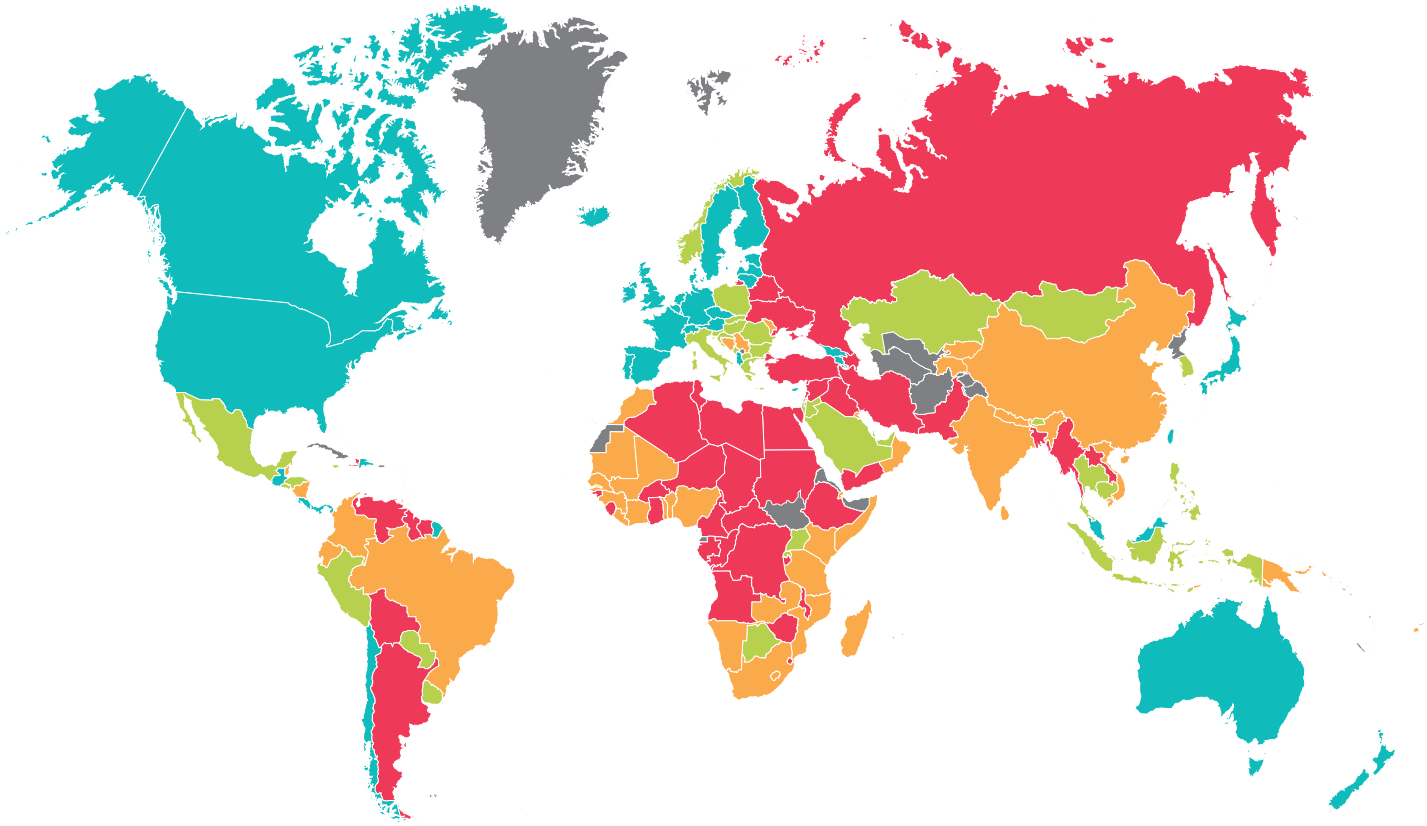
James Gwartney, Robert Lawson, Ryan Murphy, and Matthew D. Mitchell

FRASER INSTITUTE

Economic Freedom of the World

2026

ANNUAL REPORT



MOST FREE · 2ND QUARTILE · 3RD QUARTILE · LEAST FREE

Economic Freedom of the World
2026 Annual Report

James Gwartney[†]
Florida State University

Robert Lawson
Southern Methodist University

Ryan Murphy
Southern Methodist University

Matthew D. Mitchell
Fraser Institute

with

Vincent Geloso
George Mason University

Signè DeWind
Universidad Francisco Marroquín

FRASER INSTITUTE

2026

[†]James Gwartney was the lead author of the index for nearly three decades and was instrumental in establishing its methodology. He passed away on January 7, 2024.

Copyright © 2026 by the Fraser Institute. All rights reserved. No part of this book may be reproduced in any manner whatsoever without written permission except in the case of brief quotations embodied in critical articles and reviews.

The authors of this book have worked independently and opinions expressed by them are, therefore, their own and do not necessarily reflect the opinions of the supporters, directors, or staff of the Fraser Institute. This publication in no way implies that the Fraser Institute, its directors, or staff are in favor of, or oppose the passage of, any bill; or that they support or oppose any particular political party or candidate.

Published in cooperation with the Economic Freedom Network.

Printed and bound in Canada.

Data available to researchers The full data set, including all of the data published in this report as well as data omitted because of limited space, can be downloaded for free at <www.fraserinstitute.org/economic-freedom/dataset>. The data file available there contains the most up-to-date and accurate data for the *Economic Freedom of the World* index. Some variable names and data sources have evolved over the years since the first publication in 1996; users should consult earlier editions of *Economic Freedom of the World* for details about sources and descriptions for those years. All editions of the report are available in PDF and can be downloaded for free from <https://www.fraserinstitute.org/studies/economic-freedom>. However, users are always strongly encouraged to use the data from this most recent data file as updates and corrections, even to earlier years' data, do occur. Users doing long-term or longitudinal studies are encouraged to use the EFW Panel Dataset as it is the most consistent through time.

Technical help If you have difficulty downloading the data, please contact Matthew Mitchell via e-mail to <freetheworld@fraserinstitute.org>. If you have technical questions about the data itself, please contact Ryan Murphy <rhmurphy@smu.edu> or Robert Lawson <rlawson@smu.edu>.

Citing the data Please cite the data in your bibliography as: James Gwartney, Robert Lawson, Ryan Murphy, and Matthew Mitchell (2026). Economic Freedom Dataset, published in *Economic Freedom of the World: 2026 Annual Report*. Fraser Institute. <www.fraserinstitute.org/economic-freedom/dataset>.

Citing this publication James Gwartney, Robert Lawson, Ryan Murphy, and Matthew Mitchell (2026). *Economic Freedom of the World: 2026 Annual Report*. Fraser Institute.

Published work using ratings from *Economic Freedom of the World.* A list of published papers that have used the economic-freedom ratings from *Economic Freedom of the World* is available on line at <https://efotw.org/economic-freedom/citations>. In most cases, a brief abstract of the article is provided. If you know of other papers current or forthcoming that should be included on this page, or have further information about any of these papers or authors, please write to <freetheworld@fraserinstitute.org>.

Cataloguing Information

Gwartney, James D. / Economic freedom of the world … annual report / James D. Gwartney. Annual. Description based on: 1997

2026 issue by James Gwartney, Robert Lawson, Ryan Murphy, and Matthew D. Mitchell; with Vincent Geloso and Signè DeWind.

Issued also online as a PDF.

ISSN 1482-471X; 978-0-88975-823.7 (2026 edition); 978-0-88975-924-4 (2026 US edition); 978-88975-925-1 (PDF).

1. Economic history--1990- --Periodicals. 2. Economic indicators--Periodicals.
I. Fraser Institute (Vancouver, B.C.) II. Title

Table of Contents

Executive Summary **1**

Chapter 1
Economic Freedom of the World in 2024 **3**
Robert Lawson, Ryan Murphy, and Matthew D. Mitchell

Chapter 2
Economic Freedom as Environmental Regulation by Markets **37**
Vincent Geloso

Chapter 3
Commemorating Dr. James Gwartney:
A Dedicated Scholar, Freedom Fighter, and Genuinely Kind Individual **65**
Signè DeWind

Appendix
Explanatory Notes and Data Sources **87**

Acknowledgments **103**

About the Authors **104**

About the Contributors **106**

The Economic Freedom Network **107**

Executive Summary

The index published in *Economic Freedom of the World* (EFW) measures economic freedom in up to 165 jurisdictions as far back as 1970. Economic freedoms are a subset of human freedoms and concern economic activity such as working, transacting, contracting, and owning and using productive property.

Individuals are more economically free when they are allowed to make more of their own economic choices, with others imposing fewer and less severe constraints on those choices. They must, however, respect the rights of others.

The index measures economic freedom using 46 components and subcomponents grouped into five areas: [1] Size of Government, [2] Legal System and Property Rights, [3] Sound Money, [4] Freedom to Trade Internationally, and [5] Regulation. Each component and subcomponent is placed on a scale from zero to 10, reflecting the distribution of the underlying data.

Despite a precipitous decline in economic freedom since 2018, Hong Kong remained the world's most economically free jurisdiction in 2024 (the latest year for which we have data). It was followed by Switzerland (2nd), Singapore (3rd), New Zealand (4th), and the United States (5th).

Canada has now slipped from 9th to 18th, just ahead of Germany at 19th. The United Kingdom is 10th, Japan is 13th, France is 39th, Italy is 47th, South Korea is 53rd, Indonesia is 72nd, Mexico is 77th, Brazil is 85th, India is 88th, China is 110th, and Russia is 143rd.

Global economic freedom fell following the pandemic as policymakers imposed new regulations, raised barriers to trade, expanded the size of government, and then printed money to pay for spending. While governments have begun to reverse these policies, economic freedom in the average country has not yet returned to pre-pandemic levels.

A preliminary estimate of US economic freedom in the first year of the Trump Administration finds increases in the size of government, weaker protection of property rights and the rule of law, and significant restrictions on trade freedom caused a 0.12-point decline in US economic freedom in 2025.

Comparing the economically freest 25 percent of countries with the least free, we find:

- Average incomes are 6.9 times greater;
- The bottom 10 percent of incomes are 7.1 times greater;
- People live 14 years longer;
- People work six fewer hours each week;
- Far fewer children die in infancy;
- People are more satisfied with their lives;
- Governments are less corrupt; and
- Environments are cleaner.

This year's report includes a guest chapter by George Mason University Professor of Economics Vincent Geloso, examining the ways in which economic freedom can improve the natural environment. It also includes a tribute by Dr. Signè DeWind to the late James Gwartney, the lead author of the Economic Freedom of the World for nearly three decades.

The complete EFW dataset can be downloaded at https://www.freetheworld.com/ or by scanning the following QR code:

CHAPTER 1

Economic Freedom of the World in 2024

Robert Lawson, Ryan Murphy, and Matthew D. Mitchell

The index published in the *Economic Freedom of the World 2026 Annual Report* (EFW index) measures economic freedom in up to 165 jurisdictions as far back as 1970. Economic freedoms are a subset of human freedoms and concern economic activity such as working, transacting, contracting, and owning and using productive property.[1] Though it is possible to define economic freedom in absolute terms, it is more useful to think of it as a spectrum. Individuals are more economically free when they are allowed to make more of their own economic choices, with others imposing fewer and less-severe constraints on these choices. Their choices, however, must respect the rights of others.

Like human freedom more broadly, economic freedom is based on the concept of self-ownership. If individuals own themselves then they have a right to choose how to use their time, talents, and resources to shape their own lives. And if all individuals own themselves, then no one has a right to the time, talents, and resources of anyone else. Threats to economic freedom may arise from the government or from individuals using fraud or force to limit the economic choices of others.

The EFW index is designed to measure the degree to which the institutions and policies of countries permit people to make their own economic choices. To achieve a high EFW rating, a country's government must do some things but refrain from others. Governments can protect economic freedom with laws that safeguard voluntary exchange and defend individuals and their property from aggressors who might use fraud or force in economic activity. To this end, the legal system is a particularly important guarantor of economic freedom. In more economically free places, legal institutions protect all people and their property from the aggression of others and enforce contracts in an even-handed manner. These governments also permit people to access sound money and do not expropriate property through unexpected inflation or deflation. In economically free places, governments do not impose high taxes, barriers to trade, or excessive regulations that restrict personal choice, interfere with voluntary exchange, or limit entry into markets.

1 *The Human Freedom Index* (Vásquez, Mitchell, Murphy, and Schneider, 2025) co-published by the Fraser Institute and the Cato Institute measures human freedom more broadly by adding indicators of personal freedom to the EFW index's measure of economic freedom. A new edition will be published at the end of this year.

The EFW index might be thought of as an effort to identify how closely the institutions and policies of a country correspond with the classical liberal ideal of a limited government, where the government protects people and property rights from aggressors but otherwise allows them to make their own economic choices.

Before discussing the structure of the index, it may be useful to say a few words about what the EFW index is *not*. First, the only outcome that the EFW index measures is economic freedom. It does not attempt to measure the standard of living, the extent of corruption, the protection of personal freedoms such as speech, or any other indicator of well-being. These factors are important for human flourishing. And researchers using the index have found that economic freedom does correlate with many of them. But the index is not itself a measure of these things. Nor should it be. Since the EFW index is used to see if economic freedom relates to these markers of well-being, it would be tautological to include them in the index itself.

Second, the EFW index should not be taken as a *net* measure of good policy. It does not weigh the costs of infringements on economic freedom against the hoped-for benefits of these infringements. A tax or a regulation may well produce some good outcome. It might address a negative environmental externality, fund a valuable public good, or correct some social injustice. But we make no effort to account for these potential benefits. Instead, we offer the index as a measure of one side of the ledger, believing that this is the first step toward such a full net accounting. We leave it to other scholars to take the next step and assess whether these infringements on economic freedom are in some sense worth it.

Finally, the EFW index should be seen as a measure of "what is" rather than as a judgment about "what ought to be." We the authors, like most social scientists, do have our own opinions about economic freedom (on the margin, we would prefer to see most countries become more economically free). But that should not keep skeptics of economic freedom from using the index to study their own hypotheses. Indeed, in recent years, it has become more common for these skeptics to employ the index in their own studies and we welcome this development.

The Economic Freedom of the World index—an overview

The EFW index measures the degree to which a jurisdiction's institutions and policies permit people to make their own economic choices. It is an outgrowth of a series of six conferences hosted by Milton and Rose Friedman and Michael Walker from 1986 to 1994, which resulted in three books (Walker, 1988; Easton and Walker, 1992; Block, 1993) documenting the discussion and various prototype indices that culminated with the initial publication, *Economic Freedom of the World: 1975–1995* (Gwartney, Lawson, and Block, 1996). In addition to

the Friedmans, several of the world's leading economists, including Douglass North, Gary Becker, Peter Bauer, William Niskanen, and Gordon Tullock, participated in the discussions leading to the EFW index. The index is published by a network of organizations spearheaded by the Fraser Institute in Canada. Members of the network and other interested parties meet regularly to review the structure of the index and consider ideas for its improvement.

Most of the data in the EFW index are drawn from external sources such as the International Monetary Fund, the World Bank, or the Economist Intelligence Unit. To obtain consistent measures across all 165 countries, we rarely use data provided directly from a source within a country. The index includes both objective data components as well as survey data components. And scores are never altered based on the subjective opinions of the authors or others in the Economic Freedom Network. The authors strive for transparency throughout. The report provides information about the data sources, the methodology used to transform raw data into the ratings of the components and subcomponents and how these ratings are used to construct both the area and overall EFW ratings. Methodological details can be found in the appendix: Explanatory Notes and Data Sources of this report (pp. 87–102). The index is freely available at <www.fraserinstitute.org/economic-freedom/dataset>.

The current edition of the EFW index rates up to 165 jurisdictions from 1970 through 2024. Data are available in five-year increments from 1970 through 2000 and then annually through 2024. Starting this year, we are offering a preview of economic freedom in the US through 2025 (see pages 22–24).

Structure of the EFW index

Table 1.1 describes the structure of the EFW index. Five major areas comprise the index: [1] Size of Government, [2] Legal System and Property Rights, [3] Sound Money, [4] Freedom to Trade Internationally, and [5] Regulation.

Each of the five areas is constructed from several components, and many of these are constructed from subcomponents and underlying variables. In total, the index incorporates 46 distinct components and subcomponents.[2] Each component and subcomponent is placed on a scale from zero to 10, reflecting the distribution of the underlying data, usually with a reference to the minimum and maximum values in year 1990. This means that a 10 out of 10 on any one component does not necessarily mean "the most economic freedom possible"

2 Sometimes we use multiple data sources for a single indicator or sub-indicator. We do this when one data source is discontinued and replaced by a different source or when there is more than one source for the same concept, and we think it prudent to average multiple sources. This means that in total, there are 74 separate underlying data sources for the EFW.

Table 1.1. Economic Freedom of the World Index

1. Size of Government

A. Government consumption
- i. Government consumption without interest payments
- ii. Government consumption with interest payments

B. Transfers and subsidies

C. Government investment

D. Top marginal tax rate
- i. Top marginal income tax rate and the threshold at which it applies
- ii. Top marginal income and payroll tax rate and the threshold at which it applies

E. State ownership of assets

2. Legal System and Property Rights*

A. Judicial independence

B. Impartial courts

C. Property rights

D. Military interference

E. Integrity of the legal system

F. Contracts

G. Real property

H. Police and crime

* Area 2 ratings calculated both with and without adjustments for inequalities in the legal treatment of women using a Gender Disparity Index produced by Rosemarie Fike. The adjusted Area 2 rating is used to compute the summary rating.

3. Sound Money

A. Money growth

B. Standard deviation of inflation

C. Inflation in the most recent year

D. Foreign currency bank accounts

4. Freedom to Trade Internationally

A. Tariffs
- i. Trade tax revenue
- ii. Mean tariff rate
- iii. Standard deviation of tariff rates

B. Regulatory trade barriers
- i. Non-tariff trade barriers
- ii. Costs of importing and exporting

C. Black market exchange rates

D. Controls on the movement of people and capital
- i. Financial openness
- ii. Capital controls
- iii. Freedom of foreigners to visit
- iv. Protection of foreign assets

5. Regulation

A. Credit market regulation
- i. Ownership of banks
- ii. Private sector credit
- iii. Interest rate controls/negative interest rates

B. Labor market regulation
- i. Labor regulations and minimum wage
- ii. Hiring and firing regulations
- iii. Flexible wage determination
- iv. Hours regulation
- v. Costs of worker dismissal
- vi. Conscription
- vii. Foreign labor

C. Business regulation
- i. Regulatory burden
- ii. Bureaucracy costs
- iii. Impartial public administration
- iv. Tax compliance

D. Freedom to compete
- i. Market openness
- ii. Business permits
- iii. Distortion of business environment

but rather "the most economic freedom relative to other countries." When there are subcomponents, they are averaged to derive the component rating. The component ratings within each area are then averaged to derive ratings for each of the five areas. And the five area ratings are averaged to derive the overall EFW rating for each country.

Area 1. Size of Government measures the effect of government expenditures and tax rates on economic freedom. Taken together, the five components of Area 1 measure the degree to which a country's fiscal policies limit the scope of individual economic choice. Since almost all government spending is financed through either current taxation, future taxation, or inflation, almost all government spending necessarily expropriates money from citizens, limiting their economic choices. Countries whose governments spend less on government consumption, interest payments, transfers and subsidies, and government investment, and those with lower marginal tax rates and less state ownership of assets earn the highest ratings in this area.

Area 2. Legal System and Property Rights measures the degree to which each jurisdiction's legal system protects economic freedom. When a person and his or her rightfully acquired property are not secure, others (both private individuals and the state) may limit his or her economic choices. The key ingredients of a legal system consistent with economic freedom are rule of law, security of property rights, an independent and unbiased judiciary, and impartial and effective enforcement of the law. The eight components of Area 2 are indicators of how effectively these protective functions of government are performed. The rating for Area 2 is adjusted based on a gender-disparity index that reflects cross-country differences in legal rights based on gender.

Area 3. Sound Money measures the degree to which a jurisdiction's monetary policies permit economic freedom. Money is involved in nearly every transaction in an economy so unexpected changes in its value have a profound effect on peoples' ability to make their own economic choices. If a government's monetary authority creates significant unexpected inflation, it makes money less valuable, expropriating property from savers. Conversely, if the government creates significant unexpected deflation, it makes money more valuable and expropriates property from borrowers. High and volatile inflation or deflation therefore interfere with individuals' ability to make their own economic choices. The four components of this area measure the extent to which people have access to sound money—i.e., currencies that maintain their value over time. To earn a high rating in Area 3, a country must permit its citizens to access a currency with low (and stable) rates of inflation and avoid regulations that limit the ability to use alternative currencies.

Area 4. Freedom to Trade Internationally measures the degree to which governments limit their citizen's ability to exchange with people from other countries. The components in Area 4 measure a wide variety of trade restrictions: tariffs, quotas, hidden administrative restraints, controls on exchange rates, and limits on the movement of people and capital. To get a high rating in this area, a country must have low and uniform tariffs, easy clearance and efficient administration of customs, a freely convertible currency, and few controls on the movement of physical and human capital.

Area 5. Regulation measures the extent to which regulations that restrict entry into markets and interfere with the freedom to voluntarily exchange reduce economic freedom. The components of Area 5 focus on regulatory restraints that limit the freedom of exchange in credit, labor, and product markets.

Construction of area and summary ratings

Theory provides us with some direction about elements that should be included in the five areas and the summary index, but it does not indicate what weights should be attached to the components within the areas or among the areas in the construction of the overall index. It would be convenient if these factors were independent, and a weight could be attached to each of them. In the past, we investigated several methods of weighting the various components, including principal component analysis and a survey of economists. We have also invited others to use their own weighting structure if they believe that it is preferable. Our experience indicates that the overall index is not very sensitive to alternative weighting methods.

Furthermore, there is reason to believe the areas (and components) are dependent on one another, working together like the wheels, motor, transmission, drive shaft, and frame of a car.[3] Just as these interconnected parts allow an automobile to move forward, it seems that a combination of interrelated factors allow people to benefit from economic freedom. Which is more important for the mobility of an automobile: the motor, wheels, or transmission? The question cannot be easily answered because the parts work together. If any of these key parts break down, the car is immobile. Institutional quality may be much the same. If any of the key parts are absent, the overall effectiveness may be undermined.

As a result of these two considerations, we organize the elements of the index in a manner that seems sensible, but we make no attempt to weight the components in any special way when deriving either area or overall ratings. Of course, the component and subcomponent

3 See, for example, Bolen and Sobel (2020).

data are available to researchers who would like to consider alternative weighting schemes, and we encourage them to do so.

Overall economic freedom ratings in 2024

Figures 1.1a and 1.1b (pp. 10–11) present the overall economic freedom ratings, sorted from highest to lowest, for the 165 jurisdictions in this year's report. These ratings are for 2024, the most recent year for which reasonably comprehensive data are available (but see pages 22–24 on more recent US data). The 10 highest scoring nations are Hong Kong (1st), Switzerland (2nd), Singapore (3rd), New Zealand (4th), the United States (5th), Ireland (6th), Denmark (7th), Australia (8th), Mauritius (9th), and Finland, the Netherlands, and the United Kingdom (tied for 10th).

Canada has now slipped from 9th to 18th, just ahead of Germany at 19th. The United Kingdom is 10th, Japan is 13th, France is 39th, Italy is 47th, South Korea is 53rd, Indonesia is 72nd, Mexico is 77th, Brazil is 85th, India is 88th, China is 110th, and Russia is 143rd. The 10 lowest-rated countries are: the Democratic Republic of Congo, Egypt, Malawi, Algeria, Iran, Myanmar, Libya, Sudan, Zimbabwe, and Venezuela in last place.

Ratings and rankings in 2024 for the five areas of the index

Table 1.2 (pp. 12-16) presents the ratings (and rankings) for each of the five areas of the index. Several interesting patterns emerge from an analysis of these data. High-income industrial economies generally rank quite high for Legal System and Property Rights (Area 2), Sound Money (Area 3), and Freedom to Trade Internationally (Area 4). Their ratings are lower, however, for Size of Government (Area 1) and Regulation (Area 5). This is particularly true for the high-income countries of Western Europe.

On the other hand, many developing nations have a small fiscal size of government but rate low in other areas, and as a result, have a low overall rating. The lesson from this is clear: a small fiscal size of government is insufficient to ensure prosperity. The other areas of economic freedom—the rule of law and property rights, sound money, trade openness, and limited regulations—are also required.

As the area ratings show, weakness in the rule of law and property rights is particularly pronounced in Sub-Saharan Africa, among Islamic nations, and for some nations that were formerly part of the Soviet bloc, though several countries in the latter group have made impressive strides toward improvement. Many nations in Latin America and Southeast Asia also score poorly for rule of law and property rights. The nations that rank poorly in this

Figure 1.1a: Summary Economic Freedom Ratings for 2024, First and Second Quartiles

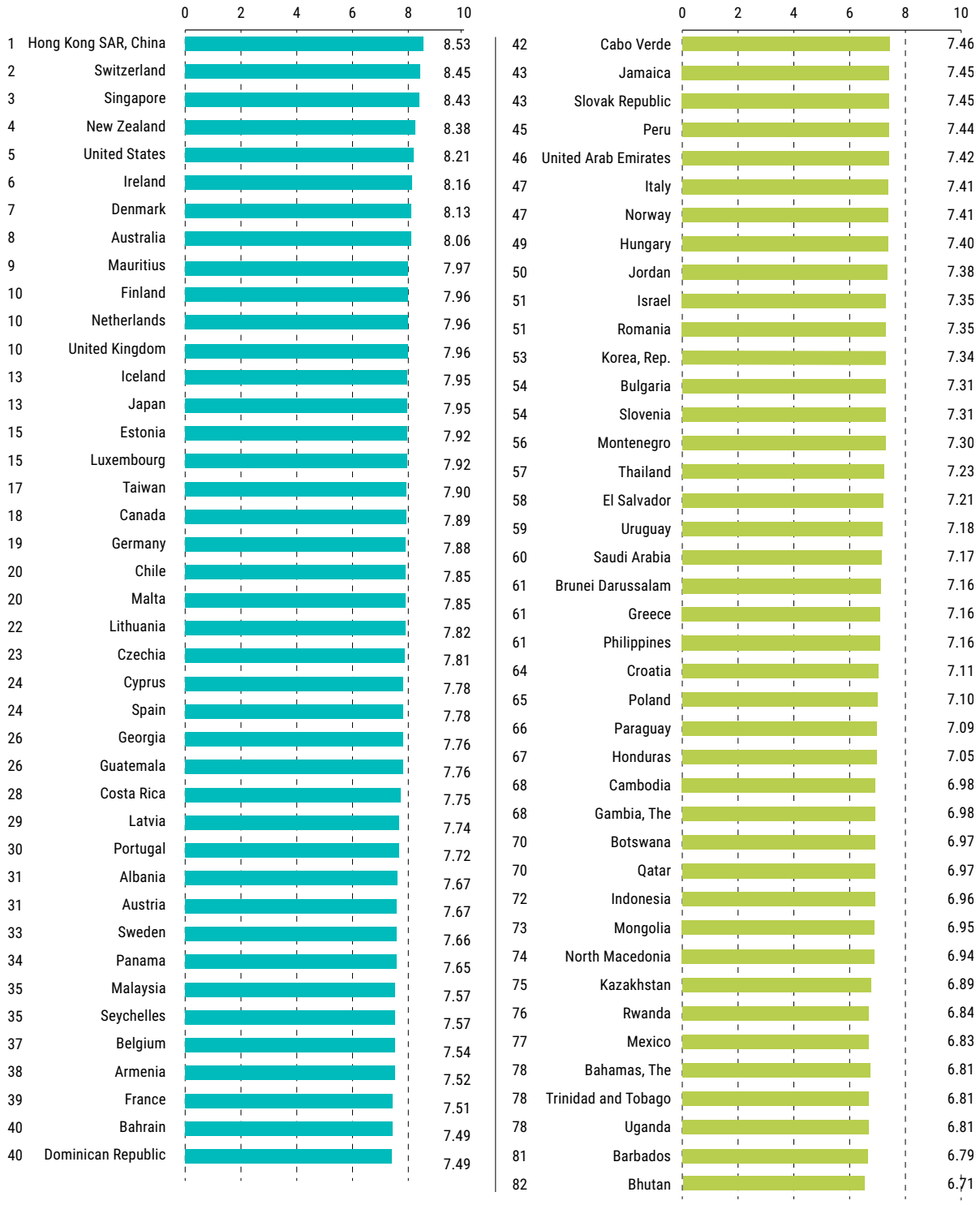


Figure 1.1b: Summary Economic Freedom Ratings for 2024, Third and Fourth Quartiles

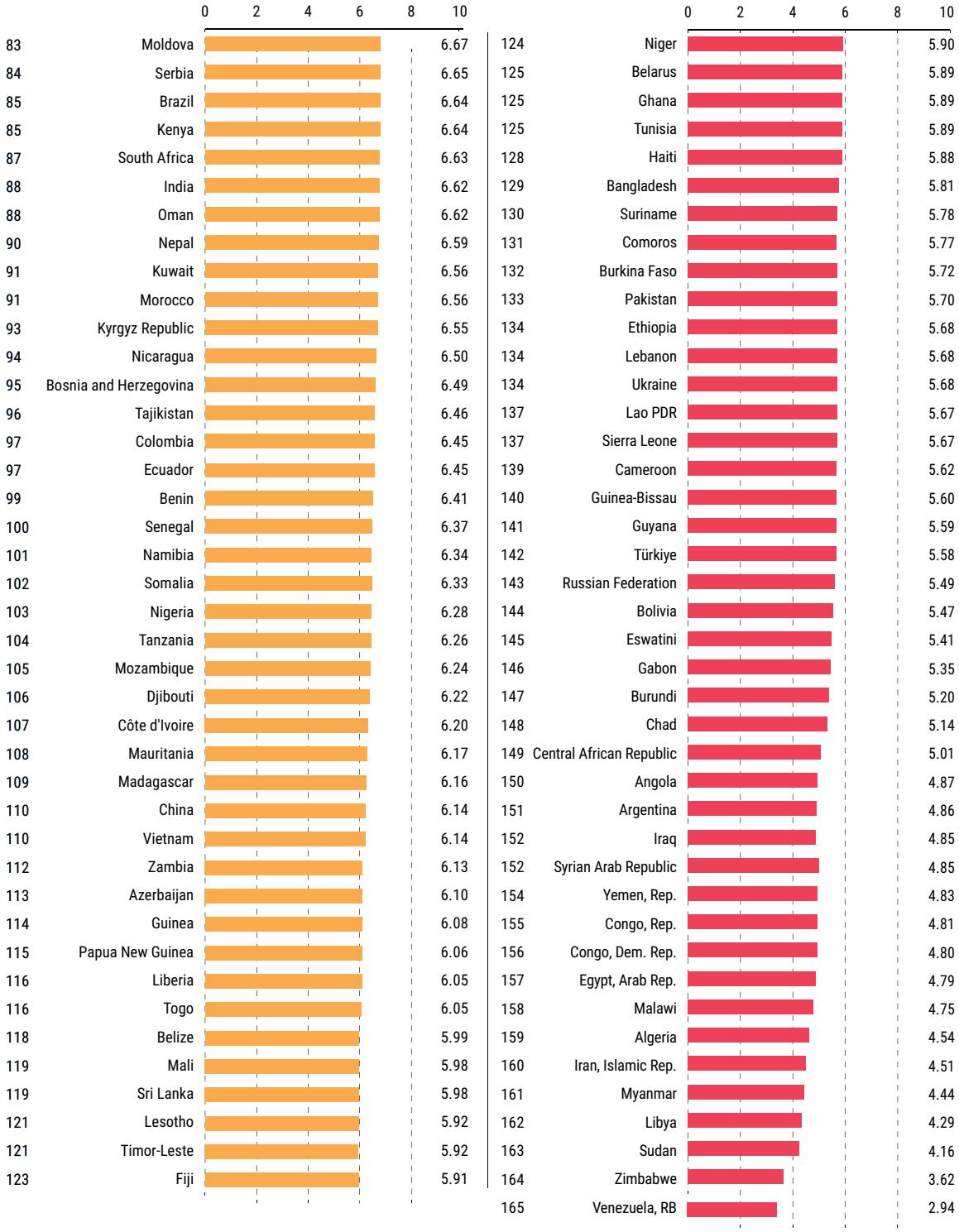


Table 1.2: Economic Freedom by Area and Ranking in 2024

Countries	1 Size of Government	Rank	2 Legal System & Property Rights	Rank	3 Sound Money	Rank	4 Freedom to trade internationally	Rank	5 Regulation	Rank
Albania	7.64	30	5.60	66	9.25	34	8.56	37	7.30	26
Algeria	4.30	163	3.90	128	6.81	113	2.70	164	5.00	148
Angola	6.64	85	3.32	146	3.52	159	5.96	137	4.93	151
Argentina	6.75	73	5.14	81	1.25	163	5.55	147	5.61	128
Armenia	8.11	15	5.85	56	9.22	36	8.14	51	6.26	101
Australia	6.17	109	8.68	7	9.17	45	8.13	53	8.17	5
Austria	5.08	145	8.45	11	8.91	58	8.85	19	7.04	39
Azerbaijan	4.62	160	5.08	86	7.30	106	7.23	84	6.27	100
Bahamas, The	8.81	4	5.56	68	6.60	123	5.60	144	7.49	22
Bahrain	7.21	54	5.24	77	9.19	40	8.22	47	7.59	16
Bangladesh	8.45	9	2.89	152	6.21	136	5.95	138	5.53	130
Barbados	7.33	44	5.61	65	8.02	86	6.77	105	6.24	103
Belarus	5.89	123	4.27	120	8.17	81	6.32	121	4.82	154
Belgium	4.74	157	7.63	22	9.31	27	8.87	17	7.13	36
Belize	6.09	111	4.08	125	6.35	133	6.57	112	6.86	55
Benin	8.07	18	4.40	116	6.98	111	6.10	130	6.48	82
Bhutan	6.45	98	6.72	38	6.68	120	6.88	99	6.80	57
Bolivia	6.09	112	3.94	126	8.88	60	3.96	159	4.48	159
Bosnia and Herzegovina	6.67	82	4.58	109	6.64	121	7.78	64	6.76	59
Botswana	6.49	96	6.23	45	8.97	55	6.99	96	6.17	108
Brazil	6.54	94	5.33	71	8.59	72	7.45	74	5.26	141
Brunei Darussalam	6.67	83	5.31	72	8.25	80	7.66	68	7.91	8
Bulgaria	6.62	88	5.83	57	8.93	57	8.56	38	6.60	71
Burkina Faso	5.59	135	3.61	136	6.51	129	6.29	122	6.58	76
Burundi	6.74	76	3.34	145	6.34	134	3.16	161	6.41	87
Cabo Verde	7.32	45	6.32	44	9.52	7	7.61	69	6.53	77
Cambodia	8.90	3	3.91	127	9.30	30	7.39	76	5.40	137
Cameroon	7.06	62	2.85	153	6.46	130	5.47	148	6.29	98
Canada	6.31	101	8.30	12	9.02	53	8.18	50	7.65	13
Central African Republic	6.65	84	2.02	164	6.56	126	4.94	156	4.90	153
Chad	8.42	10	2.41	161	4.93	150	5.29	152	4.63	156
Chile	7.61	33	6.95	31	9.18	44	8.59	36	6.92	46
China	4.70	158	4.72	99	8.32	78	7.36	78	5.60	129

Table 1.2: Economic Freedom by Area and Ranking in 2024 (continued)

Countries	1 Size of Government	Rank	2 Legal System & Property Rights	Rank	3 Sound Money	Rank	4 Freedom to trade internationally	Rank	5 Regulation	Rank
Colombia	6.82	72	5.05	88	7.00	110	6.86	101	6.53	78
Comoros	7.24	52	3.16	148	6.38	132	6.25	125	5.83	123
Congo, Dem. Rep.	4.79	156	2.67	155	5.94	139	5.32	150	5.26	142
Congo, Rep.	5.34	140	3.09	150	5.01	148	5.32	151	5.29	139
Costa Rica	7.46	37	6.61	42	9.46	13	8.21	48	6.99	41
Côte d'Ivoire	6.99	65	5.12	82	6.74	117	5.74	142	6.40	88
Croatia	5.76	128	6.19	48	8.71	66	8.69	29	6.20	107
Cyprus	6.85	71	6.69	39	9.47	12	9.00	9	6.87	54
Czechia	6.13	110	7.63	21	9.19	41	8.88	15	7.23	27
Denmark	5.38	139	9.08	2	9.31	28	9.11	4	7.76	10
Djibouti	5.43	137	3.59	137	9.58	4	5.57	146	6.91	49
Dominican Republic	8.31	11	5.28	74	9.00	54	8.11	55	6.74	63
Ecuador	6.74	75	4.86	93	7.88	90	6.79	103	5.99	116
Egypt, Arab Rep.	5.06	146	3.35	144	5.32	143	6.15	128	4.08	162
El Salvador	7.61	32	4.32	117	9.49	10	8.02	61	6.60	73
Estonia	6.20	106	8.00	16	8.60	71	9.04	6	7.74	11
Eswatini	4.97	149	3.10	149	7.85	92	5.65	143	5.48	134
Ethiopia	7.00	64	4.24	122	5.11	145	6.03	133	6.01	115
Fiji	5.70	131	4.86	94	6.53	128	6.06	132	6.40	89
Finland	4.93	150	8.87	5	9.61	2	8.85	20	7.53	18
France	4.88	153	7.40	27	9.40	17	8.97	12	6.90	51
Gabon	6.03	115	3.72	132	5.90	140	5.59	145	5.50	131
Gambia, The	7.63	31	4.90	92	8.06	84	7.34	81	6.96	43
Georgia	7.30	49	6.08	51	9.08	48	8.82	22	7.51	19
Germany	5.79	126	8.02	15	9.37	21	8.75	26	7.48	23
Ghana	8.23	13	5.24	78	2.91	160	6.74	107	6.34	93
Greece	5.23	144	6.21	46	9.08	49	8.64	30	6.63	70
Guatemala	9.22	2	4.77	97	9.21	37	8.37	44	7.21	31
Guinea	7.93	23	3.53	139	7.09	108	6.01	134	5.84	120
Guinea-Bissau	7.33	43	2.76	154	6.54	127	6.00	136	5.34	138
Guyana	3.77	164	5.08	87	6.42	131	6.24	126	6.46	83
Haiti	8.79	5	2.43	160	4.98	149	8.04	59	5.17	146
Honduras	8.71	8	4.10	124	8.82	61	7.12	91	6.51	80

Table 1.2: Economic Freedom by Area and Ranking in 2024 (continued)

Countries	1 Size of Government	Rank	2 Legal System & Property Rights	Rank	3 Sound Money	Rank	4 Freedom to trade internationally	Rank	5 Regulation	Rank
Hong Kong SAR, China	7.30	48	7.56	24	9.50	8	9.66	1	8.61	2
Hungary	6.08	114	6.68	41	8.73	64	8.82	23	6.67	68
Iceland	5.83	124	8.80	6	8.88	59	8.53	40	7.72	12
India	7.85	25	5.27	75	7.76	96	6.27	124	5.94	117
Indonesia	8.23	12	4.53	112	9.14	46	7.17	89	5.74	126
Iran, Islamic Rep.	6.95	69	3.39	142	5.03	147	2.43	165	4.76	155
Iraq	4.89	152	2.43	159	5.82	141	6.13	129	4.97	149
Ireland	6.25	103	8.06	14	9.29	31	9.04	8	8.17	4
Israel	5.78	127	6.13	49	9.09	47	8.81	24	6.93	45
Italy	5.30	141	6.73	36	9.53	6	9.00	10	6.49	81
Jamaica	8.12	14	5.82	58	8.45	77	7.22	85	7.63	14
Japan	5.92	122	7.92	17	9.44	15	8.61	34	7.86	9
Jordan	7.19	56	4.61	107	9.59	3	8.13	52	7.38	25
Kazakhstan	7.76	26	5.71	62	7.86	91	6.99	97	6.15	110
Kenya	6.56	92	4.72	100	9.19	42	6.45	115	6.30	97
Korea, Rep.	6.44	100	6.80	34	9.39	19	7.36	79	6.73	64
Kuwait	5.99	119	5.24	76	7.78	95	7.35	80	6.42	86
Kyrgyz Republic	7.20	55	4.57	110	7.60	100	7.47	73	5.91	118
Lao PDR	7.40	38	4.53	113	4.50	154	6.85	102	5.07	147
Latvia	6.02	118	7.60	23	9.05	52	8.86	18	7.16	34
Lebanon	8.78	7	3.58	138	3.94	155	6.10	131	6.02	114
Lesotho	5.42	138	4.75	98	7.54	102	6.44	116	5.45	135
Liberia	7.12	59	3.90	129	8.16	82	5.82	140	5.25	143
Libya	3.37	165	2.66	156	7.09	109	4.44	158	3.89	163
Lithuania	6.75	74	7.66	20	8.73	65	8.93	13	7.02	40
Luxembourg	4.90	151	8.62	8	9.48	11	8.99	11	7.62	15
Madagascar	8.09	16	3.07	151	7.40	104	6.94	98	5.27	140
Malawi	5.74	129	4.71	104	3.77	158	3.74	160	5.77	125
Malaysia	7.23	53	5.94	54	9.40	18	7.90	63	7.39	24
Mali	7.30	50	3.52	140	6.88	112	6.38	118	5.82	124
Malta	6.68	81	6.88	32	9.44	14	9.04	7	7.18	32
Mauritania	6.62	86	3.38	143	7.99	88	6.79	104	6.04	113
Mauritius	7.68	27	6.86	33	9.06	51	8.76	25	7.51	20

Table 1.2: Economic Freedom by Area and Ranking in 2024 (continued)

Countries	1 Size of Government	Rank	2 Legal System & Property Rights	Rank	3 Sound Money	Rank	4 Freedom to trade internationally	Rank	5 Regulation	Rank
Mexico	7.98	20	4.26	121	7.65	99	8.11	56	6.16	109
Moldova	7.60	34	5.76	60	7.13	107	7.60	70	5.24	144
Mongolia	6.94	70	6.05	53	8.09	83	7.36	77	6.31	95
Montenegro	7.11	60	5.67	64	8.70	67	8.28	46	6.73	65
Morocco	6.99	66	5.30	73	6.80	114	7.17	88	6.53	79
Mozambique	7.01	63	4.69	105	7.75	97	6.52	113	5.21	145
Myanmar	6.72	78	3.26	147	3.90	156	2.84	163	5.50	132
Namibia	7.13	58	5.92	55	6.57	124	6.36	120	5.73	127
Nepal	7.25	51	4.82	96	7.57	101	6.39	117	6.90	50
Netherlands	5.23	143	8.55	9	9.30	29	9.24	3	7.49	21
New Zealand	6.27	102	9.09	1	9.37	20	8.54	39	8.61	1
Nicaragua	6.45	99	3.48	141	8.78	62	7.96	62	5.84	121
Niger	7.96	21	3.61	135	6.19	137	5.44	149	6.28	99
Nigeria	8.78	6	3.62	133	6.21	135	6.18	127	6.59	74
North Macedonia	7.14	57	4.71	101	7.89	89	7.72	66	7.23	28
Norway	4.83	154	9.04	3	7.82	94	8.39	43	6.95	44
Oman	5.05	147	5.69	63	8.56	74	7.34	82	6.45	84
Pakistan	7.66	29	3.73	131	5.04	146	6.01	135	6.08	112
Panama	7.32	46	5.78	59	9.36	22	8.87	16	6.92	48
Papua New Guinea	6.02	117	4.71	102	6.57	125	6.57	111	6.44	85
Paraguay	7.94	22	4.46	115	8.96	56	7.39	75	6.68	67
Peru	7.58	35	5.18	79	9.06	50	8.52	41	6.88	53
Philippines	7.86	24	4.71	103	9.34	24	7.15	90	6.75	61
Poland	5.61	134	6.75	35	7.70	98	8.63	31	6.80	58
Portugal	5.97	120	7.40	26	9.29	33	9.09	5	6.84	56
Qatar	5.68	133	5.59	67	8.04	85	8.41	42	7.14	35
Romania	6.52	95	6.68	40	8.65	68	8.61	35	6.31	96
Russian Federation	6.03	116	4.85	95	5.14	144	6.48	114	4.94	150
Rwanda	4.98	148	6.06	52	8.56	73	7.51	72	7.11	37
Saudi Arabia	6.69	80	6.21	47	8.32	79	7.71	67	6.92	47
Senegal	7.38	41	4.27	119	6.73	118	7.09	92	6.37	92
Serbia	6.23	104	5.37	69	7.34	105	8.08	57	6.23	106
Seychelles	6.74	77	6.43	43	9.56	5	8.03	60	7.07	38

Table 1.2: Economic Freedom by Area and Ranking in 2024 (continued)

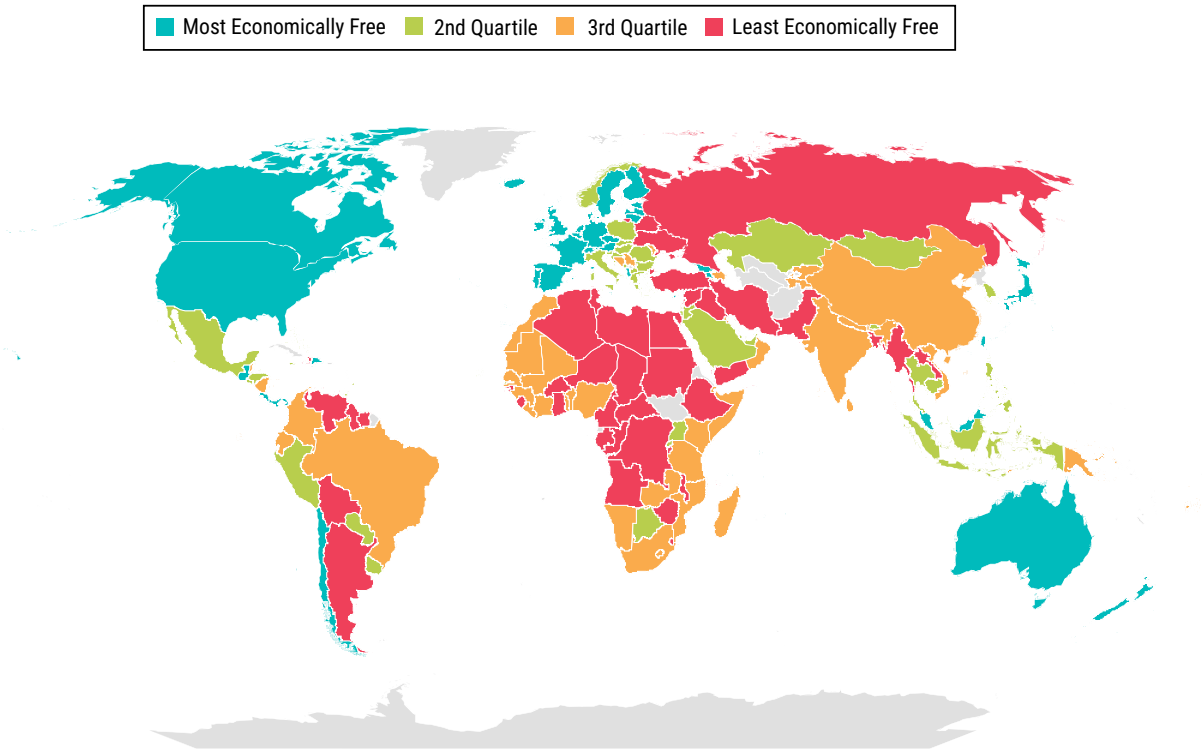
Countries	1 Size of Government	Rank	2 Legal System & Property Rights	Rank	3 Sound Money	Rank	4 Freedom to trade internationally	Rank	5 Regulation	Rank
Sierra Leone	7.10	61	4.60	108	3.79	157	6.63	110	6.24	102
Singapore	7.38	40	8.46	10	8.75	63	9.56	2	7.97	6
Slovak Republic	6.18	108	6.73	37	9.21	38	8.74	27	6.38	90
Slovenia	4.82	155	7.10	29	9.24	35	8.63	32	6.74	62
Somalia	9.45	1	2.18	163	9.33	25	6.38	119	4.33	160
South Africa	6.20	105	5.71	61	7.84	93	7.01	95	6.37	91
Spain	6.19	107	7.35	28	9.35	23	8.85	21	7.17	33
Sri Lanka	7.34	42	5.11	83	4.91	151	6.29	123	6.23	104
Sudan	8.02	19	1.91	165	1.25	163	5.02	154	4.59	158
Suriname	6.60	90	4.29	118	4.67	153	7.09	93	6.23	105
Sweden	4.57	161	8.29	13	9.33	26	8.89	14	7.22	30
Switzerland	7.67	28	8.97	4	9.66	1	8.35	45	7.59	17
Syrian Arab Republic	7.31	47	2.50	157	4.70	152	5.16	153	4.61	157
Taiwan	7.57	36	7.43	25	9.42	16	8.19	49	6.89	52
Tajikistan	5.94	121	4.19	123	8.63	69	7.24	83	6.32	94
Tanzania	5.79	125	5.10	85	8.01	87	5.77	141	6.60	72
Thailand	6.96	68	5.36	70	9.49	9	7.56	71	6.76	60
Timor-Leste	4.35	162	3.89	130	6.63	122	7.74	65	6.98	42
Togo	6.72	79	5.02	89	6.75	116	5.91	139	5.83	122
Trinidad and Tobago	6.60	89	5.17	80	8.51	75	7.07	94	6.69	66
Tunisia	5.29	142	4.53	114	7.41	103	6.73	108	5.48	133
Türkiye	6.97	67	4.90	91	2.68	161	7.22	86	6.12	111
Uganda	6.57	91	4.65	106	9.29	32	6.87	100	6.64	69
Ukraine	5.73	130	4.56	111	6.03	138	7.19	87	4.90	152
United Arab Emirates	5.69	132	7.08	30	8.47	76	8.62	33	7.23	29
United Kingdom	6.08	113	7.91	18	9.20	39	8.72	28	7.91	7
United States	7.39	39	7.87	19	9.18	43	8.13	54	8.47	3
Uruguay	6.56	93	6.08	50	8.62	70	8.06	58	6.58	75
Venezuela, RB	4.63	159	2.40	162	0.00	165	4.99	155	2.66	165
Vietnam	6.62	87	5.10	84	6.79	115	6.74	106	5.41	136
Yemen, Rep.	8.08	17	2.44	158	5.82	142	4.58	157	3.21	164
Zambia	6.46	97	4.95	90	6.69	119	6.66	109	5.87	119
Zimbabwe	5.44	136	3.62	134	1.93	162	2.95	162	4.18	161

category also tend to score poorly in the trade and regulation areas, even though several have reasonably sized governments and sound money.

The geography of economic freedom

In figure 1.2, we can see the geographic distribution of economic freedom. Countries in the most economically free quartile are blue, those in the second-most free quartile are green, those in the third quartile are orange, and those in the least economically free quartile are red. North America, with an average EFW of 8.05 is the most economically free region on Earth.[4] At 5.95, Sub-Saharan Africa is the least economically free region. Since 2000, economic freedom in North America has declined 0.37 points while in Sub-Saharan Africa it has increased 0.47 points, narrowing the gap between the world's most and least-free regions by about 0.84 points. The region with the greatest variation in economic freedom

Figure 1.2: Economic Freedom in 2024



4 We use the World Bank's regional classification system. Under this system, North America comprises only three countries: the US, Canada, and Bermuda. Because Bermuda is not included in our dataset, North America refers only to the US and Canada.

is the Middle East and North Africa. There, economic freedom spans from Libya at 4.29 to Malta at 7.85. Note that there are a handful of places on Earth where first- and fourth-quartile countries share a border: Haiti and the Dominican Republic, Chile and Argentina, Russia and the Baltics, etc.

The EFW Panel Dataset

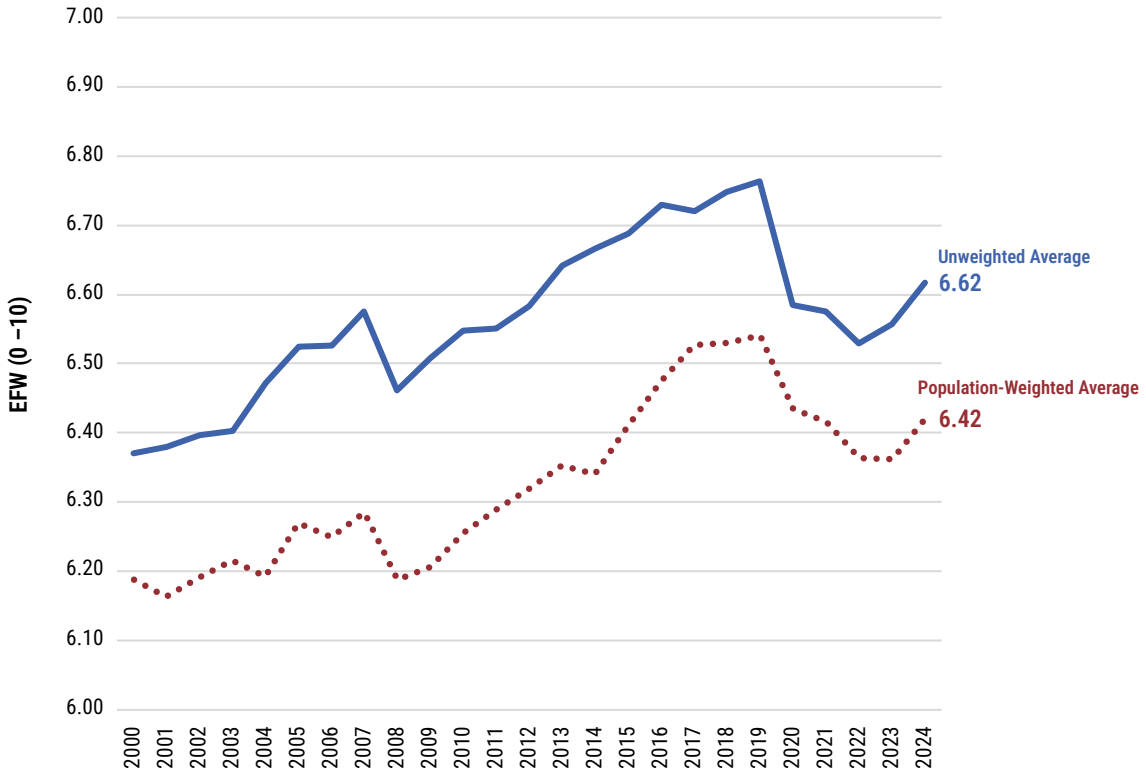
Over the years, the EFW index has become more comprehensive and the available data more complete. As a result, the number and composition of the components and subcomponents for many countries vary across time. This makes it difficult to directly compare index values from earlier periods with those of later periods. To assist researchers who are interested in a consistent time-series for a particular country and/or longitudinal data for a panel of countries, we have developed the EFW Panel Dataset.

The EFW Panel Dataset is a chain-linked version of the index. It uses the most recent year as the base year, and changes in a country's scores backward in time are based only on changes in components that were present in adjoining years. See page 103 in the appendix for additional details on this process. Note that the EFW Panel Dataset contains area and summary ratings only for those years in which the country received a regular EFW index rating. Because some data for earlier years may have been updated or corrected, we always encourage researchers to use the data from the most recent annual report to ensure the most reliable figures.

Figure 1.3 presents the global average for all nations with complete data since 2000 using the EFW Panel Dataset. It also shows the population-weighted global average, which indicates how the average global citizen fares. Because it gives greater weight to large, relatively unfree countries like India, China, and Brazil, the population-weighted average is lower than the simple average. Overall, the index shows that economic freedom has increased since 2000, but fell precipitously following the coronavirus pandemic, erasing nearly a decade of progress. It also shows that global economic freedom finally began to recover in 2024, four years after the onset of the pandemic. The last time global economic freedom fell was during the Great Recession of 2007–08. Note that the post-COVID decline in economic freedom was much larger and has lasted much longer than the decline in economic freedom during the Great Recession.

Figures 1.4 through 1.6 offer a closer look at the patterns shaping global economic freedom in the years after the pandemic. Figure 1.4 shows global economic freedom and each of its constituent areas from 2019 through 2024. It contextualizes the data by showing each

Figure 1.3: Global Economic Freedom (2000–2024)



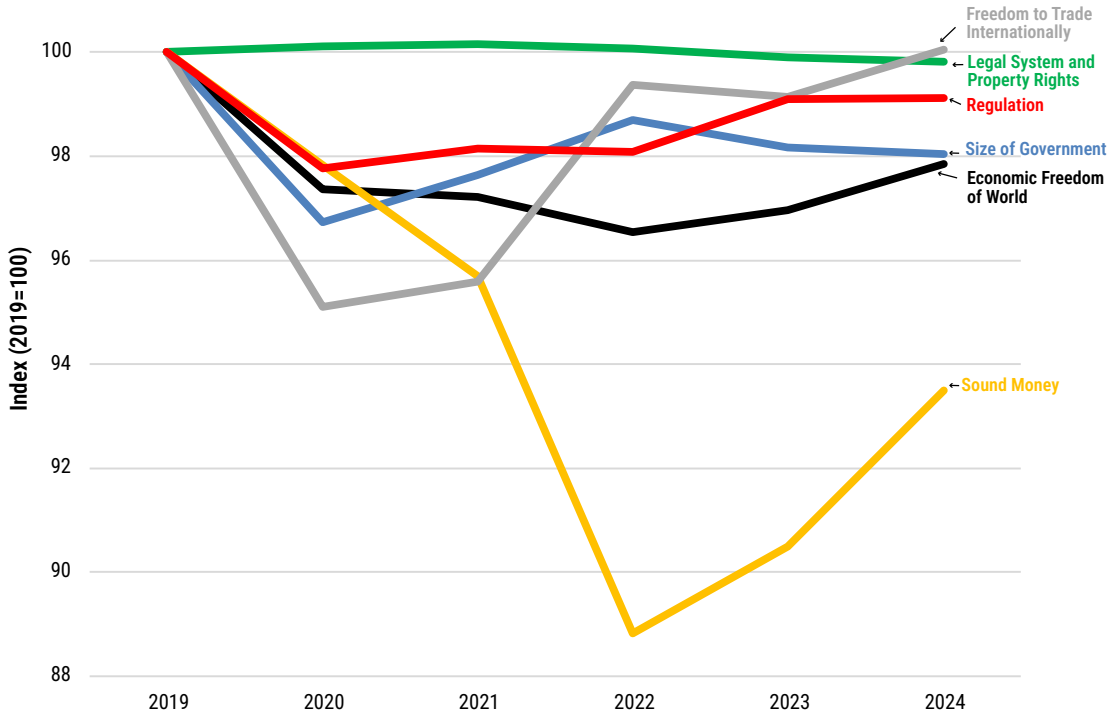
value as a percent of its 2019 level.[5] So, for example, it shows that in 2022, the average government's Sound Money score was about 89 percent of its pre-COVID level.

In the average country, every area of economic freedom except for the Legal System and Property Rights area collapsed in the years after the pandemic.[6] In 2020, governments restricted international trade, increased regulation, ramped up government spending, and began printing money to pay for the new spending. In this first year of the pandemic, the area of economic freedom that fell the most was Freedom to Trade Internationally, falling on average to about 95 percent of pre-pandemic levels. In 2021, the average government began to pull back on government spending and regulation and eased restrictions on international trade, causing those three areas to begin to rebound. But as inflation took hold, Sound Money

5 Here and in the following figures we calculate global EFW as a simple average across countries rather than as a population-weighted average. This keeps the focus on the countries as decision-making units rather than on the experience of the average global citizen.

6 The relative stability in Area 2 may have more to do with measurement than reality. The World Bank has discontinued its *Doing Business* report, and the World Economic Forum has discontinued publishing the Executive Opinion Survey data from its *Global Competitiveness Report.* These two reports supplied many of the indicators used in Area 2. In recent years we have begun to use alternative sources for these indicators, including the Economist Intelligence Unit, but in the meantime, we have had to assume little change in some indicators. This means that in future revisions of the data, Area 2 may exhibit less stability than it does now.

Figure 1.4: Recovery in Economic Freedom by Area of EFW, Indexed to 2019 = 100 (2019–2024)



scores continued to fall, and this was enough to continue to drag overall economic freedom down through 2022. Beginning in 2023, inflation eased, and Sound Money scores began to rebound as well. This pattern continued in 2024. Still, despite the gains in 2023 and 2024, global economic freedom remains below pre-pandemic levels. And every area of economic freedom other than Freedom to Trade Internationally was lower in 2024 than it had been in 2019.

Figure 1.5 shows that geographically the recovery in economic freedom has been uneven. In North America, the fall in economic freedom was not nearly as significant nor as prolonged as in other parts of the world. But the North American recovery, which began in 2021, faltered in 2024. Economic freedom in Europe and Central Asia also began to recover in 2021 but sharply reversed in 2022. In the rest of the world, the recovery in economic freedom did not begin until 2023 or 2024.

Starting places also mattered. Figure 1.6 groups countries by their quartile of economic freedom in 2019. We see here that countries in the two most economically free quartiles have recovered to about 98.5 percent of their pre-COVID levels while those in the two least-free quartiles have recovered to about 97 percent of their pre-COVID levels.

Figure 1.5: Recovery in Economic Freedom by Global Region, Indexed to 2019 = 100 (2019–2024)

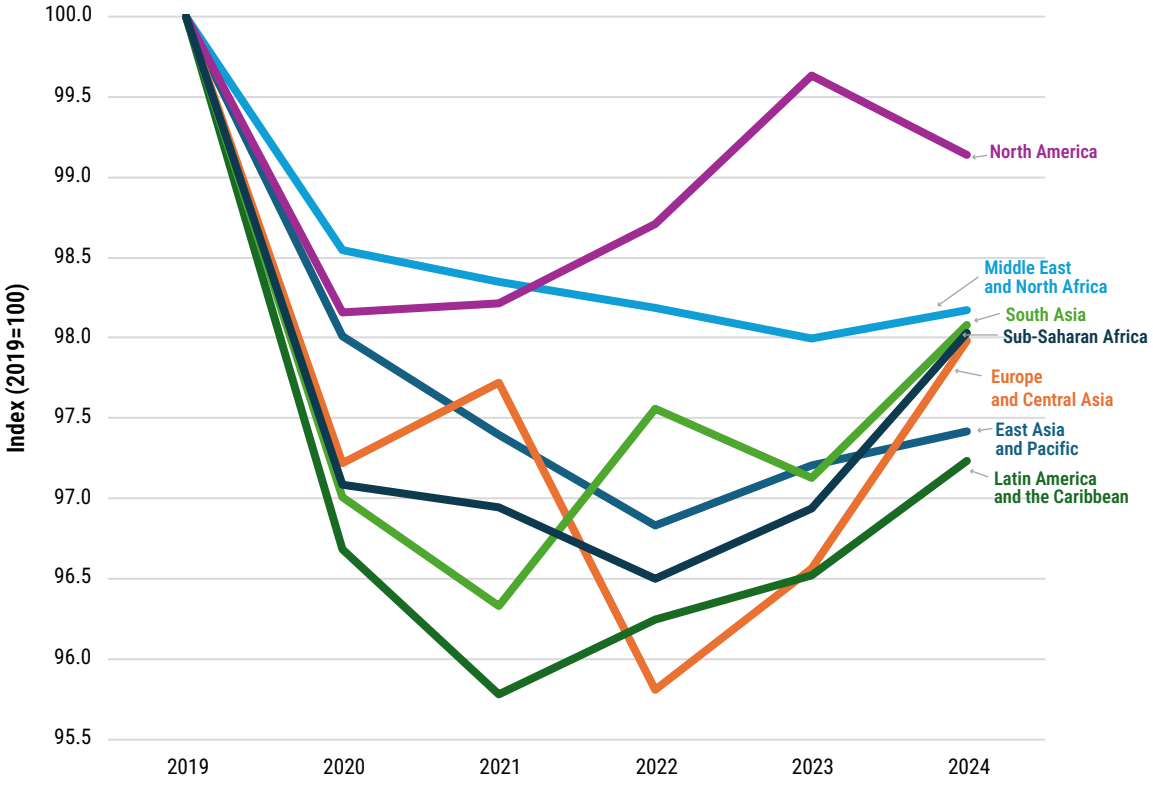
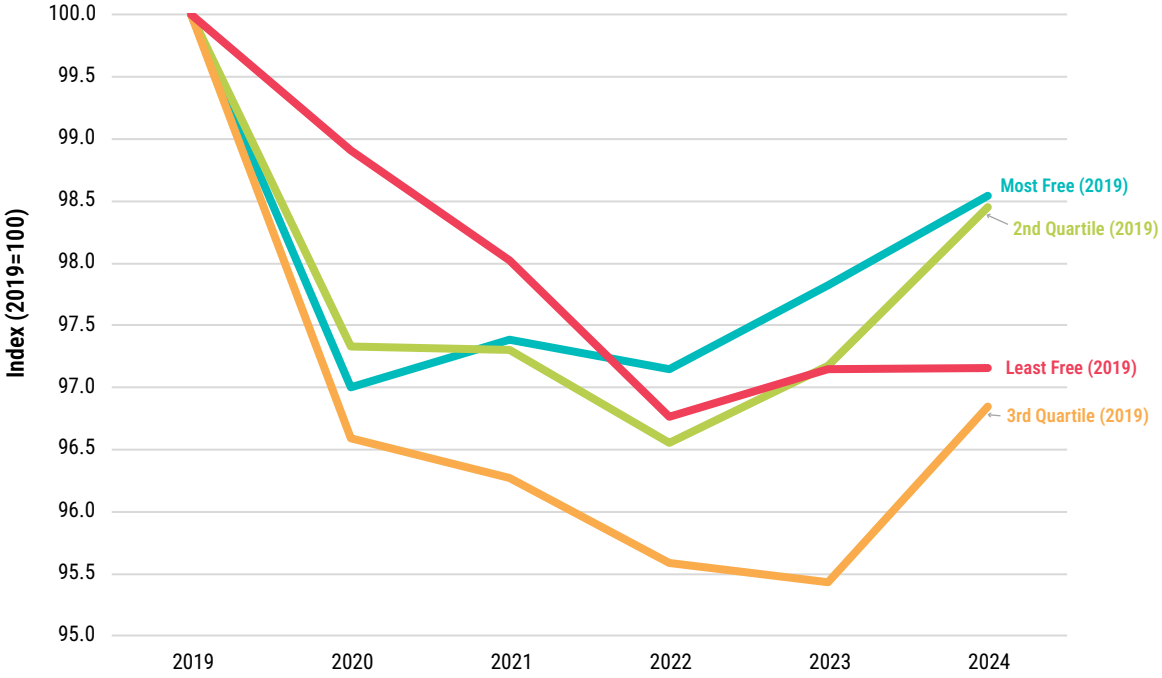


Figure 1.6: Recovery in Economic Freedom by Quartile, Indexed to 2019 = 100 (2019–2024)



A preview of economic freedom in the United States

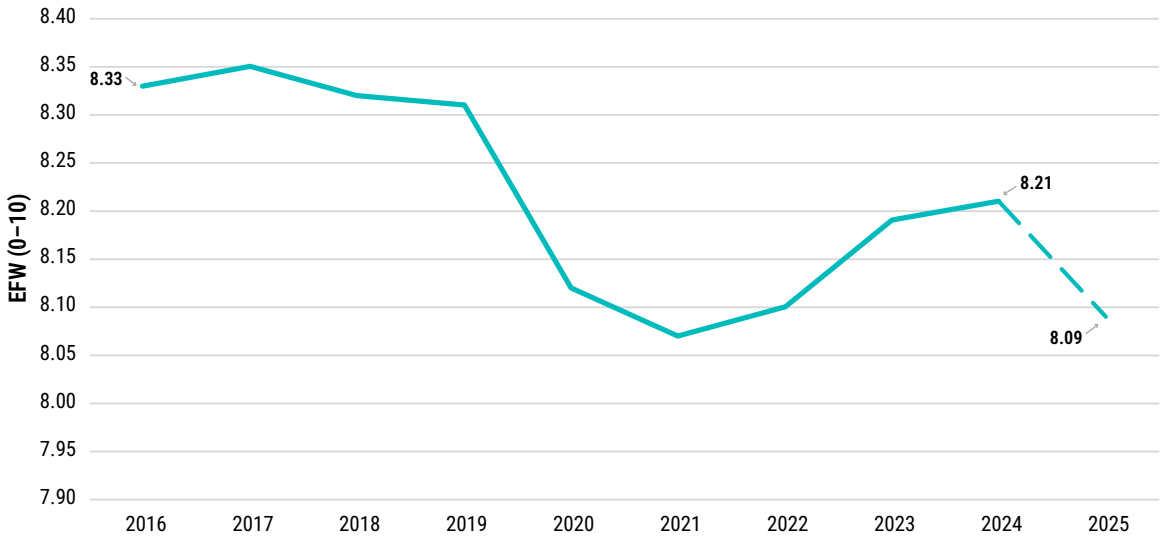
Each edition of the *Economic Freedom of the World* (EFW) report presents data from two years prior to release. For most countries, it is simply not possible to get more up-to-date data. United States data, however, are released in a more timely manner, permitting us to attempt, for the first time, a nearly contemporaneous estimate of the country's economic freedom. These figures give us a glimpse of what the EFW ratings (and rankings) for the US will be in next year's report. All the numbers will be fully revised and updated in the 2027 report and these figures should be seen as tentative.

Economic Freedom of the United States: Overall

2024	8.21 (5th)
2025p	*8.09 (7th)*

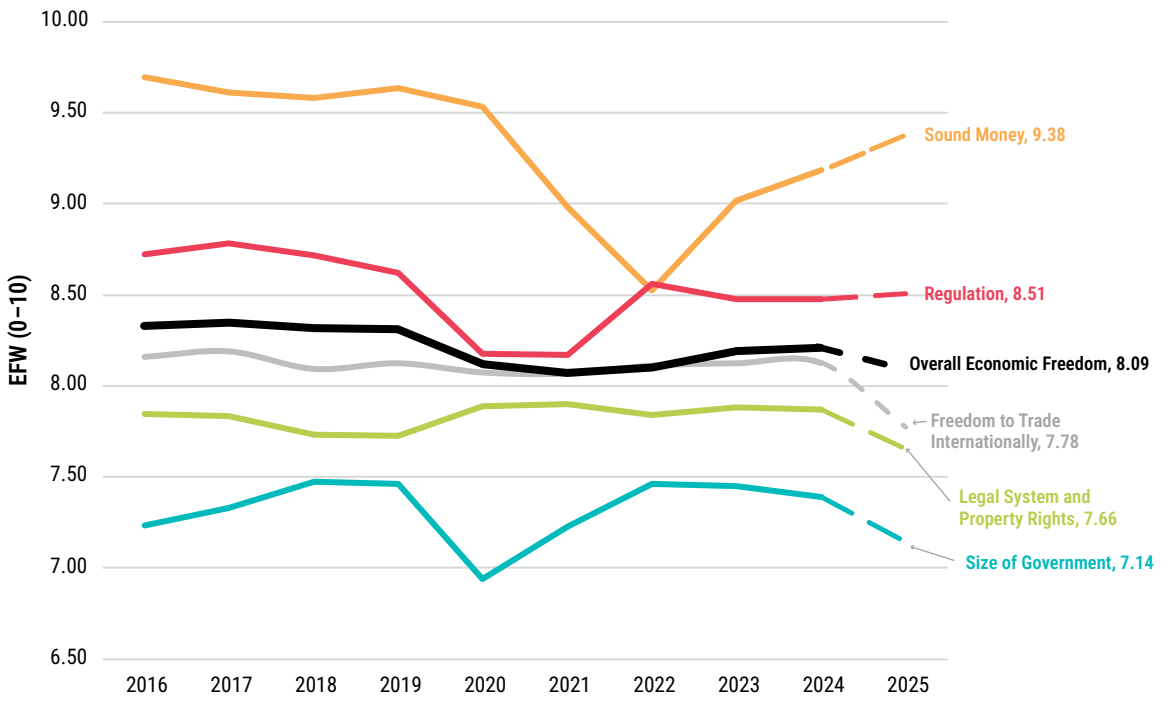
President Trump's second term was supposed to portend the dawn of a new era. The preliminary data suggests that the new era will be one of less economic freedom for Americans. Government is bigger, property rights and the rule of law are weaker, and trade is more restricted. We currently project a significant decline of 0.12 points in the country's overall EFW index (see figure 1.7). Assuming other countries do not change, this would drop the US from 5th to 7th place in the world from 2024 to 2025 and mark the country's largest one-year decline in economic freedom since the 2020 COVID drop. A drop from 5th to 7th may

Figure 1.7: US Economic Freedom with 2025 Preliminary Estimate (2016–2025)



Note: All data are chain-linked.

Figure 1.8: US Economic Freedom By Area with 2025 Preliminary Estimates (2016–2025)



All data are chain-linked.

not sound like much but the relative ranking in the country's overall score obscures what is going on under the surface at the area level. As shown in figure 1.8, we project that three of the five areas of economic freedom declined in 2025. Regulations were roughly unchanged while only Sound Money improved.

AREA 1: Size of Government: Overall

↓	2024	7.39 (39th)
	2025p	*7.14 (56th)*

The size of the US government increased in 2025 thanks to increasing transfers and subsidies (1B) and a much lower rating for state ownership of assets (1E), which fell from 9.4 to 8.3. This reflects the government's acquisition of equity stakes in more than two dozen firms. The country's decline in this area of economic freedom accelerates a trend that began in 2023.

AREA 2: Legal System and Property Rights

↓	2024	7.87 (19th)
	2025p	*7.66 (20th)*

Significant declines in judicial independence (1A) and contracts (2F) resulted in the largest recorded single year drop in the country's Legal System and Property Rights (Area 2) score. The US rating for this area is now the lowest it has ever been going back to 1970.

AREA 3: Sound Money

↑

2024	9.18 (43rd)
2025p	*9.38 (20th)*

The Federal Reserve has continued to show improved monetary restraint resulting in lower and more stable inflation in 2025 compared with 2024. This is the one area of the index that shows a clear positive trend in 2025. It is also the area over which the President has been able to exercise the least control, though that may change as he appoints more members to the Federal Reserve. We urge caution in the interpretation of the relative performance of the US in this area as global inflation eased in 2025 and many other countries are also likely to improve their 2025 Area 3 scores when those data come out.

AREA 4: Freedom to Trade Internationally

↓

2024	8.13 (54th)
2025p	*7.78 (64th)*

Tariffs have become one of the signature policies of the Trump administration. The President has imposed a five-fold increase in the mean tariff rate, raising it to a whopping 16.8 percent in 2025. Only a handful of low-income countries, including Sudan, Djibouti, and Iran imposed higher tariffs in 2024. This causes the tariff component (4A) ranking to fall from 60th in the world to 125th, and the broader area of trade freedom (Area 4) to fall 0.35 points in one year. This is the largest single year decline in US trade freedom on record and pushes the country's score in this area to the lowest recorded level going back to 1970.

AREA 5: Regulation

Ø

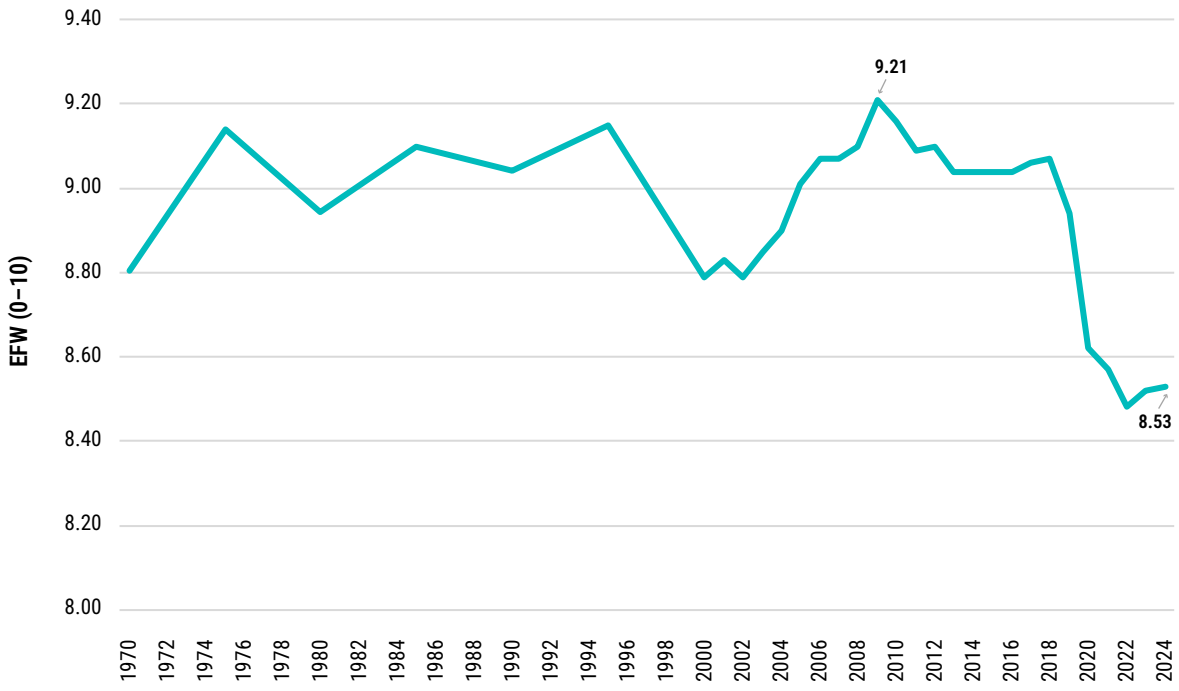
2024	8.47 (3rd)
2025p	*8.51 (3rd)*

Despite claims to the contrary, we project little change in the regulatory environment in the US in 2025. Overall, the country's regulatory score seems to have recovered somewhat from its COVID-low, but it has not returned to its pre-COVID levels.

Economic freedom in Hong Kong

Hong Kong has long topped the list as the world's most economically free jurisdiction. But there is more to the story than the top-line rankings. Figure 1.9 shows the special administrative region's overall economic freedom from 1970 through 2024. Hong Kong's score has declined by 0.68 points since 2009, with most of the decline occurring after 2018. To put this in perspective, a difference of 0.68 points is about equal to the difference in economic freedom between the United States and Armenia. Hong Kong's decline has been driven by significant deteriorations in Regulation (down 0.47 since 2009), Legal System and Property Rights (down 0.98), and Size of Government (down 1.85). The territory's declines in the Regulation and Legal System and Property Rights areas are no doubt due to a notorious 2020 security law that seems to have ended China's promise of "one country, two systems." A summary of published estimates on the economic freedom-income relationship[7] finds that a one standard deviation decrease in the EFW index is associated with nearly a half standard deviation decrease in real GDP per capita. Applied to Hong Kong's 0.68-point decline in its EFW rating since 2009, this implies Hong Kong's decline in economic freedom has caused

Figure 1.9: Hong Kong Economic Freedom (1970–2024)



7 See Lawson, Miozzi, and Tuszynski (2024).

the territory's real per capita income to be roughly $5,100 to $6,400 (in 2026 USD) lower than it would otherwise be.[8]

Economic freedom and human well-being

According to Google Scholar, researchers have cited various versions of the EFW index approximately 16,000 times. But scholars have not just cited the index; many of them have used it in their own work. Scholars have employed the index in close to a thousand studies to examine the effects of economic freedom on everything from income and growth to happiness and conflict. These studies typically use data from many years, include multiple controls to account for possibly confounding factors, and employ sophisticated econometric techniques to minimize potential statistical biases. But one need not have a deep background in econometrics to appreciate the gist of these results: economic freedom tends to be associated with better outcomes.

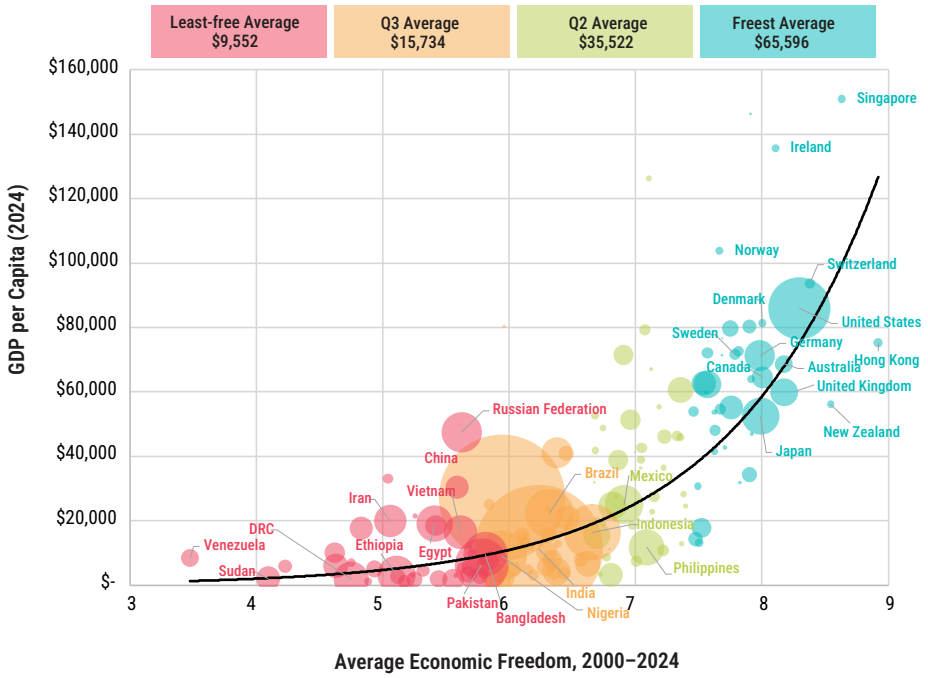
We illustrate this below in figures 1.10 through 1.20. These simple scatter plots show the relationship between economic freedom and various measures of well-being. In most cases, the graphs use the average of the EFW Panel Dataset from 2000 to 2024 (in some cases we average over an earlier period if the y-axis variable is not available in 2024). Because persistence is important and the impact of economic freedom will be felt over a lengthy period, it is better to use the average rating over a long period rather than the current rating to observe the impact of economic freedom on performance. Dot sizes indicate country size and colors indicate economic freedom quartile. Quartile averages are shown in the boxes at the top of each figure.

The graphs begin with the data on the relationship between economic freedom and the level of GDP per capita and then go on to examine the correlation with other economic and social outcomes. We are not necessarily arguing that there is a direct causal relation between economic freedom and the variables considered below. These graphs only establish how economic freedom correlates with other socio-economic outcomes over their respective time periods. To argue for a causal relationship between economic freedom and these outcomes would require econometric modeling with appropriate strategies for identifying causal effects.[9] For instance, many of the relationships illustrated in the graphs below likely reflect the impact of economic freedom as it works through increasing per capita income. At the very least, these graphs suggest fruitful areas for future research.

8 According to the *Human Freedom Index*, which accounts for personal as well as economic freedom, Hong Kong fell from third place in 2011 to 53rd in 2023 (Vásquez, Mitchell, Murphy, and Schneider, 2025).

9 For recent reviews of the literature, see Lawson (2022); Lawson, Miozzi, and Tuszynski (2024); Mitchell (2024); and Berggren (2024).

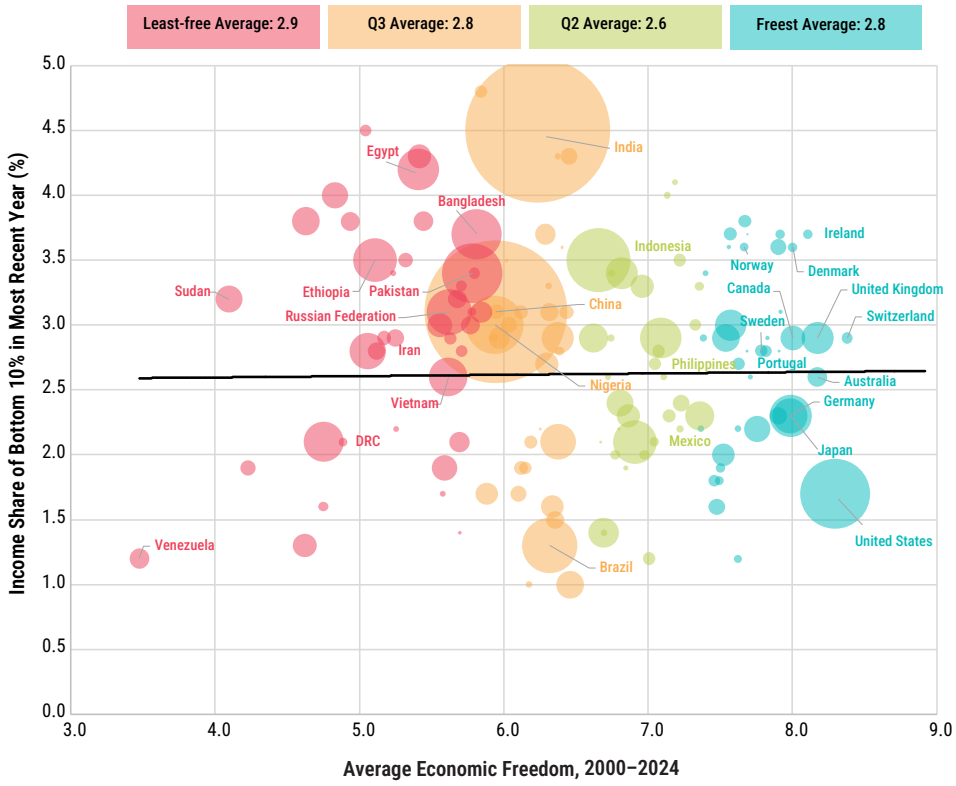
Figure 1.10: Economic Freedom and GDP per Capita



Those in the economically freest quartile earn 6.9 times as much as those in the least-free.

Sources: EFW: Authors' calculations. Main source for GDP per capita: World Bank, World Development Indicators, GDP per capita, PPP (constant 2021 international $), as published by Our World in Data, converted to 2024 international $ using the US GDP deflator (FRED). Alternative Source for 3 countries not covered by the World Bank: Taiwan, Venezuela, and Yemen: the IMF World Economic Outlook Database, April 2025 (GDP per capita, constant prices, PPP; 2021 international $), converted to 2024 international $ with the same deflator. Venezuela and Yemen are IMF estimates. Year Coverage: All figures are for 2024 except three countries: Bhutan (2023), Lebanon (2023), and Syria (2022).

Figure 1.11: Economic Freedom and Income Share of Bottom 10%

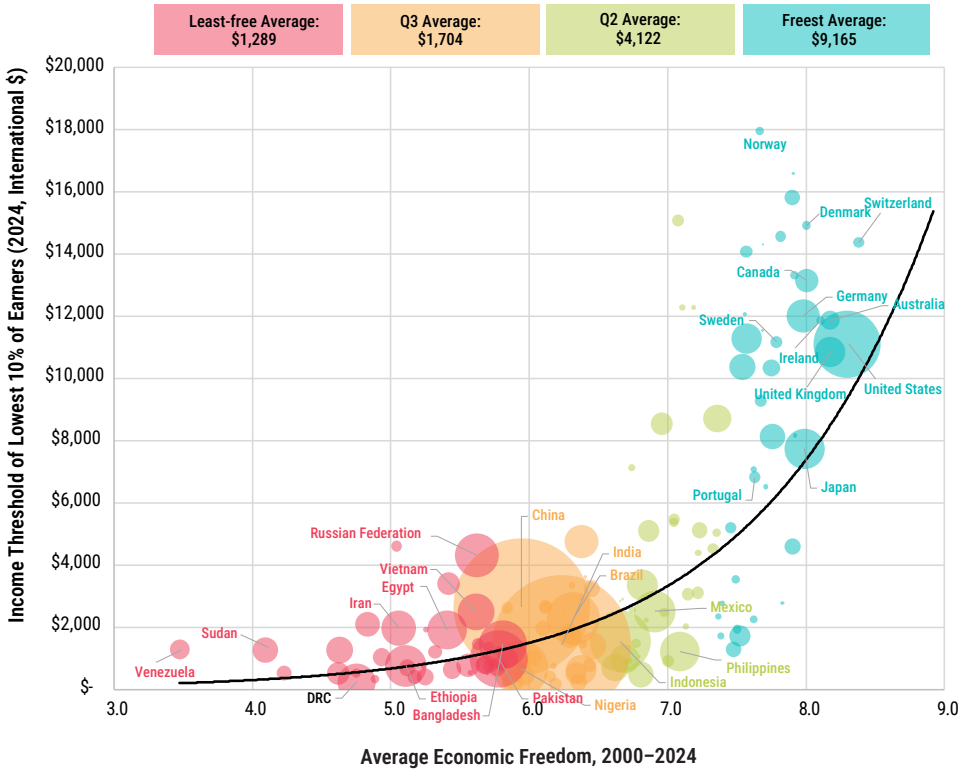


Economic freedom does not correlate with the income share of the bottom 10% of earners.

Sources: EFW: Authors' calculations. Income share: World Bank, World Development Indicators—Income share held by lowest 10% (SI.DST.FRST.10), Poverty and Inequality Platform <https://api.worldbank.org/v2/en/indicator/SI.DST.FRST.10?downloadformat=csv>(retrieved 2026-07-06). Data are latest available year per country.

Figure 1.12: Economic Freedom and Income Threshold of Lowest 10% of Earners

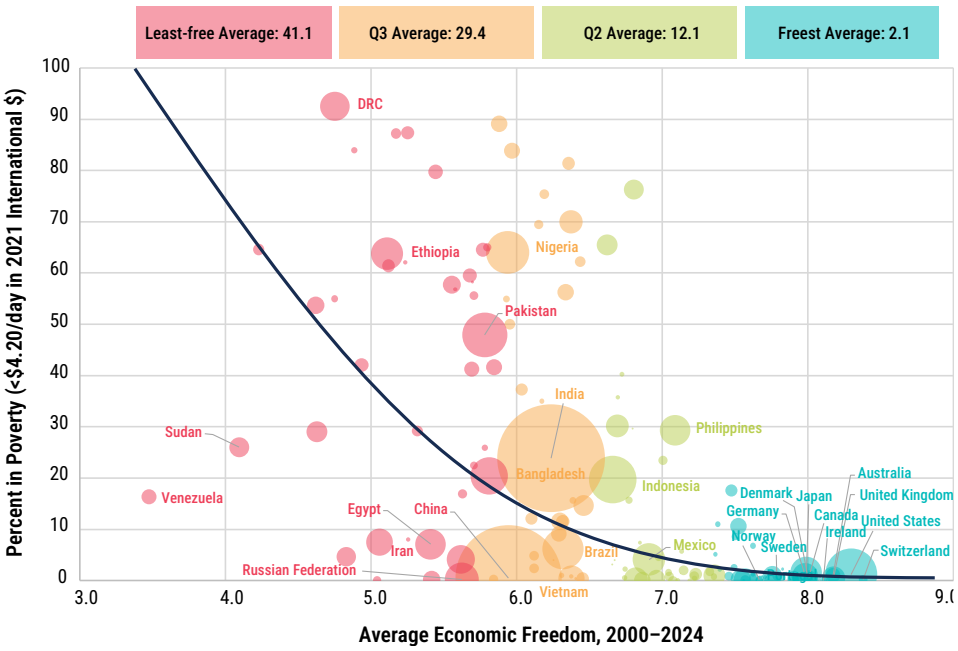
While economic freedom does not correlate with the share of income earned by the bottom 10% it does correlate with the level of income earned by the bottom 10%. In economically free places, the threshold for the bottom 10% of earners is 7.1 times greater than is the threshold for the bottom 10% in the least free places.



Sources: EFW: Authors' calculations. Income Threshold: Our World in Data (World Bank Poverty and Inequality Platform), P10 income/consumption threshold.

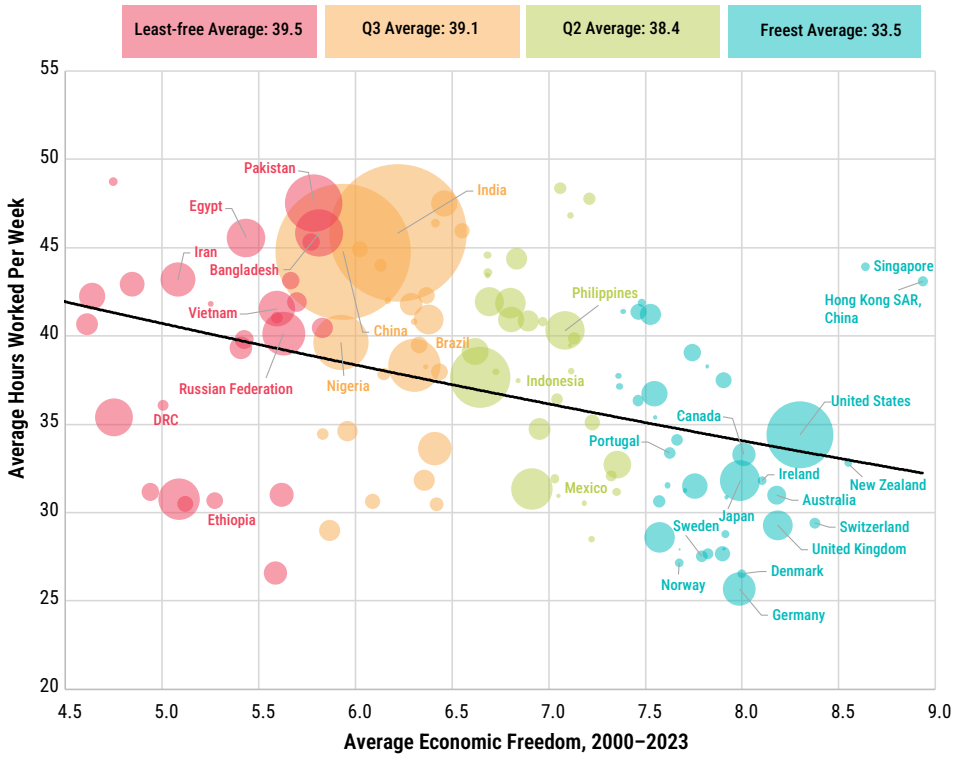
Figure 1.13: Economic Freedom and Percent in Poverty (<$4.20/day in 2021 International $)

On average, poverty levels in the least economically free quartile are about 20 times greater than in the freest quartile.



Sources: EFW: Authors' calculations. Poverty: Our World in Data (World Bank Poverty and Inequality Platform), share of population below $4.20/day (2021 Int'l $).

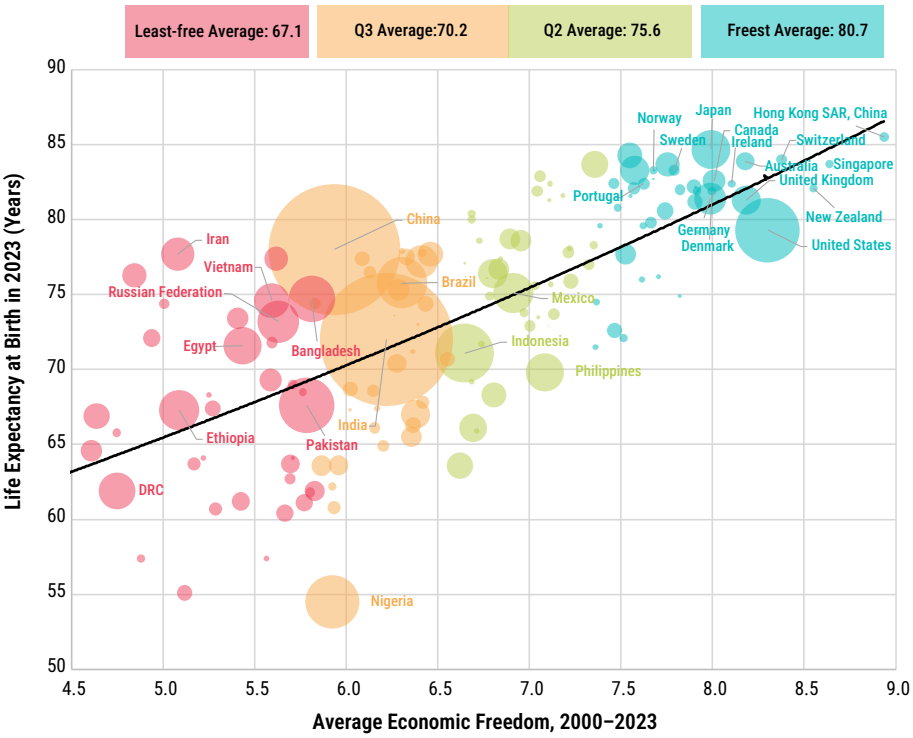
Figure 1.14: Economic Freedom and Average Hours Worked Per Week



On average, those in the least economically free quartile work about six more hours per week compared with those in the freest quartile.

Sources: EFW: Authors' calculations: Our World in Data (Penn World Table 11.0, Feenstra et al.), average annual hours worked per worker. Hours worked are derived from annual hours divided by 52.

Figure 1.15: Economic Freedom and Life Expectancy

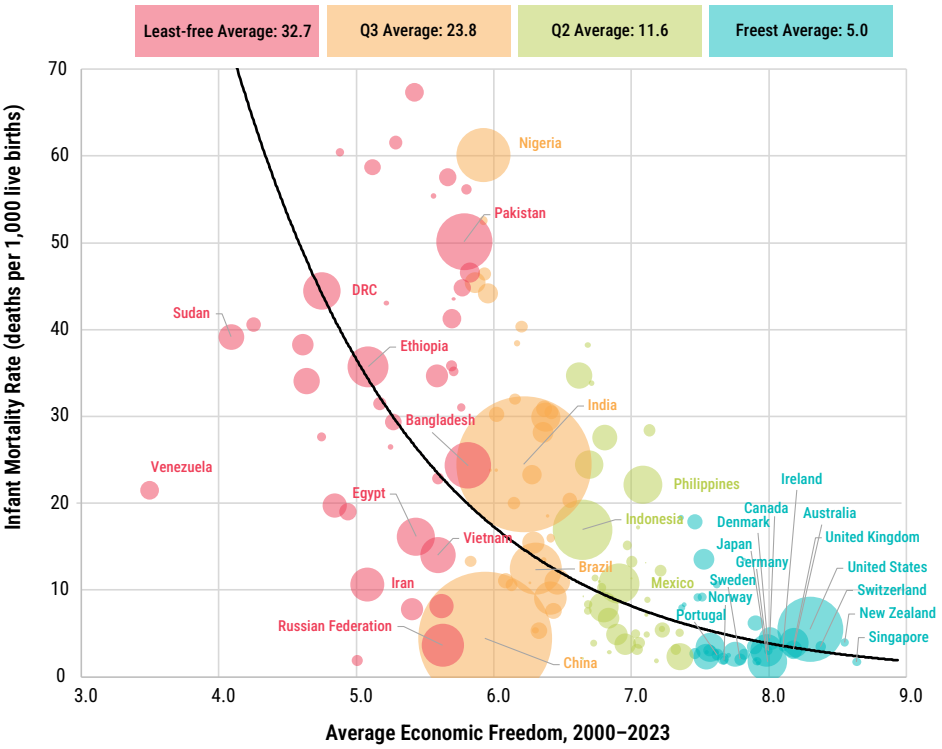


Those in the most economically free places can expect to live about 14 years longer than those in the least economically free places.

Sources: EFW: Authors' calculations. Life expectancy: Our World in Data (UN World Population Prospects 2024; HMD), life expectancy at birth.

Figure 1.16: Economic Freedom and Infant Mortality

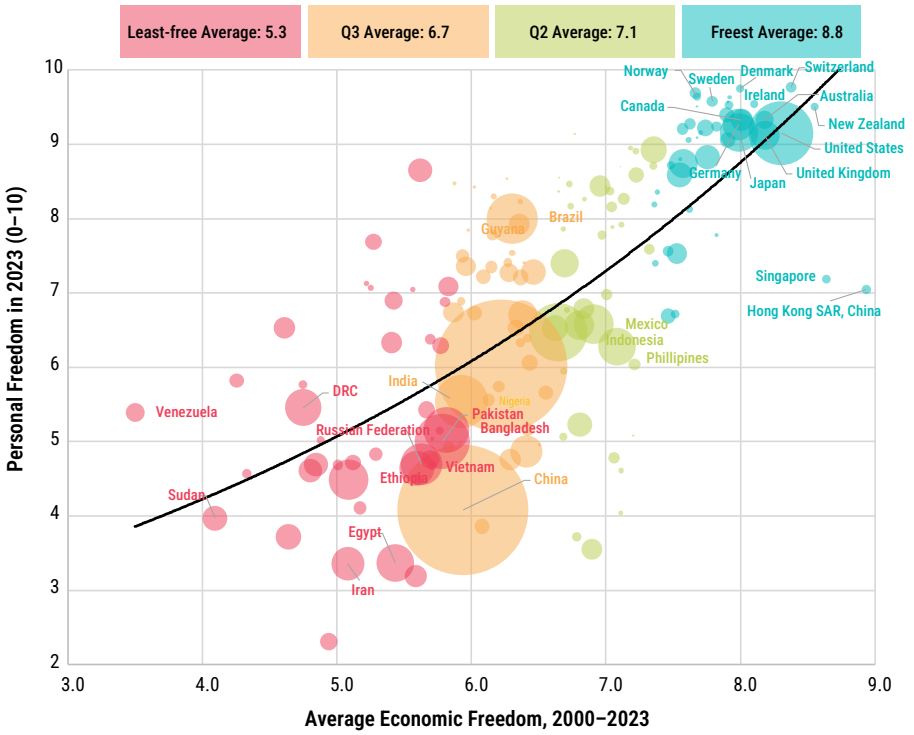
The average infant born in an economically un-free place is about seven times more likely to die than an infant born in the freest quartile.



Sources: EFW: Authors' calculations. Infant Mortality: Our World in Data (UN Inter-agency Group for Child Mortality Estimation, 2025 release), infant mortality rate, 2023 estimates; converted from percent of live births to deaths per 1,000 live births.

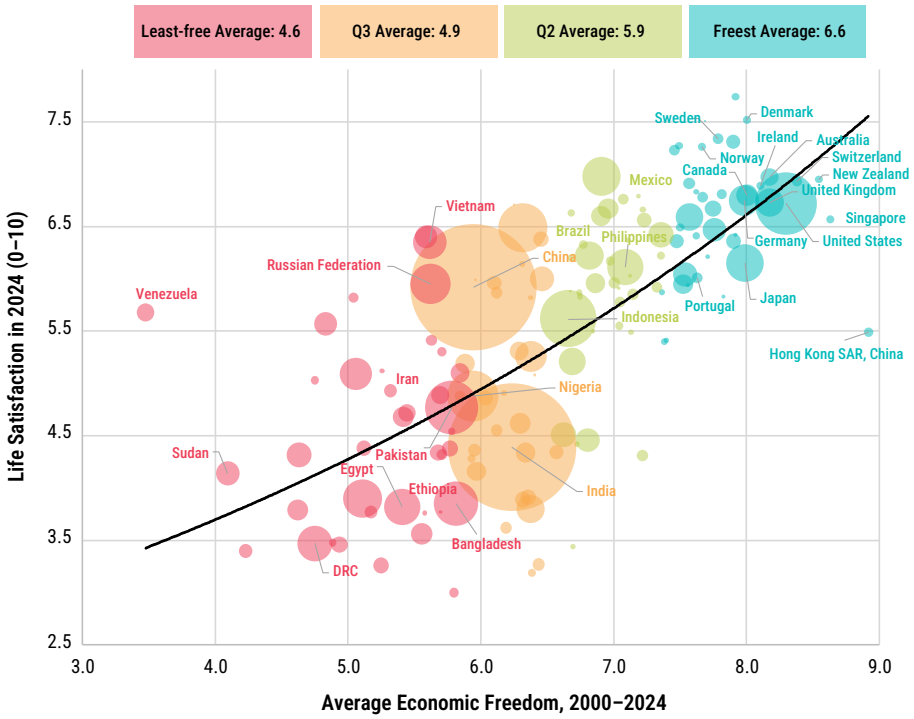
Figure 1.17: Economic Freedom and Personal Freedom

Personal freedoms such as freedom of speech, association, and religion are highly correlated with economic freedoms.



Sources: EFW: Authors' calculations; Personal Freedom: Vasquez et al., 2025.

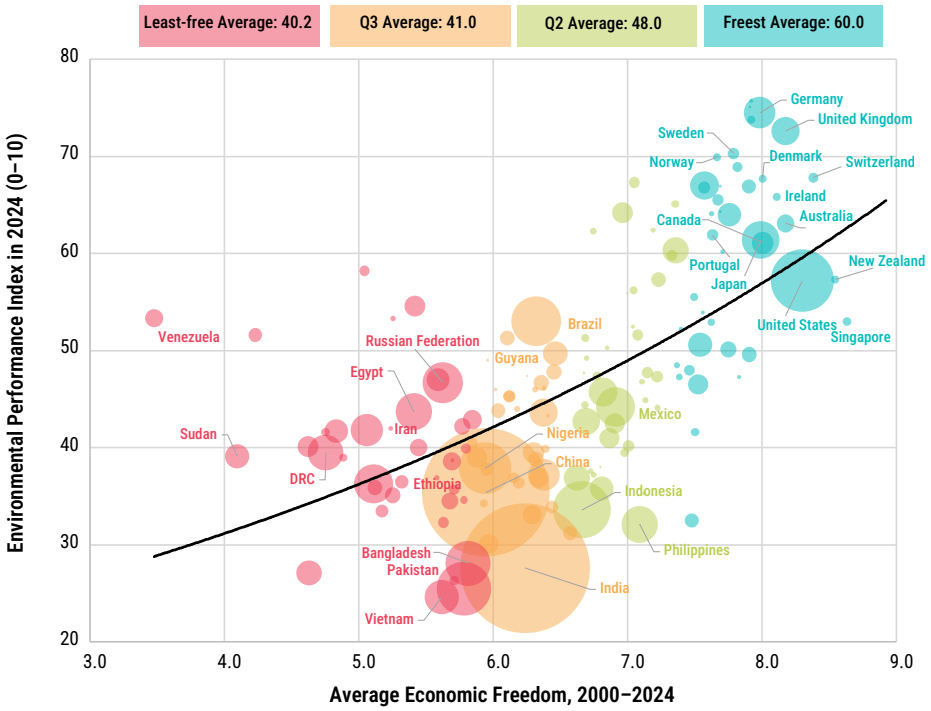
Figure 1.18: Economic Freedom and Life Satisfaction



Compared with the least economically-free quartile, those in the freest quartile are more likely to report that they are satisfied with their lives.

Sources: EFW: Authors' calculations; Life Satisfaction: Our World in Data (World Happiness Report, Wellbeing Research Centre / Gallup World Poll), self-reported life satisfaction on the Cantril ladder (0–10), each value is the three-year survey average ending in the year shown.

Figure 1.19: Economic Freedom and Environmental Performance

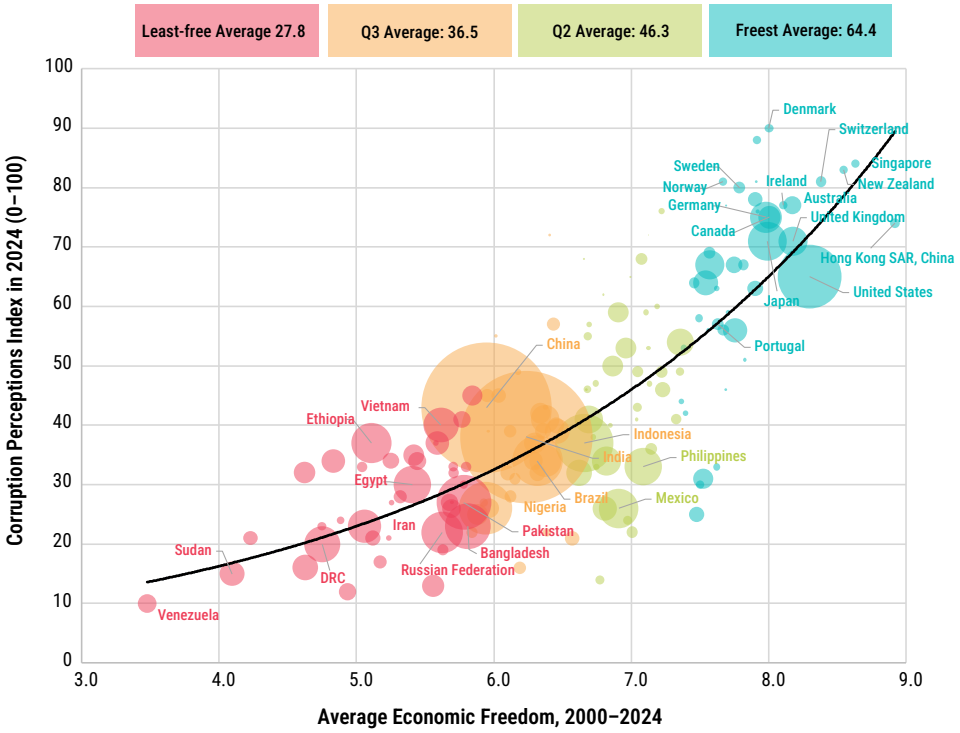


Natural environments are cleaner and better cared for in economically free places.

Sources: EFW: Authors' calculations; Environmental Performance: Yale Center for Environmental Law & Policy and Columbia University CIESIN, 2024; Environmental Performance Index (EPI), overall score 0–100.

Figure 1.20: Economic Freedom and Non-Corrupt Government

People perceive their governments to be less corrupt in economically free places.



Sources: EFW: Authors' calculations; Corruption: Transparency International, Corruption Perceptions Index (0 = highly corrupt, 100 = very clean), via Our World in Data.

Economic freedom in the literature

Each year, scholars publish dozens of articles on economic freedom. Some address fundamental questions that have interested economists for centuries, while others explore novel hypotheses. In this new segment of the report, we profile a handful of papers that we found especially interesting (if you have ideas for future papers we should profile, please email Matthew Mitchell at freetheworld@fraserinstitute.org).

Which good institutions come first? In a series of papers, Ryan Murphy and Colin O'Reilly have been exploring the connection between economic freedom and state capacity—the ability of a state to accomplish what it sets out to accomplish. These papers rely on a novel dataset that Murphy and O'Reilly have developed that measures state capacity through fiscal capacity, territorial control, market-supporting public goods, and rule of law. In their latest paper, they examine the order in which good institutions evolve, finding evidence that state capacity seems to come before economic freedom while finding little evidence that either state capacity or economic freedom needs to develop before democracy.

Murphy, Ryan H. and Colin O'Reilly (2026). Sequencing Institutional Development: The Modernization Hypothesis Reconsidered. *Journal of Comparative Economics*.

Do markets make people homicidal? Scholars have long debated the relationship between economic freedom and violence. Market skeptics like Rousseau and Marx contend that commercial competition breeds avarice, distrust, and what some call a "hard culture" that marginalizes the weak, eventually leading to more violence. On the other hand, a long line of thinkers including Smith, Voltaire, and Durkheim believe that commerce tends to lead to peaceful cooperation through mutual gain. Criminologists William Alex Pridemore and Meghan L. Rogers recently studied this question using data from 88 countries over nearly 20 years. They found economic freedom was negatively and significantly associated with lower homicide rates. In particular, a one-point increase in economic freedom (roughly equivalent to the difference between Cambodia and Korea) was associated with a 22 percent decline in homicides. The effect was most prevalent in less economically free societies.

Pridemore, William Alex, and Meghan L. Rogers (2026). Market Orientation and National Homicide Rates. *Criminology*.

Did economically unfree societies impose more severe COVID restrictions? As we show above, global economic freedom fell precipitously during the COVID pandemic. We also noted that those societies that were more economically free to begin with have been quicker than less-free societies to recover lost freedoms. Economists Vincent Miozzi and Benjamin Powell have been studying these questions at both the national and sub-national level for several years now. In their latest paper, they attempt to understand what caused some nations like Argentina, India, and Rwanda to impose severe COVID lockdowns while others like Burundi, Nicaragua, and Tanzania imposed much more mild restrictions. They find that those countries with better hospital capacity (relative to population) and greater pre-pandemic levels of economic freedom were less likely to impose severe lockdowns. As the pandemic wore on, the relationship between limited economic freedom and severe lockdowns grew stronger. Still, despite the statistical significance of these associations, they also find that much of the variation in lockdown stringency remains unexplained.

Miozzi, Vincent, and Benjamin Powell (2026). What Determines the Severity of International Lockdowns? *Southern Economic Journal*.

Do people from economically free societies cooperate more in laboratory experiments? Some social scientists study human behavior at the "macro" level, using large national datasets like the EFW to look at society-wide outcomes. Others study behavior at the "micro" level through controlled experiments in which subjects are brought into a laboratory and given incentives to either cooperate or not cooperate with others. In a new working paper, a group of economists combine these two approaches to see how society-level institutions like economic freedom affect laboratory subject behavior. Their approach combines data from 51

countries across two decades with data from 1,126 laboratory experiments. They find that certain measures of economic freedom correlate with prosocial behavior in the laboratory.

Aimone, Jason A., Sheryl Ball, Esha Dwibedi, Jeremy J. Jackson, and James E. West (2024). *Macro-Level Institutions and Micro-Level Economic Behavior: A Meta-Meta Analysis of 1,126 Studies*. NBER Working Paper 33129.

References

Aimone, Jason A., Sheryl Ball, Esha Dwibedi, Jeremy J. Jackson, and James E. West (2024). *Macro-Level Institutions and Micro-Level Economic Behavior: A Meta-Meta Analysis of 1,126 Studies*. NBER Working Paper 33129. National Bureau of Research. <https://www.nber.org/system/files/working_papers/w33129/w33129.pdf>, as of July 29, 2026.

Berggren, Niclas (ed.) (2024). *Handbook of Research on Economic Freedom*. Edward Elgar Publishing.

Block, Walter (ed.) (1993). *Economic Freedom: Toward a Theory of Measurement*. Fraser Institute. <https://www.fraserinstitute.org/studies/economic-freedom-toward-a-theory-of-measurement>, as of July 29, 2026.

Block, Sebastián, John W. Emerson, Daniel C. Esty, Alex de Sherbinin, and Zachary A. Wendling (2024). *2024 Environmental Performance Index*. Yale Center for Environmental Law & Policy and Center for International Earth Science Information Network (CIESIN), Columbia University. <https://epi.yale.edu/downloads/2024-epi-report-20250106.pdf>, as of July 31, 2026.

Bolen, J. Brandon, and Russell S. Sobel (2020). Does Balance Among Areas of Institutional Quality Matter for Economic Growth? *Southern Economic Journal* 86, 4 (April): 1418–1445. <https://doi.org/10.1002/soej.12428>, as of July 29, 2026.

Easton, Stephen T., and Michael A. Walker (eds.) (1992). *Rating Global Economic Freedom*. Fraser Institute. <https://www.fraserinstitute.org/research/rating-global-economic-freedom>, as of July 29, 2026.

Feenstra et al. (2023). Penn World Table, with major processing by Our World in Data. Productivity: output per hour worked – Penn World Table – In constant international-$ [dataset]. <https://ourworldindata.org/grapher/labor-productivity-per-hour-pennworldtable>, as of July 31, 2026.

Gwartney, James, Robert A. Lawson, and Walter Block (1996). *Economic Freedom of the World: 1975–1995*. Fraser Institute. <https://www.fraserinstitute.org/studies/economic-freedom-of-the-world-1975-1995>, as of July 29, 2026.

Gwartney, James, Randall G. Holcombe, and Robert A. Lawson (2006). Institutions and the Impact of Investment on Growth. *Kyklos* 59, 2 (May): 255–273. <https://onlinelibrary.wiley.com/doi/abs/10.1111/j.1467-6435.2006.00327.x>, as of July 31, 2026.

IMF World Economic Outlook Database (2025). GDP per capita.

Lawson, Robert (2022). Economic Freedom in the Literature: What Is It Good (Bad) For? In James Gwartney, Robert Lawson, Joshua Hall, and Ryan Murphy, *Economic Freedom of the World: 2022 Annual Report*. (Fraser Institute): 187–199. <https://www.fraserinstitute.org/sites/default/files/economic-freedom-of-the-world-2022.pdf>, as of July 29, 2026.

Lawson, Robert, Vincent Miozzi, and Meg Tuszynski (2024). Economic Freedom and Growth, Income, Investment, and Inequality: A Quantitative Summary of the Literature. *Southern Economic Journal* 90, 4 (April): 1099–1135. <https://onlinelibrary.wiley.com/doi/full/10.1002/soej.12680>, as of July 29, 2026.

Miozzi, Vincent, and Benjamin Powell (2026). What Determines the Severity of International Lockdowns? *Southern Economic Journal*. 93, 1 (July): 3–13. <https://onlinelibrary.wiley.com/doi/abs/10.1002/soej.70049>, as of July 29, 2026.

Mitchell, Matthew (2024). *Economic Freedom: What Is It? How Is It Measured? And How Does It Affect Our Lives?* Fraser Institute. <https://www.fraserinstitute.org/sites/default/files/2024-09/economic-freedom-what-is-it-how-is-it-measured.pdf>, as of July 29, 2026.

Murphy, Ryan H., and Colin O'Reilly (2026). Sequencing Institutional Development: The Modernization Hypothesis Reconsidered. *Journal of Comparative Economics*. <https://www.sciencedirect.com/science/article/abs/pii/S0147596726000478>, as of July 29, 2026.

Pridemore, William Alex, and Meghan L. Rogers (2026). Market Orientation and National Homicide Rates. *Criminology* 64, 1 (February): 88–112. <https://onlinelibrary.wiley.com/doi/full/10.1111/1745-9125.70023>, as of July 29, 2026.

Transparency International (2025). Corruption Perception Index: 2025.

UN World Population Prospects (2024). Life Expectancy at Birth.

UN Inter-agency Group for Child Mortality Estimation (2025). Infant mortality rate, 2023 estimates.

Vásquez, Ian, Matthew D. Mitchell, Ryan Murphy, and Guillermina Sutter Schneider (2025). *The Human Freedom Index 2025: A Global Measurement of Personal, Civil, and Economic Freedom*. Fraser Institute and Cato Institute. <https://www.fraserinstitute.org/studies/human-freedom-index-2025>, as of July 30, 2026.

Walker, Michael (ed.) (1988). *Freedom, Democracy, and Economic Welfare: Proceedings of an International Symposium*. Fraser Institute. <https://www.fraserinstitute.org/research/freedom-democracy-and-economic-welfare>, as of July 29, 2026.

Wellbeing Research Centre (2025). Self-reported life satisfaction [dataset]. World Happiness Report 2025 [original data]. Wellbeing Research Centre, with major processing by Our World in Data. <https://ourworldindata.org/grapher/happiness-cantril-ladder>, as of July 31, 2026.

World Bank (2026a). World Development Indicators. World Bank. <https://databank.worldbank.org/source/world-development-indicators>, as of July 6, 2026.

World Bank (2026b). Poverty and Inequality Platform. World Bank. <https://pip.worldbank.org/home>, as of July 6, 2026.

CHAPTER 2

Economic Freedom as Environmental Regulation by Markets

Vincent Geloso

1. Introduction

A frequently iterated talking point is that economic growth comes at an environmental cost. Some contend that this trade-off can be mitigated through policies that reconcile growth with conservation. Others argue that the trade-off is unavoidable and that continued economic expansion necessarily generates environmental degradation, making degrowth the only viable path forward. In other words, they contend, there exists a tension between economic growth and the environment. Thus, under either viewpoint, economic growth is typically regarded as environmentally risky because of its presumed tendency to accelerate growth at the expense of nature.[1]

Public opinion polls seem to suggest that this is not a fringe opinion. A 2019 poll in America shows that 20 percent of Americans believe "capitalism has an exploitative and corrupt nature, often hurting either people or the environment" (Pew Research Center, 2019). Even polling questions seem to assume an inherent tension between capitalist growth and nature. Take, for example, a Canadian poll from 2026 which asked whether energy policy should be designed with economic growth in mind or with environmental preservation in mind (Canadian Press, 2026).

However, is there really an inherent tension between capitalism (and the growth it seems to generate) and environmental preservation? To answer, we must understand that economic growth *can* deteriorate the environment substantially. However, it is not inevitable.

A large literature has questioned the notion of a permanent trade-off between prosperity and environmental quality, suggesting instead that the relationship may evolve as societies develop. This evolution is captured by the Environmental Kuznets Curve (henceforth the EKC). Named for the Nobel Prize-winning economist Simon Kuznets, it suggests that there is an inverted U-shape to the relationship between economic growth and the environment. In other words, initial economic development increases pollution up to a point, but after

1 There is a well-documented literature showing the connection from economic freedom to economic growth, see Alvarez, Geloso, and Scheck (2024).

that point, more income leads to reductions in pollution and greater efforts at environmental preservation and restoration.[2] In this chapter, I argue that this relationship is highly conditional on institutions—many of which underlie economic freedom. These institutions create effective ways to deal with pollution, nuisance, and resource overuse. In so doing, they reduce the peak point (so that less pollution is generated before the point is reached) and move it forward (the peak occurs at a lower income level).

In nations with institutions that protect economic freedom, property rights offer ways to experiment with liability and tort to internalize the damages of pollution in ways that are more prone to reconcile development with preservation. They also permit the creation of complementary mechanisms—insurance, easier delineation of commons, and new forms of industrial organization—that facilitate internalization. To top it off, property rights create strong incentives to innovate in ways that replace outdated production techniques with more efficient ones (i.e., those that use fewer resources). At the same time, open markets communicate information via prices about substitutes, scarcity, and damages induced by pollution while also facilitating specialization in ways that increase the efficiency of resource use.

I present this as "regulation by markets." It contrasts with the more usually discussed "regulation by bureaucracy" whereby government agencies are tasked with specific mandates to control and restructure markets (and individual behavior) in ways to improve environmental outcomes.

In Section 2, I review those mechanisms that make it possible to improve the shape of EKC via open markets and stronger property rights protection—both of which can be proxied by economic freedom indices published in the *Economic Freedom of the World* (EFW) reports. Section 3 reviews the evidence that directly speaks to the connection between economic freedom as the proxy for regulation by markets and environmental quality. Section 4 discusses regulation by government and its effect on the environment. Taken together, sections 3 and 4 are meant to highlight two key conclusions: a) that regulation by markets is far more potent in improving environmental outcomes than commonly realized and; b) that while regulation by bureaucracy can secure environmental improvements, its efficacy is often overstated as many aspects of government actions end up causing more harm than good (notably by undermining regulation by markets). Section 5 discusses and concludes.

2 Kuznets did not originate the curve. Instead, he postulated an inverted U-shaped relationship between economic growth and inequality. The economists Gene Grossman and Alan Krueger adapted this graph to show the relationship between economic development and the environment in 1991 and named it in honor of Kuznets.

2: Kuznets, regulation by markets, and regulation by bureaucracy

Environmental problems boil down to what economists call a "commons problem" or sometimes "open access resource" problem. Referring to the old communal grazing lands (i.e., the village's commons), it speaks to the idea that there are resources or areas that can be accessed by everyone. No one can be excluded from using it. However, when they access these commons, they still reap private benefits. The problem part emerges because rational self-interest leads to overuse as the cost is spread over everyone which leads to what economists call an externality (i.e., a cost borne by others than parties that contracted) (Boudreaux and Meiners, 2019).

To illustrate, take the example of an open sea fishery (a classic example in economics) (Scott, 1955). The ocean cannot be fenced to exclude some from using it the same way one can fence land to prevent trespassers. The fish that dwell in it are thus an open access resource since the ocean is a common. A fisherman knows that if he is not the one to capture the easiest fish himself, another fisherman will. He must thus pull as many fish out as he can before other fishermen do. If he hesitates, he will face higher costs in trolling the harder-to-find fish. The problem applies the same for all fishermen and they all have the same incentives. The result is that fish catches are well in excess of the fish population's ability to sustain itself. Fish stocks dwindle and eventually go extinct. That cost is shared by everyone.

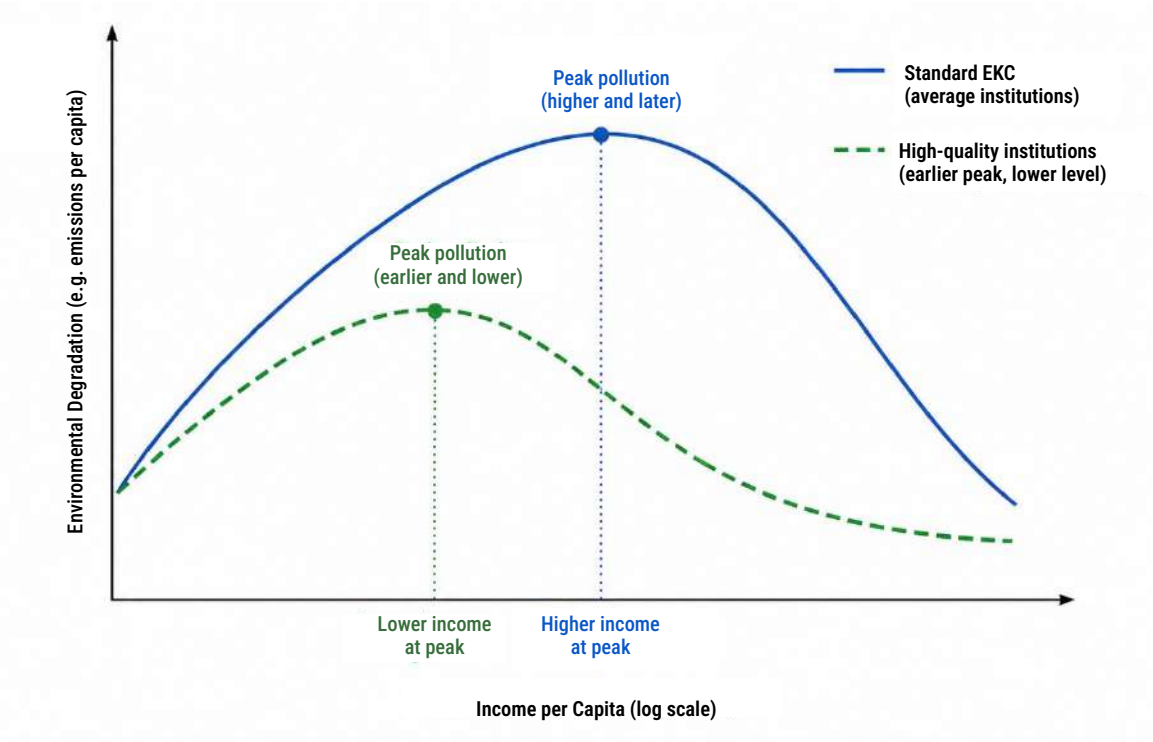
This is the same problem that exists for all environmental problems. Air pollution occurs when firms have private incentives to produce goods and the costs (i.e., the emissions) are shared by everyone. Water pollution is when firms have incentives to produce goods and throw the waste associated with the production process into the water. And so on.

Normally, three answers to environmental problems can be provided. The first is tied to what is known as the Environmental Kuznets Curve (EKC) named after economist Simon Kuznets who won the Nobel Prize in economics in 1971.[3] It postulates an inverted U-shape relationship between economic development and environmental degradation. As countries grow richer, they produce more and that leads to environmental degradation, but only up to a point. As they continue to develop, the effects on the environment become smaller and eventually reverse. After that point in income, the environment starts improving. In figure 1 below, the solid blue line depicts this idea. This relationship emerges out of three factors. The first is that richer individuals might marginally value environmental goods more as they grow richer. Thus, after a certain point, one extra percent of income might lead to more than one percent increase of spending on environmental preservation (e.g., forests, water cleanup, energy-efficiency methods, etc.). Moreover, as incomes rise the cost of some environmental

3 Dinda (2004); Raymond (2004); Stern (2017).

goods might fall relative to income. For example, if the cost of reforesting one acre of land is always $1 per acre, economic growth makes that fixed cost proportionally easier to bear. Second, economic growth does not only happen via the scaling-up of activities. In fact, it happens mostly via innovations that enhance productivity. These productivity-enhancing innovations are adopted by firms, consumers and workers if they use fewer resources such as energy, capital, and material commodities to create value. Third, the process of economic growth also comes with a form of industry rotation. Poor societies tend to be agrarian and produce mostly using land. As they grow richer, the farm sector contracts, land is returned to nature (such that forests recover) and industries emerge (leading to more air pollution from the chimneys of the new factories). Then, as they grow even richer, manufacturing industries contract in size relative to the rest of the economy and service industries rise. These new industries emit fewer air pollutants and thus air pollution declines. The three factors explain why environmental damage eventually peaks and then starts to decline.

Figure 1: Environmental Kuznets Curve



But the EKC is not a sufficient explanation. Indeed, all it does is describe a general shape. It says little about how much income is needed to reach the peak; how much environmental degradation happens before that peak is reached; or even the instances where the EKC might be too weak. Indeed, there are instances where the EKC works well in settings where the harm is localized and when those injured by environmental degradation are people not yet born. However, when both conditions are not met, the EKC has a harder time working.

An example of the problem not being localized is climate change, whereby emissions made by industries in the United States are costly to people in Kenya, South Africa, or Sudan. The growth in America comes at a cost to people elsewhere, which cuts the incentives for Americans to reduce their emissions. Similarly, if environmental problems are intergenerational, whereby pollution now creates irreversible or highly persistent damage (e.g., accumulation of greenhouse gases leading to higher temperatures) to generations not yet born, the incentives to generate the EKC are weakened.[4]

This explains the next two answers, which speak to policy responses to environmental problems. Indeed, as described above, the EKC proposes no policy course whatsoever. It simply states that, in some situations, as incomes increase, forces will materialize to improve environmental outcomes. There is little debate over the existence of the EKC; the predicted pattern shows up in a wide variety of environmental indicators from ground water contamination to air pollution to CO_2 emissions. But it does not show up everywhere (or at least the peak has not been reached in all instances), and scientists continue to debate its exact shape.[5]

However, a more important question is whether there are policies that can affect the EKC's shape and reach. By shape, I refer to the peak in figure 1 and where it occurs. Ideally, we would prefer a flatter curve with a lower peak, such that the point of reversal occurs earlier (i.e., at a lower income level on the horizontal axis) and with less environmental degradation (i.e., at a lower point on the vertical axis). By reach I mean the number of environmental outcomes to which the EKC applies. In figure 1, I presented environmental outcomes as a single aggregate indicator. However, the discussion above suggests that the EKC is likely to apply more readily to some environmental problems than others. For example, it may apply well to urban smog and other localized air-pollution problems whose costs are borne largely by people currently alive and living nearby, but less so to broader environmental problems such as chlorofluorocarbons and ozone depletion. Thus, an EKC with a wider reach would be one that applies to a larger set of environmental problems rather than only a narrow subset of them. The ideal we should strive for is an EKC with a lower peak that occurs at a lower income level and that affects a larger number of dimensions of environmental quality.

To move towards a better curve, policy choices matter. This is where the green dashed-line comes into play in figure 1. This shows the effect of better (not yet defined) policies and institutions in terms of dealing with environmental problems. Notice that the peak occurs earlier and at a lower level of pollution denoting the direction of ideal improvements we should desire.

4 Dasgupta, Laplante, Wang, and Wheeler (2002).

5 Dancer, Miller, and Burgess (2026).

What is better policy? One answer is tied to legislation by government which aims to restrict access to the commons. This means rules, quotas, permits, regulations, and penalties for overuse.[6] For example, a legislative assembly could impose emissions quotas on factories to limit greenhouse gas emissions that contribute to climate change. I call this approach regulation by bureaucracy as agencies have to be put in charge of defining and enforcing the rules. For many people, this is the more obvious form of policy approach and it requires little elaboration to be understood.

The second answer is tied to what legal scholar John Hasnas calls "common law privatization" or what I prefer to refer to as regulation by markets. Regulation by markets is more complicated and requires longer elaboration than regulation by bureaucracy. Yet it surrounds us in advanced economies. It is ubiquitous and deeply embedded in everyday life, making it so easy to overlook. This is because it all starts with property rights but it ends with strong forces to reduce socially harmful costs, increase socially beneficial outcomes, internalize both costs and benefits, and align incentives with preservation. When combined with open markets, this is a potent way to deal with environmental problems.

Secure property rights mean there are socially recognized and enforceable claims over the use of resources that define who may undertake particular actions and who must bear the costs or receive the benefits that result from those actions. As a result, behavior by parties that destroy or damage those claims can be adjudicated in courts. Under common law regimes, for example, judges developed doctrines such as trespass, nuisance, negligence, and defamation to determine when one person's actions unlawfully impose costs on another, as well as the remedies available. Central to this is the idea that he who causes harms must bear the consequences of his actions and offer remediation against injured parties who may seek compensation. This occurs through liability rules that force actors to internalize the costs that their behavior imposes on others. Property rights, when enforceable and well-defined, open the door to the use of liability rules. Aware of these potential lawsuits, actors adjust their behavior before harm is done when they are aware they can cause harm.

For example, a company working up a particular river might be aware that they can be sued for throwing waste into the water thereby damaging farms downstream. The threat of costly lawsuits incentivizes them to treat waste or dispose of it in safer ways. The adjustment can also occur by more indirect means since the security of property rights creates complementary effects. For example, insurance companies could be aware of this liability which would—for them—imply that they are taking on a risky client. The higher premiums they charge communicate information about risks and incentivize the adoption of water treatment installations. Insurance companies do more than just charge higher premiums;

6 Hasnas (2009, 2021, 2024).

they also encourage policy holders to change their behavior. For example, they may refuse to insure a factory without inspecting it and they may require it to take certain actions to mitigate the risk of an industrial accident. The security of property rights allows insurance firms to impose that additional—more indirect—mechanism which is why the security of property rights is multiplicative.

Moreover, secure property rights may incentivize the conversion of waste into valuable resources. For example, geographer Pierre Desrochers pointed out that many waste products tied to Britain's industrialization during the 19th century caused concerns of legal actions for negligence, nuisance, and trespass.[7] The risk of incurring liability costs led factories to experiment with ways to convert waste into valuable products. Coal tar—a thick dark liquid which is a byproduct of coal heated to high temperature—dumped in rivers could dramatically hurt properties downstream. If burned, it produced heavy smoke noxious to the health of nearby inhabitants. Gas companies frequently gave it away for free for fear of nuisance. However, because coal tar is made of hundreds of chemical compounds, chemists realized that these could be separated and refined, creating valuable byproducts. For example, creosote oils can be extracted and used to preserve railroad ties, telegraph poles, and wooden infrastructure. Phenol can also be extracted and used as a disinfectant to clean livestock and for other sanitary products. The nuisance problem disappeared with innovation, whereby waste was converted into valuable products. The key point to remember is that the security of property rights also created this additional indirect mechanism. Security of property rights meant that nuisance doctrine created the risk of lawsuits and thus the incentive to mitigate harm. At the same time, they allowed innovators to retain the gains from discovering more productive uses of waste materials, thereby increasing the benefits of internalization.

Unlike regulation by bureaucracy, these rules evolve incrementally through litigation and judicial decisions. Courts adapt legal doctrines to new circumstances on a case-by-case basis, refining standards of responsibility through experience. In this sense, common-law privatization relies on private rights, liability, and judicial remedies to govern behavior and resolve externalities, including environmental harms such as pollution. This is well-suited to situations where the harm of a particular practice is not yet known to people.[8] A good example of this is the case of British shellfish in the late 19th and early 20th centuries. The British were historically fond of shellfish. However, shellfish (notably oysters) feed by filtering water, which means that bacteria present in local waters can accumulate in their tissues and subsequently be ingested by humans. Shellfish growing in waters near sewage-water facilities often acted—because of Salmonella Typhi—as transmitters of typhoid fever.

7 Desrochers (2007, 2008, 2009a, 2009b, 2023, and 2025).

8 Geloso and Tynan (2025). See summary at Geloso and Tynan (2026).

The link between shellfish, wastewater, and typhoid fever was not well understood until the late 1890s and early 1900s. In 1903, however, a well-publicized case of typhoid fever was linked to oysters, leading London newspapers to speak of "Oysteria" because of the consumer response to the outbreak. The link—which had been discussed between experts for more than a decade—became vividly clear to consumers and the shellfish industry which feared collapse. A rapid experimentation process began. The main fish market in London—Billingsgate Market—initiated court cases against fish merchants who brought tainted products, required proof of site inspections by respected bacteriologists to sell at the market, and expelled merchants from well-known contaminated sites until they proved safety. The risk of liability incentivized experimentation with new rules and new arrangements of property rights. Simultaneously, Billingsgate Market began funding the research of bacteriologists into processes—notably epuration in flowing water tanks to allow the pathogens to exit shellfish—to clean the product. Moreover, aware of the risks and because consumers were turning away from their products, firms also changed their production methods. Shellfish harvesting in deeper water—though far safer, as the risk of typhoid from those sites was far smaller—had been deemed unprofitable before the 1903 crisis. This was largely because deep sea fishing required more capital, and was conducted further away from markets, thus necessitating higher transportation and handling costs. The crisis changed the incentives by shifting the demand from cheaper but riskier sites to deeper but safer sites. The risks incentivized a change in production techniques that minimized the problem.

This example illustrates the experimentation process under regulation by market and the fact that it is quite flexible. Indeed, the solution was a mixture of multiple solutions. Shellfish merchants adjusted their production methods as a result of the fear of losing consumers and being exposed to lawsuits. Retail markets like Billingsgate began restricting the entry of merchants with risky products, initiated lawsuits against them, and began to fund research and development efforts to deal with the problem. Within a decade, the "oyster" crisis was dealt with entirely and faded from the memory of all except a few historians.

All of these mechanisms of market-based regulation act to push the EKC downward and to the left by encouraging the internalization of costs and benefits and by creating incentives for firms to innovate, allowing them to capture the gains from developing cleaner and more efficient production techniques. These mechanisms are reinforced by open markets. If an industrial activity creates environmental harm, that harm represents a cost and thus an opportunity for entrepreneurs. The existence of that cost signals potential profits to anyone who can devise a way to reduce, eliminate, or repurpose it. As a result, the ability to challenge incumbent firms through innovation can hasten the disappearance of environmentally harmful practices. Yet this process also depends on secure property rights, for innovators

must be able to appropriate a sufficient share of the gains generated by their innovations if they are to undertake the costly effort of innovating in the first place.

The safer property rights are, and the more people can experiment with them (through class-action lawsuits, the transfer by sale of claims from poor parties to parties able to sue for restitution, and richer contractual and corporate forms[9]), the more efficacious market-based regulation becomes.

Both methods have upsides and downsides. The legislation approach uses coercion and penalties to limit pollution and resource overuse. According to the advocates of this approach, it is well-suited to deal with immediate crises where time is of the essence, as well as to problems with inter-generational costs since governments are long-lived agents. However, it is vulnerable to special interest lobbying (economists call it rent seeking when firms expend scarce resources seeking government-granted privileges) and politicians seeking to push costs on future voters and away from current voters (Buchanan and Wagner, 1977). Interest groups might try to lobby governments to use them as a vehicle to serve self-interested ends. For example, incumbent firms might desire emissions caps in certain industries because they limit entry from potential challengers, giving incumbents a degree of monopoly power. Additionally, the legislative approach suffers from a knowledge problem in that command-and-control policies or even lighter-touch approaches like taxes (e.g., the carbon tax) can lead to policies that are too costly: they reduce incomes more than necessary to solve a given environmental problem. In fact, the two downsides can potentially work in ways that make the environmental problem worse.

Regulation by market, for its part, may be poorly suited to deal with emergencies, as the aforementioned experimentation process takes time. It is also highly dependent on the ability to narrowly identify which polluter caused harm via negligence, nuisance, or trespass, and who the damaged party is. Regulation by market works best when property rights are clearly defined, and harms are localized, observable, and traceable to specific actors. It works less well when injured parties of environmental damages are hard to identify, such as in cases

9 While this is rarely discussed, corporate forms can be an exceptionally effective way to address environmental problems. Consider the case of a vertically integrated firm. Integration can be environmentally beneficial because it expands the boundary within which costs and benefits are internalized. Activities that would otherwise generate externalities across firms become internal transfers within the same organization, meaning that a greater share of the resulting costs is borne by the owner. For example, if a food manufacturer discharges waste into waterways that damage farms it owns downstream, it has a stronger incentive to reduce that pollution than if the manufacturing and farming operations were owned by separate firms. By bringing multiple stages of production under common ownership, vertical integration can transform environmental externalities into ordinary business costs that managers have incentives to minimize. In practice, this means that government intrusions into industrial organization (preventing certain business practices) might have the unintended ill effect of limiting incentives to deal with externalities. See Cheung (1983); Coase (1937).

when the harm is global (e.g., greenhouse gas emissions and climate change) or borne by future generations.

The limitations and strengths of both approaches suggest that the relevant question is not which system is perfect, but which institutional arrangement is better suited to a particular environmental problem. Trade-offs exist and the choice is between the best approach in shifting the EKC down to the left without hurting economic growth.

However, it is worth noting that people tend to underestimate the efficacy of regulation by market. One reason for this is that we fail to see how efficacious it is because it prevents some injurious activities before they even take place. John Hasnas reviews debates in America regarding tort law and concludes that regulation by market might even work *too well.* Advocates of tort reform routinely argue that liability risks have become so large that firms and individuals take excessive precautions to avoid lawsuits. They claim that liability concerns discourage socially beneficial activities. But in doing so, Hasnas argues, they provide support to the idea that regulation by market works well. What is powerful enough to discourage socially beneficial activities cannot simultaneously be dismissed as an ineffective regulatory mechanism!

The other reason for this is that governments are frequently very good at creating the commons problem in the first place. Take the aforementioned example of the pollution of waterways in which shellfish were harvested in Britain. After the linkage between typhoid fever and shellfish in sewage water was made, owners of oyster beds blamed local governments for discharging sewage waters near their estates. The issue arose because of the large expansion of government-owned water infrastructure. This was possible because earlier in the 19th century, legislation had exempted local governments from lawsuits by fishermen against the discharge of harmful substances. In other words, a great deal of the pollution problem was created by government meddling with property rights. Hasnas invokes a similar example: the infamous British Petroleum oil spill in the Gulf of Mexico in 2010, when 11 workers were killed, with some 134 million gallons of oil leaking into the Gulf, causing massive harm to inhabitants and fishermen. Offshore drilling carries substantial risks which expose drillers to liability. However, Hasnas points out that governments limited these liabilities by curtailing regulation by market through legislation that capped liability exposure, thereby insulating firms from some of the consequences of environmental harm and weakening the disciplining force of tort law (Hasnas, 2021). This insulation encouraged more reckless behavior and maybe even the offshore drilling in the first place.

On an even grander scale is the case of the Soviet Union, where, in the context of a centrally planned economy, the environmental record is one of overexploitation of the

commons and pollution coming at high costs to human health and welfare.[10] To quote one historian,

> [socialist economies] relied on a merciless exploitation (some would say short-sighted plundering) of the countries' natural resources of land, water, and minerals, and processing these resources in a rather wasteful way to produce poor quality products using methods of production which appeared to be what had been significantly more capital- and labor-intensive than need be. (Gomulka, 1986:103)

This creates the possibility that government remedies may not simply be inefficient but also that other state interventions create problems in the first place or amplify them. In terms of the EKC, this means that government interventions also have the ability to move the curve in the non-ideal direction of a higher peak occurring at a higher level of income, meaning that there is more environmental degradation occurs before improvements take place.

3: Direct empirical evidence

Broadly speaking, the concept of regulation by market is best proxied by the *Economic Freedom of the World* (EFW) report. The property rights component speaks most directly to the ability to internalize externalities through liability rules and tort law. The other components—regulation, open trade, and government spending—speak well to the indirect channels of regulation by market, such as the incentives for innovation, the ability of consumers to punish bad behavior, the ability to import new and better production inputs, and the ability to contest incumbent firms through innovation.

Figure 2 shows that for the broad Yale Environmental Performance Index (EPI), countries with higher economic freedom scores have higher environmental scores. The EPI is a composite measure that ranks 177 countries using 47 indicators across multiple categories of environmental performance (we will return to the categories). It assesses how closely countries approach established targets in environmental health, ecosystem vitality, and climate change mitigation.

Echoing discussions in earlier works and using the same dataset—which also has gross domestic product (GDP) per capita estimates—we can verify if elements of the Kuznets curve are present (Mitchell, 2025: 42–46). Figure 3 is based on an estimated quadratic relationship between EPI and the logarithm of GDP per capita, while controlling for economic freedom.[11] Because economic freedom was included only as an additive control and not interacted with GDP, the two curves have exactly the same shape, but the higher the economic freedom,

10 Feshbach and Friendly (1992); see also Martinez and Geloso (2026).

11 The relationship is given as follows: All variables are statistically significant at the five percent level and above.

Figure 2: Yale Environmental Performance Index (EPI) for 2026 by Economic Freedom Score (2023 Values)

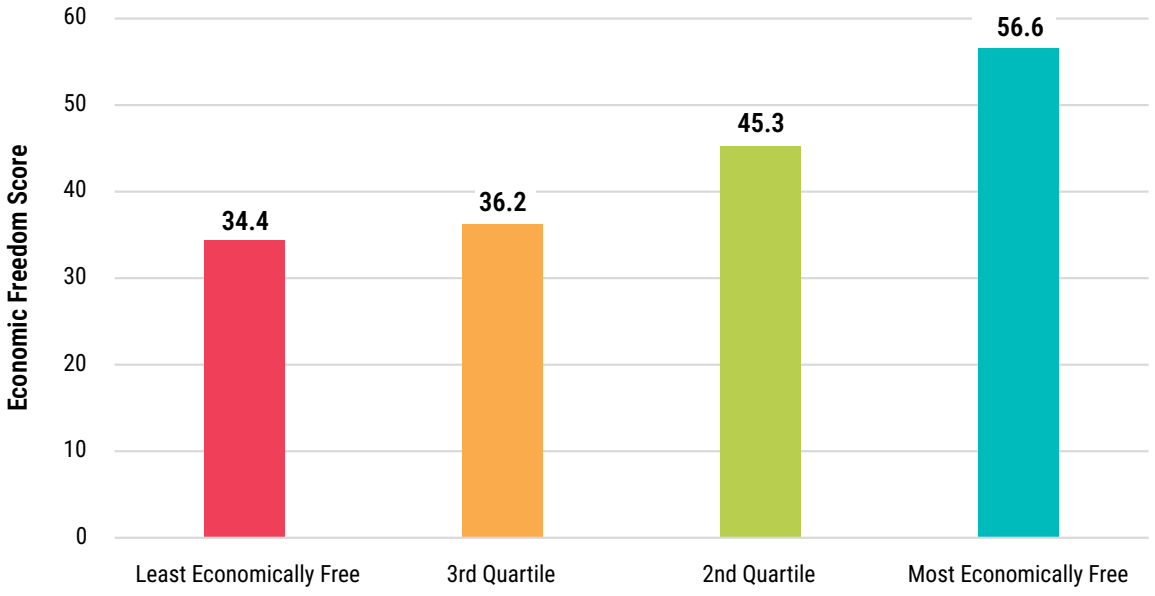
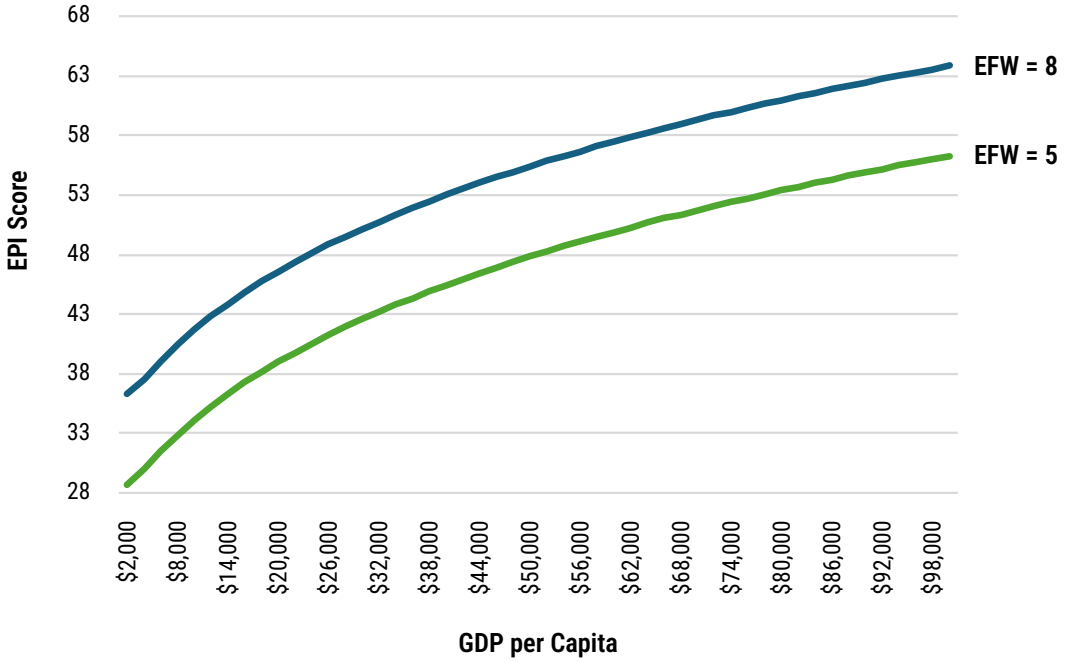


Figure 3: Predicted EPI Score As a Function of GDP per Capita at Different Levels of Economic Freedom

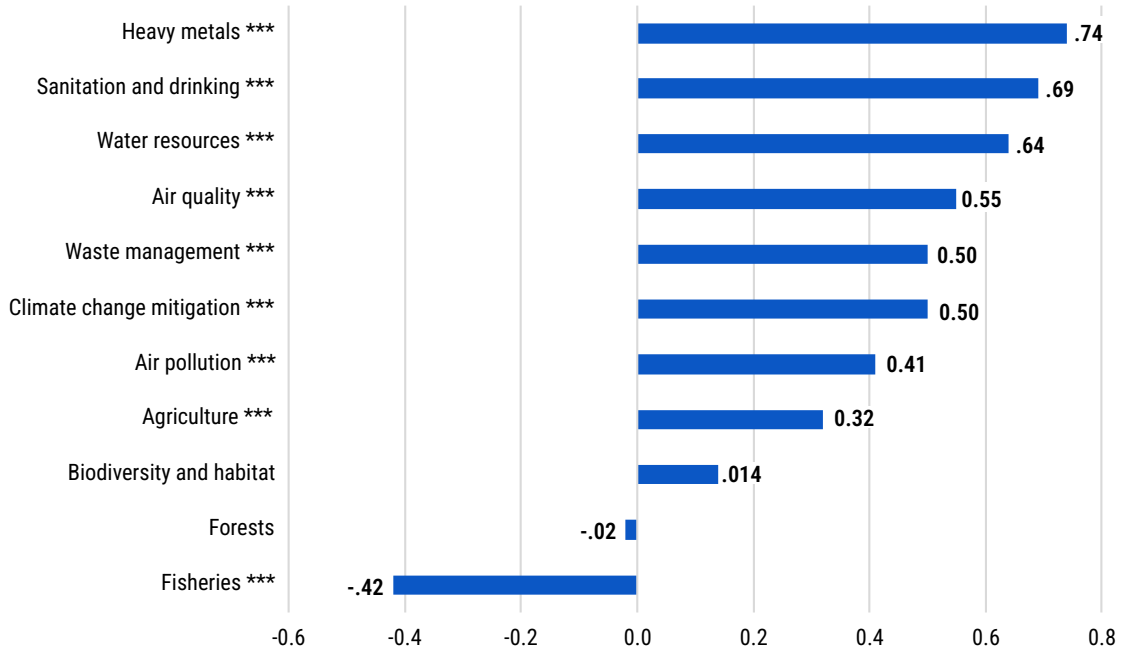


the greater the score. In other words, this specification says that for any level of income, economic freedom improves the EPI score. An alternative specification would consist of interacting economic freedom with both logged GDP per capita and its square, allowing

economic freedom to alter the level, slope, curvature, and turning point of the relationship between GDP and environmental performance. While the results show that at higher levels of economic freedom, GDP per capita is more effective in increasing the EPI score, I do not show this specification. This is because the resulting terms are highly correlated and difficult to identify separately in a relatively small cross-country sample with a single year of cross-section, producing large standard errors and statistically insignificant coefficients despite visually different fitted curves. A proper study would require richer approaches (e.g., panels) and, in any case, as we will see below, the presence of an EKC being augmented with economic freedom are echoed in causal inference works.

The general pattern of the broad EPI holds at the lower categorical level in ways that match what was explained in Section 2. In figure 4 below, I show the correlation between the Fraser Institute's EFW index and the different broad components of the Yale Environmental Performance Index (EPI). The EPI is a composite index developed by researchers at Yale University and collaborators that ranks countries according to a broad set of environmental outcomes and policy indicators, including air quality, water and sanitation, biodiversity, ecosystem vitality, and climate-related measures. This battery of measures is useful because it speaks well to the different limitations and advantages of regulation by market

Figure 4: Correlation between Economic Freedom Index and Components of the Yale Environmental Performance Index (2023)



Stars: * p<0.05, ** p<0.01, *** p <0.001

and regulation by bureaucracy approaches. For example, biodiversity and habitat as well as climate change represent good examples of limitations of regulation by markets since injured parties are hard to identify (who is harmed and to what amount by the extinction of a particular species of snails?) and harms are intergenerational (injured parties are not yet born). However, other dimensions such as waste management, sanitation and drinking water, water resources, and agricultural land quality are all dimensions in which regulation by market should be expected to perform better because harm is more localized, injured parties are easier to identify, and thus remedial actions in court may lead to preemptive harm-reduction measures by firms.

Across all indicators except one, even those where regulation by markets should be at a disadvantage, we see that more economic freedom (i.e., more room for regulation by markets) correlates with better environmental outcomes. The one big exception is fisheries, which is unsurprising given that it is very difficult to fence the oceans, as mentioned earlier. However, even this may be misleading. Oceans are difficult to fence, but de facto fencing is not impossible. Some governments—such as Iceland—fix a maximum allowable catch of fish in the high seas. The government then sells rights to that catch to the highest bidder so that the most efficient producers participate in the industry without overexploiting fish stocks (Marvasti, 2024). These rights can be traded between fishermen. This is a form of privatization consistent with regulation by markets, but a form which the EFW cannot measure directly. Wherever this approach is adopted, fish populations tend to show signs of recovery.[12] Moreover, pressures on fish populations seem to be alleviating globally, as rising productivity (and falling costs) in aquaculture (fish farming) allows for a greater share of the fish supply to be increased in the same way chicken, cows, and pigs are increased, without overexploitation of resources.[13] And there are studies attempting to measure property rights specific to aquaculture and the degree of aquaculture (Anderson, 2002). They find that stronger property rights are associated with greater use of aquaculture and other managed production systems. This suggests that secure property rights can ease pressures on high-seas fisheries and natural fish populations.

This is merely correlation, but it echoes what other studies have found.[14] For example, in 2022, Robert Lawson reviewed 24 studies linking economic freedom to some environmental outcomes. Of those, 41.7 percent showed mixed or null results; 41.7 percent showed good results (i.e., economic freedom improved nature); and 16.7 percent showed bad results—overall showing a relatively decent case for the relative strength of market-based regulation.

12 Chu (2009); Costello and Deacon (2007); Costello, Gaines, and Lynham (2008); Costello, Lynham, Lester, and Gaines (2010); Grainger and Costello (2011).

13 Desrochers, Geloso, and Szurmak (2021a, 2021b).

14 For example, see Hartwell and Coursey (2015).

More recently, Acharya, Geloso, and Psurek (2026) examined claims that capitalist economies create ecological imbalances. They normalized a wide array of environmental indices and measured imbalance using the coefficient of variation across all of them. A higher coefficient indicates more imbalance, and thus that development comes at the cost of unsustainable environmental outcomes. They find little to no evidence that economic freedom increases imbalance. In many specifications, the relationship is statistically insignificant; in others, it runs in the opposite direction, with more economically free countries exhibiting more balance. To top it off, they also note that economically freer countries tend to have much better environmental outcomes scores. Globally, environmental outcomes improved with higher levels of economic freedom (i.e., regulation by markets). Abban, Rajaguru, and Acheampong (2025) looked at the ecological footprint (i.e., a measure of degradation) of 152 countries between 2000 and 2021 and assessed the relationship with economic freedom. They also accounted for spatial spillovers between nations such that improvements in one country can affect a neighboring country. They found that a one-point increase in the EFW index is associated with a 16.4 percent reduction in the ecological footprint. However, neighboring nations also gained from such an increase, as their own footprints fall by 4.4 percent.[15] In other words, economic institutions moderate the relationship between GDP per capita and the environment in a way that significantly reduces ecological footprints, shifting the EKC downward and to the left. Finally, de Soysa (2022) used the World Bank's adjusted net savings measure (which deducts resource depletion and pollution damage while adding investment in human capital) and found that economic freedom is associated with higher sustainability since economically freer societies seem to generate wealth with less depletion of natural, human, and physical capital and lower carbon damage per unit of output. His results seem to speak to the ability of economic freedom to push down the EKC.

In fact, other studies confirm similar linkages on dimensions that should be unfavorable to market-based regulation. For example, Callais, Geloso, and Plemmons (2026) studied 49 cases of major liberalizations, defined as countries that had a one-point jump on the EFW index over any five-year window and which was sustained in the longer run. They then compared liberalizers with non-liberalizers. While they found that liberalizations increased GDP per capita by 16 percent over 10 years relative to non-liberalizers, they found no signs of increased greenhouse gas emissions (total, per capita, per dollar of GDP). They also found signs that liberalizations reduced mortality rates from outdoor air pollution. In this case, the absence of negative effects of liberalization on greenhouse-gas emissions—the environmental outcome least likely to show improvement because of the limitations of regulation by markets in addressing intergenerational and global environmental problems—makes

15 Abban, Rajaguru, and Acheampong (2025).

a particularly strong case for regulation by markets. It is able to generate growth without harming the environment.

Bjørnskov (2024) found stronger results than Callais, Geloso, and Plemmons in their study of liberalizations. Using data from 155 countries between 1975 and 2015, he found that economic freedom reduces greenhouse gas emissions and probably creates the Environmental Kuznets Curve for emissions (Bjørnskov, 2024).[16] Economically freer societies reach the point at which total emissions begin to decline at substantially lower income levels (roughly $25,000 in GDP per capita), suggesting that economic freedom accelerates the transition to cleaner technologies and production method. Hence, Bjornskov concludes that "the EKC is typically situated to the left in economically free societies, indicating earlier adoption of clean technology and faster transition towards a low-emissions society" (p. 12).

Other environmental outcomes less likely to be favorable to regulation by markets proxied in EFW also show that market-based approaches can do considerable good. Asafu-Adjaye (2003) found that economic growth did impose pressures on biodiversity but that this was strongly mediated by indices of economic freedom, as more secure property rights helped internalize biodiversity losses. Pandit and Laband (2009) reach a similar finding, showing that greater economic freedom is associated with lower species imperilment for mammals and vascular plants.

On all other environmental outcomes, where market-based regulation has a stronger theoretical foundation, the evidence is even stronger that it secures environmental improvements. Most notable is the case of forest cover, for which there is a well-documented process of forest transition in many countries, so much so that global forest cover has increased by seven percent since 1982, with additional signs of gains in the vitality of forests since 2000.[17] As incomes initially rise, forest cover tends to decline as land is converted to agricultural and industrial uses. However, beyond a certain point, further increases in income are associated with net gains in forest cover. As such, the forest transition can be understood as a special case of the Environmental Kuznets Curve applied to forests.[18] The point at which the transition begins appears to be affected positively by economic freedom (i.e., the proxy for regulation by markets): stronger property rights and greater economic freedom raise the cost of deforestation, which accelerates forest recovery in tropical nations (Barbier, 2019). Mamkhezri, Muhamad, and Khezri (2022), in their study concerned with Asia-Pacific nations, examined the forest-products footprint (an indicator closely tied to forest cover)

16 Note that, using a smaller sample of countries, Joshi and Beck (2018) found a more modest result but economic freedom did shown signs of mitigating effects.

17 Ma, Li, Wu, and Liu (2023); Song, Hansen, Stehman, Potapov, Tyukavina, Vermote, et al. (2018).

18 Caravaggio (2020); Crespo Cuaresma, Danylo, Fritz, McCallum, Obersteiner, See, et al. (2017, 1–8); Rodríguez García, Caravaggio, Gaspart, and Meyfroidt (2021).

and found that multiple types of economic freedom reduced pressures on forests while also confirming the presence of an EKC. Lin and Ge (2021), for their part, study the carbon sinks provided by forests. Because larger carbon sinks mean that forests absorb more carbon dioxide from the atmosphere, they can be interpreted as a measure of forest quality. At low levels of income, they find that greater institutional freedom reduces forest carbon sinks, which they argue reflects the fact that greater freedom at that stage allows the exploitation of resources in pursuit of economic development. What they call "institutional freedom" is an indicator of a liberal democracy and is highly correlated with economic freedom. However, beyond a certain income threshold ($2,400 in GDP per capita), institutional freedom is associated with a faster expansion of forest carbon sinks. As countries grow richer, that beneficial effect becomes substantially larger, such that beyond the turning point, economies with greater economic freedom experience larger improvements in forest carbon sinks at any given level of income. This is also consistent with the literature on privatization of forests. In areas with stronger property rights protections, forest owners have greater incentives to think long-term because they can expect to capture a larger share of the future gains from conservation and stewardship. The recently constructed Property Rights Index in Forestry (PRIF) shows a set of results consistent with an EKC, whereby higher PRIF creates incentives for investment and active management; once countries become sufficiently wealthy, those incentives increasingly favor reforestation and forest expansion.[19]

Such results suggest that regulation by markets has the ability to push the EKC downward and to the left, such that freer markets and strong property rights protection allow societies to reach the forest transition earlier and at lower levels of environmental degradation. But forests are not the only example of such positive associations between economic freedom (again, our proxy for regulation by markets) and environmental improvements. Prenovitz, Hazlett, and Reilly (2023) found that economic freedom is associated with higher rates of recycling. This result is echoed by Nguyen and Nguyen (2022), who studied the 28 EU countries between 2001 and 2021 but also looked at income from recycling, repair, and reuse sectors.

There are also indirect effects of regulation by markets. For example, greater economic freedom is tied with a lesser dependency on natural resources (Muhamad, 2023: 15–53). Qamruzzaman (2026) showed that greater trade openness is associated with a higher rate of green technological innovations.[20] One reason for this is that green technologies frequently have higher fixed costs to be initially deployed. To render such high-cost initial investments profitable, there must be a possibility to scale up production such that average costs fall.

19 Rimoli, Bontemps, Bouriaud, Acharya, Nollet, Snoussi, et al. (2025).

20 Qamruzzaman (2026).

Open trade means large markets and thus lower average costs. Bétila (2023) used data from 138 countries between 1995 and 2018 to see if economic freedom encouraged renewable energy innovations and consumption. He found that freer economic institutions did facilitate the transition toward cleaner energy systems which, in turn, improved environmental quality by pushing down carbon emissions (Bétila, 2023).

4: Regulation by bureaucracy

The results from Section 3 above should be interpreted neither as a case against *any* state action in the form of regulation by bureaucracy, nor should they be interpreted as a case for the view that regulation by markets is bulletproof. There are settings, as indicated earlier, where regulation by markets may fail to operate, leading to cases where economic growth definitely can hurt the environment.[21] In those instances, regulation by bureaucracy has the upper hand.

For example, some of the aforementioned sources that showed that economic freedom improved environmental outcomes also contained results showing contests between variables that can be deemed to represent regulation by markets and variables that spoke to regulation by bureaucracy. For example, while trade liberalization is associated with more green innovations and technologies, environmental taxes are associated with the same outcome.[22] This dual effect can be thought of as saying that environmental taxes make pollution more costly and encourage firms to develop cleaner technologies, while trade freedom facilitates the diffusion of technologies, knowledge, and best practices across borders. Hence, there are ways that both approaches can work together.

Such a complementary approach helps explain why the conventional economics literature on carbon taxation tends to recommend pairing carbon pricing with reductions in command-and-control regulation and other distortionary taxes. The objective is both to ease firms' adjustment to the new price signals and to encourage the development of innovations that become profitable once the social cost of carbon is reflected in market prices (McKitrick, 2011; Tol, 2023).

However, while one can find evidence that regulation by bureaucracy improves outcomes,

21 Another example is provided by Cai, Murtazashvili, Murtazashvili, and Salahodjaev (2020) who find a strong Environmental Kuznets Curve in forest cover after controlling for the individualist values of the population. However, measures of economic freedom (using the Heritage Foundation index) exert no independent effect. This may reflect substantial overlap between individualism and economic freedom, making it difficult to separately identify their effects. Indeed, Cai, Murtazashvili, Murtazashvili, and Salahodjaev argue that "individualist cultures contribute to conservation by encouraging property rights entrepreneurship," (2020: 175)—a mechanism that closely resemble those associated with economic freedom.

22 Qamruzzaman (2026).

its efficacy is probably overstated. One reason for this is epistemic in that governments have a hard time finding the best solution—the one that secures the most improvements at the lowest social cost (i.e., without harming economic growth). For example, Maxwell Tabarrok recently studied the impact of the *Endangered Species Act* (ESA) in the United States on housing construction. Exploiting the time and location of listings of endangered species (which do protect endangered species), he found that each additional listing reduced housing construction by 2.3 permits per thousand residents per year.[23] In fact, sometimes, regulation by bureaucracy is tied to unforeseen harm on other environmental dimensions. For example, ethanol mandates to promote the use of biofuels reduced feed costs and thus induced increases in livestock (which produce greenhouse gases through digestion and manure) and conversion of forest and grassland (which capture carbon) into cropland that, on net, increased carbon emissions rather than reduce them.[24]

Another reason is that governments often engage in inconsistent policy-making. For example, Luke Petach (2026) found that while governments in the United States promoted policies that ought to reduce greenhouse gas emissions, they also pushed for nuclear reactor closures—which emit far fewer greenhouse gases than alternative energy sources. The independent effect of the closures was to increase carbon emissions per capita by between six and eight percent—thereby offsetting some of the gains of other policies (Petach, 2026).

Globally, we should not underestimate the degree to which commons problems are created via government interventions. Take the example of climate change—which is probably the strongest case for regulation by bureaucracy. Climate change is not simply anthropogenic (human-caused); it is also partly statogenic (state-caused) (Geloso, 2022). Governments around the world subsidize fossil-fuel consumption through direct transfers, tax exemptions, and below-market pricing, encouraging greater use of carbon-intensive energy sources. These distortions of markets amount in value to roughly 6.5 percent of global GDP and affect countries responsible for more than 40 percent of world oil consumption.[25] The evidence suggests that eliminating these subsidies could reduce greenhouse gas emissions by anywhere from seven to 21 percent, while simultaneously increasing economic output.[26] In other words, a substantial share of global emissions is not merely the result of human activity, but of government policies that artificially widen the gap between private and social costs.

23 Tabarrok (2025).

24 Searchinger, Heimlich, Houghton, Dong, Elobeid, Fabiosa, et al. (2008).

25 Coady, Parry, Sears, and Shang (2017).

26 Larsen and Shah (1992); Burniaux and Chateau (2014); Arzaghi and Squalli (2023).

5: Discussion and conclusion

The literature above does not say that there is no case for regulation by bureaucracy, nor that the case for regulation by markets is complete. What it does show is that the case for regulation by markets is understated in conventional wisdom. And the case for regulation by bureaucracy is often overstated.

More importantly, the results above suggest an approach to the balancing act required to secure rapid economic growth and environmental improvement simultaneously. The key is to rely on regulation by bureaucracy where regulation by markets is insufficient, while recognizing that the reach of market-based regulation depends on the security of property rights, the openness of markets, and the burden imposed by regulation itself. Economies with more open trade, more secure property rights, and less burdensome regulations will require smaller bureaucracies because these conditions allow greater room for liability rules, tort law, nuisance doctrines, market competition, innovation, and insurance mechanisms to interact and evolve in ways that secure environmental improvements at the lowest possible cost. In doing so, they can improve the shape, peak, and reach of the EKC. This, in turn, reduces the need to rely on regulation by bureaucracy—which can itself improve environmental outcomes—without eliminating its necessity.

The economic freedom literature highlighted above illustrates the scope for navigating the trade-offs between these two approaches for when they are substitutes. This is where the point regarding contradictory policy made in Section 5 becomes relevant. However, this point does not mean market-based regulation and bureaucratic regulation are always substitutes. They can occasionally complement, with stronger market institutions expanding the range of environmental problems that can be addressed without resorting to more centralized forms of regulation.

References

Abban, Olivier Joseph, Gulasekaran Rajaguru, and Alex O. Acheampong (2025). The Spillover Effect of Economic Institutions on the Environment: A Global Evidence from Spatial Econometric Analysis. *Journal of Environmental Management* 373 (January): 123645. <https://www.sciencedirect.com/science/article/pii/S0301479724036314>, as of August 13, 2026.

Acharya, Ashruta, Vincent Geloso, and Aleksander Psurek (2026). The Hole in the Doughnut: Formalizing and Testing a Key Model of Degrowth. *Contemporary Economic Policy* 44, 3 (July): 549–575. <https://onlinelibrary.wiley.com/doi/full/10.1111/coep.70031>, as of August 13, 2026.

Alvarez, Sean P., Vincent Geloso, Macy Scheck (2024). Revisiting the Relationship between Economic Freedom and Development to Account for Statistical Deception by Autocratic Regimes. *European Journal of Political Economy* 85 (December): 102577. <https://www.sciencedirect.com/science/article/abs/pii/S017626802400079X>, as of August 11, 2026.

Anderson, James L. (2002). Aquaculture and the Future: Why Fisheries Economists Should Care. *Marine Resource Economics* 17, 2: 133–151. <https://www.jstor.org/stable/42629357>, as of August 13, 2026.

Arzaghi, Mohammad, and Jay Squalli (2023). The Environmental Impact of Fossil Fuel Subsidy Policies. *Energy Economics* 126 (October): 106980. <https://www.sciencedirect.com/science/article/abs/pii/S0140988323004784>, as of August 13, 2026.

Asafu-Adjaye, John (2003). Biodiversity Loss and Economic Growth: A Cross-Country Analysis. *Contemporary Economic Policy* 21, 2 (April): 173–185. <https://onlinelibrary.wiley.com/doi/abs/10.1093/cep/byg003>, August 13, 2026.

Barbier, Edward B. (2019). Institutional Constraints and the Forest Transition in Tropical Developing Countries. *International Advances in Economic Research* 25, 1 (February): 1–18. <https://ideas.repec.org/a/kap/iaecre/v25y2019i1d10.1007_s11294-019-09725-8.html>, as of August 13, 2026.

Bétila, Rafiou Raphaël (2023). Economic Freedom and Carbon Emission Across the Globe: The Mediating Effect of Renewable Energy Consumption. *Environmental Science and Pollution Research International* 30, 36 (August): 86300–86327. <https://pubmed.ncbi.nlm.nih.gov/37402919/>, as of August 13, 2026.

Bjørnskov, Christian (2024). Economic Freedom and the Greenhouse Gas Kuznets Curve. *European Journal of Political Economy* 82 (March): 102530. <https://www.sciencedirect.com/science/article/pii/S0176268024000326>, as of August 13, 2026.

Boudreaux, Donald J., and Roger Meiners (2019). Externality: Origins and Classifications. *Natural Resources Journal* 59, 1 (Winter): 1–34. <https://www.jstor.org/stable/26617802?seq=1>, as of August 11, 2026.

Buchanan, James M., and Richard E. Wagner (1977). *Democracy in Deficit: The Political Legacy of Lord Keynes*. Liberty Fund.

Burniaux, Jean-Marc, and Jean Chateau (2014). Greenhouse Gases Mitigation Potential and Economic Efficiency of Phasing-Out Fossil Fuel Subsidies. *International Economics* 140 (December): 71–88. <https://www.sciencedirect.com/science/article/abs/pii/S211070171400033X>, as of August 13, 2026.

Cai, Meina, Ilia Murtazashvili, Jennifer Murtazashvili, and Raufhon Salahodjaev (2020). Individualism and Governance of the Commons. *Public Choice* 184, 1 (July): 175–195. <https://ideas.repec.org/a/kap/pubcho/v184y2020i1d10.1007_s11127-019-00722-3.html>, as of August 13, 2026.

Callais, Justin, Vincent Geloso, Alicia Plemmons (2026). Economic Freedom and the Environment: Causal Evidence from Liberalization Reforms. *Structural Change and Economic Dynamics* 79 (August): 354–374. <https://www.sciencedirect.com/science/article/abs/pii/S0954349X26000901>, as of August 13, 2026.

Canadian Press (2026, May 11). Economic Growth Now Tops Environment As Priority in Energy Policy, Poll Suggests. BNN Bloomberg. <https://www.bnnbloomberg.ca/business/2026/05/11/economic-growth-now-tops-environment-as-priority-in-energy-policy-poll-suggests/>, as of August 11, 2026.

Caravaggio, Nicola (2020). A Global Empirical Re-Assessment of the Environmental Kuznets Curve for Deforestation. *Forest Policy and Economics* 119 (October): 102282. <https://www.sciencedirect.com/science/article/abs/pii/S1389934120305165>, as of August 13, 2026.

Cheung, Steven N. S. (1983). The Contractual Nature of the Firm. *Journal of Law and Economics* 26, 1 (April): 1–21. <https://it.szu.edu.cn/__local/5/5A/01/914E82CD0D04A1653AE456A8383_C3587F7D_66161.pdf?e=.pdf>, as of August 13, 2026.

Chu, Cindy (2009). Thirty Years Later: The Global Growth of ITQs and Their Influence on Stock Status in Marine Fisheries. *Fish and Fisheries* 10, 2 (June): 217–230. <https://onlinelibrary.wiley.com/doi/10.1111/j.1467-2979.2008.00313.x>, as of August 13, 2026.

Coady, David, Ian Parry, Louis Sears, and Baoping Shang (2017). How Large Are Global Fossil Fuel Subsidies? *World Development* 91 (March): 11–27. <https://www.sciencedirect.com/science/article/abs/pii/S0305750X16304867>, as of August 13, 2026.

Coase, Ronald H. (1937). The Nature of the Firm. *Economica* 4, 16 (November): 386–405. <https://onlinelibrary.wiley.com/doi/10.1111/j.1468-0335.1937.tb00002.x>, as of August 13, 2026.

Costello, Christopher, John Lynham, Sarah E. Lester, and Steven D. Gaines (2010). Economic Incentives and Global Fisheries Sustainability. *Annual Review of Resource Economics* 2, 1 (October): 299–318. <https://www.annualreviews.org/content/journals/10.1146/annurev.resource.012809.103923>, as of August 13, 2026.

Costello, Christopher, and Robert Deacon (2007). The Efficiency Gains from Fully Delineating Rights in an ITQ Fishery. *Marine Resource Economics* 22, 4: 347–361. <https://www.jstor.org/stable/42629566>, as of August 13, 2026.

Costello, Christopher, Steven D. Gaines, and John Lynham (2008). Can Catch Shares Prevent Fisheries Collapse. *Science* 321, 5896 (September): 1678–1681.<https://pubmed.ncbi.nlm.nih.gov/18801999/>, as of August 13, 2026.

Crespo Cuaresma, Jesús, Olha Danylo, Steffen Fritz, Ian McCallum, Michael Obersteiner, Linda See, and Brian Walsh (2017). Economic Development and Forest Cover: Evidence from Satellite Data. *Scientific Reports* 7 (January): 40678. <https://pubmed.ncbi.nlm.nih.gov/28091593/>, as of August 13, 2026.

Dancer, Ashley, Steve Miller, and Matthew Burgess (2026). Developed Economies Are Growing while Reducing Many of Their Environmental Impacts. Working Paper, University of Wyoming. <https://assets-eu.researchsquare.com/files/rs-9558878/v1_covered_f882d749-de19-4ecc-a686-e225151ce877.pdf?c=1780904641>, as of August 11, 2026.

Dasgupta, Susmita, Benoit Laplante, Hua Wang, and David Wheeler (2002). Confronting the Environmental Kuznets Curve. *Journal of Economic Perspectives* 16, 1 (Winter): 147–168. <https://www.aeaweb.org/articles?id=10.1257/0895330027157>, as of August 11, 2026.

de Soysa, Indra (2022). Economic Freedom vs. Egalitarianism: An Empirical Test of Weak & Strong Sustainability, 1970–2017. *Kyklos* 75, 2 (May): 236–268. <https://onlinelibrary.wiley.com/doi/10.1111/kykl.12290>, as of August 13, 2026.

Desrochers, Pierre (2007). How Did the Invisible Hand Handle Industrial Waste? By-Product Development before the Modern Environmental Era. *Enterprise & Society* 8, 2 (June): 348–374. <https://www.cambridge.org/core/journals/enterprise-and-society/article/abs/how-did-the-invisible-hand-handle-industrial-waste-byproduct-development-before-the-modern-environmental-era/23B90BAD24493ACEB87BA7B8F60ABBA8>, as of August 11, 2026.

Desrochers, Pierre (2008). Did the Invisible Hand Need a Regulatory Glove to Develop a Green Thumb? Some Historical Perspective on Market Incentives, Win-Win Innovations and the Porter Hypothesis. *Environmental & Resource Economics* 41, 4 (March): 519–539. <https://link.springer.com/article/10.1007/s10640-008-9208-x>, as of August 11, 2026.

Desrochers, Pierre (2009a). Victorian Pioneers of Corporate Sustainability. *Business History Review* 83, 4 (Winter): 703–729. <https://www.cambridge.org/core/journals/business-history-review/article/abs/victorian-pioneers-of-corporate-sustainability/C2DFFFF428A51C0D790322A53CC133D9>, as of August 11, 2026.

Desrochers, Pierre (2009b). Does the Invisible Hand Have a Green Thumb? Incentives, Linkages, and the Creation of Wealth Out of Industrial Waste in Victorian England. *Geographical Journal* 175, 1 (March): 3–16. <https://www.cambridge.org/core/journals/business-history-review/article/abs/victorian-pioneers-of-corporate-sustainability/C2DFFFF428A51C0D790322A53CC133D9>, as of August 11, 2026.

Desrochers, Pierre, Vincent Geloso, and Joanna Szurmak (2021a). Care to Wager Again? An Appraisal of Paul Ehrlich's Counterbet Offer to Julian Simon, Part 1: Outcomes. *Social Science Quarterly* 102, 2 (March): 786–807. <https://onlinelibrary.wiley.com/doi/abs/10.1111/ssqu.12928>, as of August 11, 2026.

Desrochers, Pierre, Vincent Geloso, and Joanna Szurmak (2021b). Care to Wager Again? An Appraisal of Paul Ehrlich's Counterbet Offer to Julian Simon, Part 2: Critical Analysis. *Social Science Quarterly* 102, 2 (March): 808–829. <https://onlinelibrary.wiley.com/doi/abs/10.1111/ssqu.12920>, as of August 11, 2026.

Desrochers, Pierre (2023). *The Circular Economy: (Re)discovering the Free Market*. Fraser Institute. <https://www.fraserinstitute.org/sites/default/files/ESG-myths-realities-ESG-circular-economy.pdf>, as of August 11, 2026.

Desrochers, Pierre (2025). Lost Institutional Memory and Policy Advice: The Royal Society of Arts on the Circular Economy Through the Centuries. *Recycling* 10, 2 (March): 49. <https://www.mdpi.com/2313-4321/10/2/49>, as of August 11, 2026.

Dinda, Soumyananda (2004). Environmental Kuznets Curve Hypothesis: A Survey. *Ecological Economics* 49, 4: 431–455. <https://www.sciencedirect.com/science/article/abs/pii/S0921800904001570>, as of August 11, 2026.

Feshbach, Murray, and Alfred Friendly, Jr. (1992). *Ecocide in the USSR: Health and Nature Under Siege*. Basic Books.

Geloso, Vincent (2022). Statogenic Climate Change? Julian Simon and Institutions. *Review of Austrian Economics* 35 (September): 343–358. <https://link.springer.com/article/10.1007/s11138-022-00581-0>, as of August 13, 2026.

Geloso, Vincent, and Nicola Tynan (2025). Typhoid Contamination and Self-Regulation of London's Shellfish Industry. *GMU Working Paper in Economics* no. 25–31. <https://papers.ssrn.com/sol3/papers.cfm?abstract_id=5320950>, as of August 13, 2026.

Geloso, Vincent, and Nicola Tynan (2026). Typhoid Contamination and Self-Regulation of London's Shellfish Industry. *Research Briefs in Economic Policy* no. 478. Cato Institute. <https://www.cato.org/research-briefs-economic-policy/typhoid-contamination-self-regulation-londons-shellfish-industry>, as of August 13, 2026.

Gomulka, Stanislaw (1986). *Growth, Innovation and Reform in Eastern Europe*. University of Wisconsin Press.

Grainger, Corbett A., and Christopher Costello (2011). The Value of Secure Property Rights: Evidence from Global Fisheries. NBER Working Paper Series, no. 17019. National Bureau of Economic Research. <https://www.nber.org/system/files/working_papers/w17019/w17019.pdf>, as of August 13, 2026.

Hartwell, Christopher A., and Don L. Coursey (2015). Revisiting the Environmental Rewards of Economic Freedom. *Economics and Business Letters* 4, 1: 36–50. <https://ideas.repec.org/a/ove/journl/aid10563.html>, as of August 13, 2026.

Hasnas, John (2009). Two Theories of Environmental Regulation. *Social Philosophy and Policy* 26, 2 (July): 95–129. <https://www.cambridge.org/core/journals/social-philosophy-and-policy/article/abs/two-theories-of-environmental-regulation/C7002B90780852CC10066F066B5A3D13>, as of August 11, 2026.

Hasnas, John (2021). Market Failure, Regulation, and Invisible Gorillas. *Georgetown Journal of Law & Public Policy* 19, S: 813. <https://www.law.georgetown.edu/public-policy-journal/in-print/volume-19-special-issue-2021/market-failure-regulation-and-invisible-gorillas/>, as of August 11, 2026.

Hasnas, John (2024). *Common Law Liberalism: A New Theory of the Libertarian Society*. Oxford University Press.

Joshi, Prathibha, and Kris Beck (2018). Democracy and Carbon Dioxide Emissions: Assessing the Interactions of Political and Economic Freedom and the Environmental Kuznets Curve. *Energy Research & Social Science* 39 (May): 46–54. <https://www.sciencedirect.com/science/article/abs/pii/S2214629617303481>, as of August 13, 2026.

Khezri, Mohsen, and Goran M. Muhamad (2023). Environmental Effects of Entrepreneurship Indices on Ecological Footprint of Croplands and Grazing Lands in the Economy. *Journal of Cleaner Production* 414 (August): 137550. <https://doi.org/10.1016/j.jclepro.2023.137550>, as of August 13, 2026.

Larsen, Bjorn, and Anwar Shah (1992). World Fossil Fuel Subsidies and Global Carbon Emissions. Policy, Research Working Papers, no. WPS1002. World Bank Group. <https://documents.worldbank.org/en/publication/documents-reports/documentdetail/332991468739452719>, as of August 13, 2026.

Lin, Boqiang, and Jiamin Ge (2021). Does Institutional Freedom Matter for Global Forest Carbon Sinks in the Face of Economic Development Disparity? *China Economic Review* 65 (February): 101563. <https://www.sciencedirect.com/science/article/pii/S1043951X20301607>, as of August 13, 2026.

Ma, Jun, Jiawei Li, Wanben Wu, and Jiajia Liu (2023). Global Forest Fragmentation Change from 2000 to 2020. *Nature Communications* 14 (July): 3752. <https://www.nature.com/articles/s41467-023-39221-x>, as of August 13, 2026.

Mamkhezri, Jamal, Goran M. Muhamad, and Mohsen Khezri (2022). Assessing the Spatial Effects of Economic Freedom on Forest-Products, Grazing-Land, and Cropland Footprints: The Case of Asia-Pacific Countries. *Journal of Environmental Management* 316 (August): 115274. <https://www.sciencedirect.com/science/article/abs/pii/S0301479722008477>, as of August 13, 2026.

Martinez, Carlos Luis, and Vincent Geloso (2026). Dirty Commies: The Effect of the Cuban Revolution in Greenhouse Gas Emissions. SSRN. <https://papers.ssrn.com/sol3/papers.cfm?abstract_id=7043339>, as of August 13, 2026.

Marvasti, Akbar (2024). Safety Effects of Property Rights Contract Changes: Evidence from Field Experience in Fisheries. *Journal of Government and Economics* 13 (Spring): 100105. <https://www.sciencedirect.com/science/article/pii/S2667319324000090>, as of August 13, 2026.

McKitrick, Ross (2011). *Economic Analysis of Environmental Policy*. University of Toronto Press.

Meyer, A. L., Gerrit C. van Kooten, and Sen Wang (2003). Institutional, Social and Economic Roots of Deforestation: A Cross-Country Comparison. *International Forestry Review* 5, 1 (March): 29–37. <https://www.jstor.org/stable/43739299>, as of August 13, 2026.

Mitchell, Matthew (2025). Economic Freedom: What Is It? How Is It Measured? And How Does It Affect Our Lives? In James Gwartney, Robert Lawson, and Ryan Murphy, *Economic Freedom of the World: 2025 Annual Report* (Fraser Institute): 42–46. <https://www.fraserinstitute.org/sites/default/files/2024-09/economic-freedom-what-is-it-how-is-it-measured.pdf>, as of August 13, 2026.

Muhamad, Goran M. (2023). Economic Diversification to Reduce Natural Resource Dependency in the Literature. In *Reducing Natural Resources Dependency for Economic Growth in Resource Rich Countries* (Springer Nature): 15–53. <https://link.springer.com/book/10.1007/978-981-99-3640-3>, as of August 13, 2026.

Nguyen, Thanh Cong, and Thi Ngoc Phuong Nguyen (2022). Economic Freedom and the Transition to a Circular Economy. SSRN. <https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4301783>, as of August 13, 2026.

Pandit, Ram, and David N. Laband (2009). Economic Freedom, Corruption, and Species Imperilment: A Cross-Country Analysis. *Society & Natural Resources* 22, 9 (August): 805–823. <https://www.tandfonline.com/doi/abs/10.1080/08941920802102024>, as of August 13, 2026.

Petach, Luke (2026). Forgoing Nuclear: Nuclear Power Plant Closures and Carbon Emissions in the United States. *Southern Economic Journal* 93, 1 (July): 252–273. <https://onlinelibrary.wiley.com/doi/full/10.1002/soej.12793>, as of August 13, 2026.

Pew Research Center (2019). *In Their Own Words: Behind Americans' Views of 'Socialism' and 'Capitalism.'* Pew Research Center. <https://www.pewresearch.org/politics/2019/10/07/in-their-own-words-behind-americans-views-of-socialism-and-capitalism/>, as of August 14, 2026.

Prenovitz, Elena C., Peter K. Hazlett, and Chandler S. Reilly (2023). Can Markets Improve Recycling Performance? A Cross-Country Regression Analysis and Case Studies. *Sustainability* 15, 6 (March): 4785. <https://www.mdpi.com/2071-1050/15/6/4785>, as of August 14, 2026.

Qamruzzaman, Md. (2026). Asymmetric Effects of Environmental Tax, Energy Uncertainty, and Trade Freedom on Green Technological Innovation in OECD Countries. *Quality & Quantity* 60 (April): 7239–7274. <https://link.springer.com/article/10.1007/s11135-025-02567-z>, as of August 13, 2026.

Raymond, Leigh (2004). Economic Growth As Environmental Policy? Reconsidering the Environmental Kuznets Curve. *Journal of Public Policy* 24, 3 (September-December): 327–348. <https://www.jstor.org/stable/4007871>, as of August 13, 2026.

Rimoli, Richard, Jean-Daniel Bontemps, Laura Bouriaud, Aditya Acharya, Alexandre Nollet, Bilal Snoussi, Lison Ambroise, Louis Cordonnier, and Liviu Nichiforel (2025). The Property Rights Index for Forestry (PRIF): A New Governance Indicator with Predictive Capacity for Forest Status and Dynamic Across Europe. Working Paper. <https://assets-eu.researchsquare.com/files/rs-7683489/v1/f31960c6-f5f7-462d-9681-1ee679ac761a.pdf?c=1786380834>, as of August 13, 2026.

Rodríguez Garcia, Virginia, Nicola Caravaggio, Frédéric Gaspart, and Patrick Meyfroidt (2021). Long- and Short-Run Forest Dynamics: An Empirical Assessment of Forest Transition, Environmental Kuznets Curve and Ecologically Unequal Exchange Theories. *Forests* 12, 4 (April): 431. <https://www.mdpi.com/1999-4907/12/4/431>, as of August 13, 2026.

Searchinger, Timothy, Ralph Heimlich, R. A. Houghton, Fengxia Dong, Amani Elobeid, Jacinto Fabiosa, Simla Tokgoz, Dermot Hayes, and Tun-Hsiang Yu (2008). Use of U.S. Croplands for Biofuels Increases Greenhouse Gases Through Emissions from Land-Use Change. *Science* 319, 5867 (February): 1238–1240. <https://www.science.org/doi/10.1126/science.1151861>, as of August 13, 2026.

Scott, Anthony (1955). The Fishery: The Objectives of Sole Ownership. *Journal of Political Economy* 63, 2 (April): 116–124. <https://www.journals.uchicago.edu/doi/10.1086/257653>, as of August 11, 2026.

Song, Xiao-Peng, Matthew C. Hansen, Stephen V. Stehman, Peter V. Potapov, Alexandra Tyukavina, Eric F. Vermote, and John R. Townshend (2018). Global Land Change from 1982 to 2016. *Nature* 560, 7720: 639–643. <https://www.nature.com/articles/s41586-018-0411-9>, as of August 13, 2026.

Stern, David I. (2017). The Environmental Kuznets Curve after 25 Years. *Journal of Bioeconomics* 19, 1 (April): 7–28. <https://link.springer.com/article/10.1007/s10818-017-9243-1>, as of August 11, 2026.

Tabarrok, Maxwell (2025). The Costs of Environmental Land Use Regulation. SSRN. <https://papers.ssrn.com/sol3/papers.cfm?abstract_id=5117852>, as of August 13, 2026.

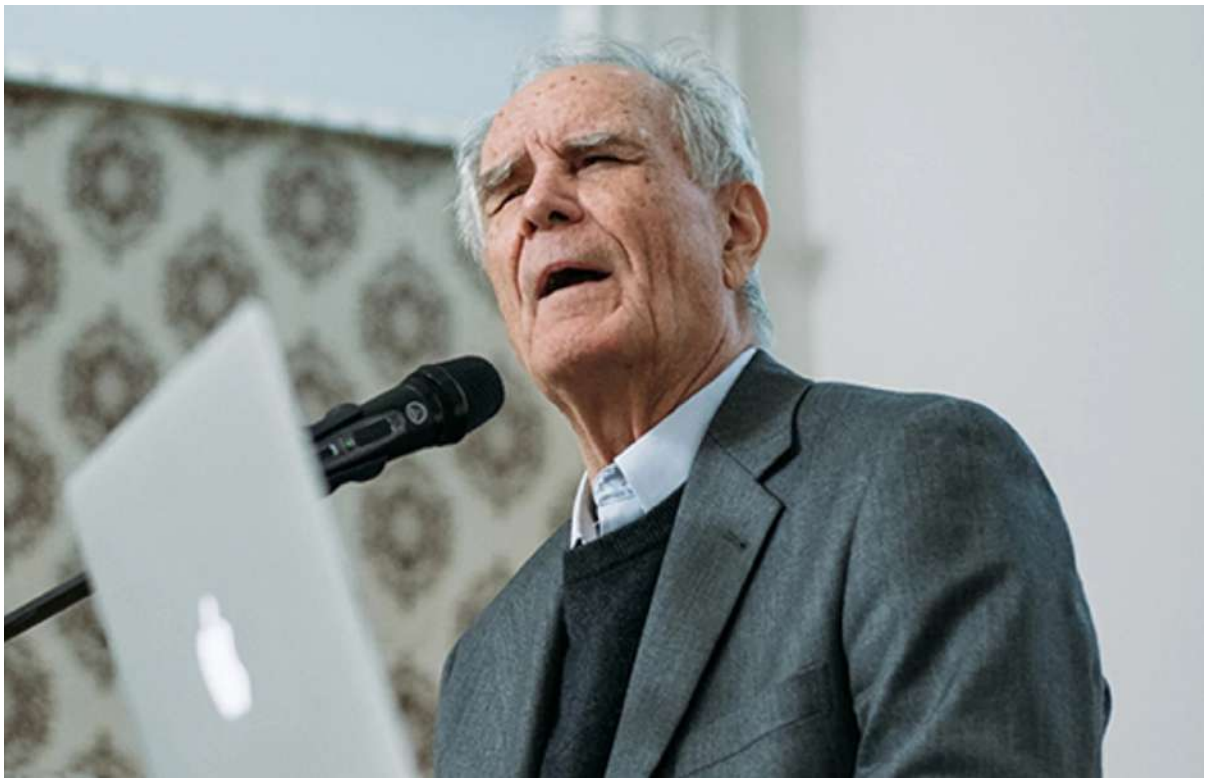
Tol, Richard S. J. (2023). *Climate Economics: Economic Analysis of Climate, Climate Change and Climate Policy*. 3rd Edition. Edward Elgar Publishing.

CHAPTER 3

Commemorating Dr. James Gwartney: A Dedicated Scholar, Freedom Fighter, and Genuinely Kind Individual

Signè DeWind

Most people know the revered Dr. James Gwartney as one of the world's leading economists whose work advanced economic freedom, public choice economics, and economic literacy. I had the privilege of serving as his right-hand person during the last decade of his academic career at Florida State University (FSU). I can attest that his kind character, genuinely caring and calm demeanor, Christian faith, and joyful spirit had just as profound an impact on me as his impressive scholarship, remarkable memory, and exceptional ability to communicate ideas. Two-and-a-half years after his passing, Jim Gwartney remains well worth commemorating—not only for his extraordinary scholarly contributions, but also for the life he lived and the countless people he influenced.



Jim Gwartney in 2017, speaking and presenting his research at an event in Kyiv, Ukraine, hosted by the Bendukidze Free Market Center. (Photo courtesy of Ekonomichna Pravda.)

A brief history of the development of the *Economic Freedom of the World* index

Among James Gwartney's most enduring contributions to economics was his leadership in developing the *Economic Freedom of the World* (EFW) index, published annually by the Fraser Institute since 1996. Today, the index is one of the world's leading measures of economic freedom and has become an indispensable resource for scholars studying the relationship between economic institutions and various measures pertaining to human well-being.

On many occasions, Dr. Gwartney would tell our class of students that he remembered receiving a letter inviting him to participate in the development of a measure of economic freedom. At first glance, he thought to himself, "What a harebrained idea! How could one possibly go about measuring something so multifaceted and complex?" Then he noticed the signature at the bottom of the letter—it was from Milton Friedman. His skepticism quickly gave way to enthusiasm, and he immediately replied that he would be delighted to participate.

The origins of the EFW index trace back to discussions at the 1984 Mont Pelerin Society General Meeting in Cambridge, England. The participants had been discussing the relationship between economic freedom and political freedom, and debating whether economic freedom across the world had increased or decreased in recent years. They were unable to come to a consensus—illustrating the need for an empirical measure. Over lunch following one of the sessions, Fraser Institute founding executive Michael Walker convinced Milton and Rose Friedman to join him in hosting an inaugural symposium devoted to defining and measuring economic freedom. Following that symposium, Walter Block and Alvin Rabushka proposed a continuing series of conferences devoted specifically to developing a rigorous measure of economic freedom.

This was the beginning of the six Rating Economic Freedom (REF) conferences convened by the Fraser Institute, and sponsored by Liberty Fund and co-hosted by Michael Walker, Milton Friedman, and Rose Friedman. The conferences brought together many of the world's leading economists, including Milton Friedman, Douglass North, Gary Becker (all three Nobel Laureates), as well as William Niskanen, Gordon Tullock, Peter Bauer, Assar Lindbeck, and James Gwartney, to develop a rigorous and clearly defined measure of economic freedom.

These six REF conferences,[1] held between 1986 and 1993, culminated in two important outcomes: the publication of *Economic Freedom of the World: 1975–1995* by James Gwartney, Robert Lawson, and Walter Block in 1996, and the formation of the Economic

1 REF I: October 5–8, 1986 (Napa Valley, California); REF II: July 28–30, 1988 (Vancouver, British Columbia); REF III: October 5–8, 1989 (Banff, Alberta); REF IV: November 8–11, 1990 (Sea Ranch, California); REF V: 1991 (Monterey, California); REF VI: 1993 (Sonoma, California).

The first annual Economic Freedom of the World conference: October 30-31, 1996 in San Francisco, California; James Gwartney is in the middle row and is the third individual from the left side of the photo; his EFW co-author Bob Lawson is next to him, and is the second individual from the left side of the photo; Milton and Rose Friedman are in the center of the photo, sitting in the first row of chairs; Michael Walker is sitting on the floor in front of the Friedmans. (Photo courtesy of Annabel Addington.)

Freedom Network—a collaboration of nearly 120 independent institutions from more than 80 countries dedicated to improving the measurement of economic freedom worldwide and communicating the research to local stakeholders in their respective countries.

The early development of the EFW index has been documented in several books and articles.[2] One pivotal development occurred during the third REF conference in 1989, when James Gwartney and Walter Block concluded that it would be more productive to focus on a smaller set of variables that could be obtained for a large number of countries. Milton Friedman agreed and encouraged Gwartney to pursue that approach. After returning to Tallahassee, Gwartney enlisted the help of his graduate student, Bob Lawson, and together they began constructing what would become the EFW index. The approach proved tractable, and as new data have become available, the authors have been able to expand the index so that it now encompasses both a large number of countries *and* a large set of indicators (46 in the latest edition).

2 The origins of the EFW project can be traced to Michael Walker's commentary on historian Paul Johnson's paper, *1984: A False Alarm,* at the 1984 Mont Pelerin Society General Meeting in Cambridge, England. For detailed accounts of the early development of the EFW index, see (a) the proceedings from the first symposium in 1986 (particularly the preface; Walker, 1988: ix-xvi); (b) the proceedings from the second symposium in 1988 (Block, 1991); (c) papers presented at the third and fourth symposia in 1989 and 1990 (Easton and Walker, 1992); (d) Gwartney, Lawson, and Block (1996: Forward, Introduction, and Chapter 1); (e) Gwartney and Lawson (2003: 405–430); (f) Gwartney and Lawson (2004: 217–238); for the entire conference proceedings, see Wynne, Rosenblum, and Formaini (2004); and for the individual chapter, see Gwartney and Lawson (2004); and (g) Gwartney and Lawson (2024: 16–30).

The Economic Freedom Network continued to convene conferences, and beginning in 1997, the *Economic Freedom of the World* report became an annual publication with EFW data updated every year. Since its inception, James Gwartney has served as the report's lead author, working alongside Robert Lawson and, in later years, Joshua Hall and Ryan Murphy.[3]

The EFW index has become one of the most widely used measures of economic freedom in empirical research. Fraser Institute records indicate that the index has been cited in more than 6,700 scholarly publications from 1994 through 2025,[4] although this almost certainly understates its total scholarly impact.[5] According to Google Scholar, researchers have cited various versions of the EFW index approximately 16,000 times.

The EFW index filled a major gap in the scholarly literature by providing researchers with a rigorous measure of economic freedom. It has also become an important educational tool for understanding the role that economic freedom plays in economic development and human flourishing.[6]

James Gwartney himself authored numerous peer-reviewed journal articles and book chapters using the EFW index, although his prolific research and writing extended far beyond the study of economic freedom.[7] Among his many publications and co-publications using the EFW index are:

- *Economic Freedom and the Environment for Economic Growth* (Gwartney, Lawson and Holcombe, 1999);
- *The Concept and Measurement of Economic Freedom* (Gwartney, and Lawson, 2003);
- *Economic Freedom, Institutional Quality, and Cross-Country Differences in Income and Growth* (Gwartney, Holcombe, and Lawson, 2004);
- *Institutions and the Impact of Investment on Growth* (Gwartney, Holcombe, and Lawson, 2006);
- *Institutions, Economic Freedom, and Cross-Country Differences in Performance* (2009 Presidential Address to the Southern Economic Association; Gwartney, 2009);
- *"Economic Freedom and Global Poverty"* (Gwartney and Connors, 2010)
- *Does Democratization Facilitate Economic Liberalization?* (Rode and Gwartney, 2012);

3 Robert Lawson has co-authored every EFW report since its inception in 1996. Joshua Hall joined as a co-author beginning with the 2010 annual report. Ryan Murphy began assisting with the project in 2016 and became a co-author beginning with the 2018 annual report. As of the 2026 annual report, the EFW index is constructed from 46 distinct variables drawn from third-party data sources, including the World Bank, International Monetary Fund, United Nations, World Economic Forum, and World Trade Organization.

4 See Fraser Institute (n.d.).

5 For example, a Google Scholar search conducted on June 14, 2026, found 2,930 citations to the *Economic Freedom of the World: 2008 Annual Report* alone and 2,123 citations to the *Economic Freedom of the World: 2021 Annual Report* alone.

6 See Hall and Lawson (2014) and Lawson (2022).

7 See Gwartney (2021).

- *Economic Institutions and Comparative Economic Development: A Post-Colonial Perspective* (Bennett, Faria, Gwartney, and Morales, 2017); and
- *The Transportation-Communication Revolution: 50 Years of Dramatic Change in Economic Development* (Connors, Gwartney, and Montesinos, 2020).

Gwartney's curriculum vitae lists 49 journal articles and 37 monographs and book chapters, in addition to numerous textbooks, testimonies, web articles, videos, and other scholarly works.[8]

One of economic education's most influential scholars

James Gwartney also profoundly influenced the field of economic education. It is rare for a scholar of his stature to possess not only an exceptional ability to conduct influential research, but also a gift for explaining economics in simple terms—and a passion for doing so. While his work developing the EFW index exemplifies his commitment to advancing economic freedom, his textbooks and other educational initiatives reflect an equally deep commitment to expanding economic literacy.

His textbook *Economics: Private and Public Choice*, first published in 1976, helped fill a void in principles textbooks by integrating public choice economics into introductory economics education. In addition to explaining how markets allocate resources, it teaches students to apply economic reasoning to the political process and government decision-making. Gwartney was the sole author of the first edition. He added Richard Stroup as a co-author beginning with the second edition, and in subsequent editions Russell Sobel and David Macpherson joined him as coauthors. The textbook is currently in its 18th edition, has been translated into multiple languages, and is used by professors at more than 160 colleges and universities in the United States alone. With five decades of continuous use and 18 editions, it stands among a very small group of economics textbooks with such longevity and influence.

Gwartney's commitment to incorporating public choice into principles-level economics instruction continued throughout his career. In a 2015 study with Rosemarie Fike, he examined the extent to which contemporary principles textbooks addressed public choice, market failure, and government failure.[9]

Gwartney was also the lead author of *Common Sense Economics: What Everyone Should Know About Wealth and Prosperity*, first published in 2005 with Richard Stroup and Dwight R. Lee. As of 2024, it is in its fourth edition, which includes Dwight R. Lee and additional

8 See Gwartney (2021).
9 Rosemarie Fike and James D. Gwartney (2015).

coauthors Tawni Hunt Ferrarini, Joseph P. Calhoun, and Jane Shaw Stroup. Gwartney also spearheaded the Common Sense Economics project, which expanded beyond the book into curriculum materials and teacher workshops. *Common Sense Economics* and its accompanying curriculum have been adopted in both high school and introductory college courses, and with the book translated into at least 33 languages, it is also widely used around the world.

The Common Sense Economics project was one of many initiatives Gwartney led while serving as Director of Florida State University's Gus A. Stavros Center for the Advancement of Free Enterprise and Economic Education from 2003 to 2016. For example, the Stavros Center organized annual Creative Teaching Ideas workshops where high school teachers and college instructors learned innovative teaching tools and classroom activities from guest speakers. The center also hosted AP Macroeconomics review sessions for high school students in Tallahassee.

While the many editions of *Economics: Private and Public Choice* and *Common Sense Economics* are the textbooks for which Gwartney is best known, he also authored or edited numerous other books on economics and public choice, including *1929 Revisited: An Economic Handbook for the Turbulent Seventies*; *Essentials of Economics*; *Public Choice and Constitutional Economics*; *What Everyone Should Know About Economics and Prosperity*;[10] and *Introduction to Economics: The Wealth and Poverty of Nations*.

Gwartney had an immense impact on economic education in a "macro" sense through his textbooks, curriculum, and other educational initiatives, yet few individuals (other than his students) witnessed the equally profound impact he had at the "micro" level through his classroom teaching. The Fall 2018 semester marked his 100th semester of teaching at Florida State University, and when he retired at the end of Spring 2022, he had taught at FSU for 54 years. Upon retiring from Florida State University in 2022, Gwartney was named Professor Emeritus—one of academia's highest honors recognizing a career of distinguished service.

In 2014, as I was finishing my graduate program, Jim told me he would create a position for me if I stayed in Tallahassee. I subsequently began working with him at the FSU Stavros Center as the Common Sense Economics (CSE) Project Director, later serving in other positions at the university. During my first few years at the center, my work focused on CSE-related projects, including working with Jim to revise *Common Sense Economics* for its third edition and teaching an online CSE course for educators. Beginning in Fall 2015, I assisted with his Honors Principles of Microeconomics and Honors Principles of Macroeconomics

10 *What Everyone Should Know About Economics and Prosperity* (1993), coauthored with Richard Stroup, was published by The James Madison Institute and several cooperating organizations, including The Heartland Institute. It later served as the predecessor to *Common Sense Economics: What Everyone Should Know About Wealth and Prosperity*. Michael Walker also adapted the book for Canadian readers, and the Canadian edition was published by the Fraser Institute in 1993.

courses, which led to co-teaching both courses through Fall 2020. I also worked with Jim on a number of other publications and projects, including revisions for the 16th and 17th editions of *Economics: Private and Public Choice*. Over the years my roles at the university expanded into other areas such as teaching courses and research—opportunities that would not have arisen had Jim not encouraged me to first work with him. Likewise, I can trace many of my own economics connections and collaborations with institutes and coauthored publications back to Jim's encouragement and funding for my participation in conferences such as the Association of Private Enterprise Education (APEE), Freedom Fest, and the Mont Pelerin Society (MPS). Jim's support of those experiences greatly expanded my professional network, collaborations, and career opportunities.

Over the years, I heard from many FSU students who said his class was their favorite course or that he was their favorite professor. They especially appreciated that he welcomed all points of view and was always willing to have a hearty discussion of controversial topics. It was not uncommon for students to remain after class to continue discussions with Professor Gwartney. Many told me they decided to major in economics because of our Principles courses, while others said he changed the way they viewed the world—or even changed their lives. These testimonies reflect only the experiences of undergraduates. Anyone who speaks with his Ph.D. dissertation students gains an even greater appreciation for the enormous, albeit unquantifiable, impact Jim had on his mentees.[11]

That mentorship often extended beyond the classroom. Jim and his wife Amy's home became affectionately known among friends as "The Gwartney Inn," or sometimes "The Gwartney Bed and Breakfast," reflecting the hospitality they extended to students, colleagues, and visitors who came to Tallahassee to work with Jim. Their generosity was also evident in another long-standing tradition. Each Thanksgiving, they also opened their home to anyone who did not have a place to spend the holiday. Before dinner, Jim would share what he called the economics lesson of Thanksgiving, using Benjamin Powell's article, "The Pilgrims' Real Thanksgiving Lesson," to illustrate one of the most fundamental economic principles: incentives matter.[12]

---

11 I have compiled a list of his doctoral dissertation students (for whom Dr. James Gwartney served as chair, co-chair, or committee member), as well as several Honors in the Major theses he supervised, though the record may still be incomplete, particularly for earlier years. If Dr. Gwartney served as chair, co-chair, or a member of your dissertation or thesis committee—or that of someone you know—I would welcome additional information as I continue documenting this important aspect of his legacy in economic education. I also welcome testimonials (regardless of how you knew Jim Gwartney). You can email me, Signè DeWind, at signe.econ@gmail.com.

12 The lesson centered on the Pilgrims' transition from communal property rights to privately assigned plots of land in 1623. Before the Gwartney Gobblefest meal at Thanksgiving, Jim would explain that the resulting change in incentives led to greater productivity and ultimately to the bountiful harvest remembered as the first Thanksgiving. See Powell (2004).

Jim's love and passion for economics extended far beyond spreading economic literacy. He took countless individuals under his wing, fostering a small army of economically literate students and scholars, many of whom developed a passion for economic freedom and public choice economics. Although the full impact of his contributions to economic education can never be measured, the evidence is overwhelming that his legacy is both far-reaching and deeply personal.

Chief economist of the Joint Economic Committee of the US Congress, and Gwartney's visit to Russia to advise Vladimir Putin

In 1998, James Gwartney, Robert Lawson, and Randall Holcombe prepared a report for the US Congress's Joint Economic Committee titled *The Size and Functions of Government and Economic Growth*.[13] Shortly thereafter, Jim and his wife, Amy, temporarily relocated from Tallahassee to Washington, DC, where he served as Chief Economist of the Joint Economic Committee from 1999 to 2000. During his tenure, Andrei Illarionov, the incoming Putin administration's chief economic adviser, invited Jim to participate in discussions regarding the future direction of the Russian economy.[14] In March 2000, Jim joined a few other economists in Russia for a week of meetings focused on market-oriented reforms and economic growth. The invitation reflected Jim's international reputation as a leading scholar on the relationship between economic institutions and prosperity.

Jim's visit included a meeting with Vladimir Putin, who at the time was pursuing reforms to move Russia further away from its Soviet-era command economy and toward a more market-oriented economy. One of the recommendations Jim discussed was reducing Russia's personal income tax burden.[15] At the time, Russia's top personal income tax rate was 35 percent, while its payroll tax was nearly 40 percent, creating strong incentives for tax avoidance and evasion. Jim recalled having an extensive discussion with Putin on the tax issue and credited Illarionov with spearheading reforms that soon resulted in Russia adopting a flat 13 percent personal income tax.[16] The reform attracted international attention as revenues

13 Gwartney, Lawson, and Holcombe (1998).

14 From 1994 to 2000, Andrei Illarionov served as director of the Institute for Economic Analysis, which he founded in Moscow. By 2000, Jim had known Illarionov for several years through work related to the *Economic Freedom of the World* project.

15 Lower marginal income tax rates can increase incentives to work, invest, and report taxable income while reducing incentives for tax avoidance and evasion.

16 In July 2000, the Russian government enacted a flat 13 percent personal income tax, effective January 1, 2001. Beginning in 2001, Russia replaced its previous personal income tax rates of 12 percent, 20 percent, and 30 percent with a single flat rate of 13 percent. Alvin Rabushka (who, along with Robert Hall, first proposed the idea of a flat tax in the United States in 1981) later wrote: "From a revenue standpoint, the 13% flat tax has exceeded all expectations. Preliminary data for 2001 reveal that the flat tax generated R254.7 billion, an increase of R80.2 billion over 2000, up 46%" (Rabushka, 2002).

increased substantially despite the lower tax rate, suggesting that improved compliance and stronger incentives to earn and report income offset much of the reduction in statutory tax rates. The payroll tax was also reformed.[17] Although Russia later moved away from the flat-tax structure, the reform remained in place for two decades, encouraged other post-communist states to adopt similar flat-tax structures, and stands as one of the most significant policy changes associated with the country's post-Soviet transition.[18]

The remarkable productivity of a blind scholar

Jim Gwartney was so productive and prolific that someone who had never met him in person might not realize that he was completely blind during the later years of his life—including the entire time I knew him. His struggle with glaucoma began around 1982. While eyedrops, lasers, and surgeries slowed the disease's progression, nothing was able to stop it. While serving as a visiting professor at Central European University in Prague, he developed an eye infection in 1994 that resulted in the loss of his right eye. By 2006 Jim was completely blind, although his vision had been severely impaired for many years before that.

Throughout the years of his blindness, Jim's wife, Amy, faithfully accompanied him to conferences and other events, helping him remain remarkably active throughout the final decades of his career. Readers interested in learning more about Jim and Amy's life together—including the story of how they met, family photographs of them and their four sons, Jim's obituary, and a video of his funeral service—will find additional resources in the footnotes.[19]

One fascinating conversation I had with Jim changed the way I think about blindness. After working with him for several years, I asked whether what he sees is the color black. Jim explained that he does not see black but instead sees "nothing." He pointed out that sighted people cannot comprehend the idea of seeing nothing and often assume blindness is like closing one's eyes and seeing darkness or black. But even then we are still seeing something—the inside of our eyelids. For Jim, there was not even darkness; there was simply nothing at all.

17 Prior to the 2001 reforms, Russia's combined payroll tax totaled 39.5 percent (38.5 percent paid by employers and one percent paid by employees). Beginning in 2001, payroll tax rates declined with additional income, ranging from 35.6 percent to five percent, and the lowest rate was further reduced to two percent beginning in 2002. See Martinez-Vazquez, Rider, Qibthiyyah, and Wallace (2006).

18 Russia's 13 percent flat personal income tax remained in effect from 2001 through 2021. Beginning in 2021, Russia increased the rate to 15 percent for top income earners, and in 2024 adopted a more progressive income tax schedule with a top marginal rate of 22 percent (see Reuters, 2024).

19 See (a) DeWind (n.d.) for a digital archive curated by Signè DeWind as an ongoing effort to preserve and share materials related to the life, scholarship, and legacy of James D. Gwartney (contributions such as photographs, documents, tributes, and other historical materials are welcome); (b) List and Schuler (2023: 31–33), for background describing how Jim and Amy met; (c) J.R. Gwartney's slideshow created for Jim and Amy's 50th wedding anniversary (see Gwartney, 2013); (d) James D. Gwartney obituary, including additional family photographs (see Dignity Memorial, 2024); (e) a video of Jim Gwartney's funeral service (see Gwartney Institute, 2024b).

One of the things I miss most is our daily walks. Jim could navigate the inside of the FSU Stavros Center and his home independently, but when walking to most other places, he needed assistance and would walk arm-in-arm with whoever was helping him. Over the course of a decade, we likely took more than 1,000 walks together—across Florida State University's campus, at conferences such as APEE and FreedomFest, at church, down the aisle on my wedding day, and elsewhere.

Jim Gwartney and Signè DeWind (then Thomas) on one of their daily walks across Florida State University's campus; January 22, 2020.

Each day Jim was on campus, we'd walk from the Stavros Center to one of our usual lunch spots. If it was just the two of us, we'd often go to the Sweet Shop. If we were meeting colleagues from FSU's economics department, we'd walk to the Subway restaurant near campus. During those walks he was always laughing and cracking jokes. That is what made Jim so unique: he was phenomenally brilliant, but also genuinely caring with a joyfully exuberant personality.

Our walks perfectly captured Jim's jovial spirit, so I'm including one of my favorite photos from over the years. The selfie included in this section is a candid photo I captured while he was laughing and joking around. He often referred to us as "the blonde leading the blind," but the ironic part is that he was the one leading me—with his cheerful spirit, brilliant mind, and unwavering faith.

Jim often had a better sense of direction than his sighted friends. On more than one occasion, I accidentally headed in the wrong direction while driving us somewhere in Tallahassee, only for Jim to point out that we were headed the wrong way. Other colleagues shared similar stories. Another memorable example occurred at FreedomFest, when another colleague and I walked a short distance down the hotel hallway before Jim asked, "Isn't the elevator the other direction?" We joked that we were simply testing him.

Another example was shared with me by Tom McCaleb, a retired FSU economics professor who was also part of our weekly Subway lunch group:

> Jim and I shared a love for Kansas University basketball. During the season, we would talk about it at lunch, much I'm sure to the dismay of our lunch companions, and we would sometimes email during a game. What was amazing was the following conversation that occurred more than once.
>
> Jim: Tom, did you see [some particular play in the previous game]?
> Tom: No, Jim, I guess I missed that.
>
> Whereupon sight-impaired Jim would proceed to tell sighted Tom about this play that sighted Tom missed even though he was watching the game.

Not only was Jim incredibly productive despite being blind, but he faced blindness with extraordinary grace. Out of all the time I spent working with him, the only time I can recall Jim appearing frustrated by his blindness was when his JAWS screen-reading software would occasionally update without notice and a keyboard function would change that he was not yet accustomed to—but even then, he adapted quickly. Never once did I see him become sad or angry about being blind. Nor did I ever see him yell or lose his temper, whether with those he worked alongside or in response to situations that would have been deeply frustrating for many people to navigate without sight. Jim's demeanor was always resolutely calm.

In fact, Jim adjusted so well to being blind that on multiple occasions I found myself explaining to students and others that he was, in fact, completely blind. People often assumed he retained at least some vision because of how capably he performed various tasks. I remember one FSU student insisting that Jim must be able to see a little because the student walked into his office and saw him typing at his computer. I explained that Jim types without sight and that his JAWS software reads text aloud, enabling him to read documents, navigate email, attach files, compose messages, and perform many other tasks independently.

What is especially remarkable is how efficient he became. While working together in his office, there were occasions when I was searching for a document on my laptop, and Jim located and opened the same file on his computer before I could find it on mine. Unlike a sighted user, he could not visually scan folders or filenames. Instead, he relied on memory—remembering which folder and subfolders contained each document—while using JAWS to navigate one filename at a time until he reached the file he wanted. Yet despite those limitations, he was often astonishingly quick. A sighted person should have been able to locate a Word document faster every single time, but embarrassingly, I cannot say that was always the case. Jim was remarkably efficient and capable on the computer. Although he could not use a mouse, he mastered keyboard commands and screen-reading technology to accomplish tasks that many people would assume impossible without sight.

Another example of how remarkably Jim continued his scholarly work despite blindness was his ability to deliver presentations entirely from memory. During lectures and

conference presentations, he routinely cited specific statistics and figures displayed throughout his PowerPoint slides.

During the final decade of his life, I was almost always the one helping Jim prepare his PowerPoint slides for classes and conferences. Before each presentation, I would read the slides aloud to him. That meant that if he was presenting at a conference in another city, the last time he had heard many of those statistics was often several days earlier, when we reviewed the presentation together in his office in Tallahassee.

Unlike most presenters, Jim could not glance at note cards immediately before or during a presentation. Yet his memory was so extraordinary that he consistently recalled highly specific statistics and other details without notes and without being able to see the projected slides. Occasionally, students or audience members assumed he could see the slides, and I would explain, "No, the slides are just for you—the audience—to be able to see the graphs and tables so you'll better understand what he's describing. He can't actually see anything on the screen. He's 100% blind." The response was often one of genuine amazement as people realized the sheer volume of information Jim had just presented entirely from memory.

Although Jim lost 100 percent of his physical eyesight, he never lost his vision for what mattered most. His Christian faith shaped both his worldview and his character, and his commitment to economic freedom, economic education, and human flourishing remained as strong and clear as ever. Blindness diminished neither his intellectual curiosity nor his ability to inspire others, and his remarkable productivity and prolific scholarship continued throughout the remainder of his life.

The Gwartney Institute for Freedom, Justice, and Human Flourishing

In honor of Dr. James Gwartney, economist Russ McCullough founded the Gwartney Institute for Freedom, Justice, and Human Flourishing at Jim's alma mater, Ottawa University. The institute officially opened in August 2018 with a mission to study economic freedom, social justice, and their role in advancing human flourishing.[20]

The Gwartney Institute also produces the *Faith and Economics* podcast,[21] where Russ McCullough, Peter Jacobsen, and Justin Clarke discuss issues related to economic freedom and human flourishing from a Christian perspective. Following Jim's passing in January 2024, the hosts dedicated episode #273 to celebrating his life and legacy.[22] Earlier, in episode #211, "Inflation Incentives Matter—Dr. Jim Gwartney," Jim joined the podcast to discuss inflation, economic incentives, and the fiscal outlook for the United States.[23]

20 See Ottawa University (2026).
21 See Gwartney Institute (2026).
22 See Gwartney Institute (2024a).
23 See Gwartney Institute (2022).

The institute also honors Jim through a named professorship. Peter Jacobsen serves as the Gwartney Professor of Economic Education and Research. Likewise, Russ McCullough holds the Wayne D. Angell Distinguished Chair of Economics, named in honor of Dr. Wayne D. Angell, who was Jim Gwartney's first economics professor at Ottawa University.[24]

Key intellectual influences

One of the professors who most influenced Jim Gwartney's economic views was Wayne Angell. Jim later remarked that Angell essentially *was* the economics department at Ottawa University at the time, estimating that he took roughly 10 courses from him. Although Angell used Paul Samuelson's *Economics* textbook, his lectures often departed from the text, explaining the unintended consequences of government intervention and why politically popular policies frequently persisted even when they made people worse off. Before the term "public choice economics" was coined or became a recognized field, Angell was teaching many of the ideas that Jim would later identify with government failure and public choice analysis.[25]

After graduating from Ottawa University, Jim entered the graduate program in economics at Washington State University. He quickly realized the department was strongly Keynesian and generally unwelcoming to students with classical liberal views favoring limited government. Rather than pursue his doctorate there, he completed the academic year while spending much of his free time reading the works of Milton Friedman, Ludwig von Mises, and F. A. Hayek.[26] During that year he met Donald Gordon, a professor at the University of Washington, at an Intercollegiate Society of Individualists (ISI) event.[27] Gordon encouraged Jim to apply to the University of Washington's Ph.D. program.

At the University of Washington, Jim studied under an extraordinary group of economists. He took courses from Douglass North, who later won the Nobel Prize in Economic Sciences and served on Jim's dissertation committee; Walter Oi; John Floyd; Yoram Barzel; Allan Hynes; Donald Gordon, who taught the history of economic thought; and Tom

24 See Federal Reserve History (n.d.).

25 Public choice emerged as a formal research program during the 1960s. Jim Gwartney's first economics course with Wayne Angell was during his sophomore year (1959–1960), and he graduated with his B.A. in 1962, the year that Buchanan and Tullock published *Calculus of Consent: Logical Foundations of Constitutional Democracy*, which sparked the public choice revolution. In 1963, Buchanan and Tullock organized the Committee on Non-Market Decision Making, but the term "public choice" was not coined until the group's meeting in Chicago in 1967; that same year, they renamed their group the Public Choice Society. In 1968, the society renamed its journal to *Public Choice*. For more information, see Public Choice Society (n.d.).

26 For further reading on who Jim credits with having a major impact on his intellectual views, see Gwartney (2002: 135–137) and List and Schuler (2023: 1–16).

27 At the time, the organization was known as the Intercollegiate Society of Individualists (ISI), which later became the Intercollegiate Studies Institute.

Borcherding, who introduced Jim to the works of James Buchanan, Gordon Tullock, William Niskanen, and other scholars in the emerging public choice tradition.

Jim considered Milton Friedman and James Buchanan to be his two greatest intellectual influences. Together, Friedman and Buchanan shaped two central pillars of Jim's views: a deep appreciation for the power of markets and an understanding of the incentives influencing decision-making in the public sector.

Jim described Friedman's *Capitalism and Freedom*, which he first read in 1963, as the most influential book he ever read other than the Bible. Friedman's writings provided the foundation for Jim's market-oriented and classical liberal views, while Buchanan's public choice writings fundamentally shaped how he viewed the political process and the importance of keeping the powers of government limited and widely dispersed. Buchanan's work also inspired Jim to write his own economics textbook, *Economics: Private and Public Choice*, in order to incorporate public choice analysis into principles-level economics instruction. Prior to Jim's textbook, principles of economics texts typically discussed market failure and the role of government in correcting it, while giving little or no attention to government failure or public choice analysis. Correcting that imbalance became one of Jim's primary goals in writing *Economics: Private and Public Choice*, now in its 18th edition.[28]

A few more of Jim Gwartney's accomplishments and accolades

James Gwartney earned his B.A. in Economics from Ottawa University in 1962 and his Ph.D. in Economics from the University of Washington in 1969. Following graduate school, he joined the faculty at Florida State University, where he taught economics for 54 years before retiring in 2022.

Throughout his career, Jim served in numerous leadership positions within the economics profession. He became a member of the Mont Pelerin Society in 1986, served as President of the Association of Private Enterprise Education (1998), President of the Southern Economic Association (2007–2008), Chief Economist of the US Congress's Joint Economic Committee (1999–2000), Director of Florida State University's Gus A. Stavros Center for the Advancement of Free Enterprise and Economic Education (2003–2016), the Stavros Center's Gus A. Stavros Eminent Scholar Chair (2004–2022), and was named Professor Emeritus at FSU in 2022."[29]

28 Buchanan and Tullock's *The Calculus of Consent: Logical Foundations of Constitutional Democracy* (1962) laid the intellectual foundations for modern public choice economics. Buchanan was awarded the 1986 Nobel Memorial Prize in Economic Sciences for his contributions to the theory of public choice (see Nobel Prize, 1986a, 1986b).

29 For Jim's curriculum vitae, see Gwartney (2021).

Jim's many honors reflected the esteem in which he was held by colleagues around the world. In 2008, Universidad Francisco Marroquín awarded him an Honorary Doctorate in Social Science.[30] He also received numerous honors from the Association of Private Enterprise Education, including the Distinguished Scholar Award (1995), Adam Smith Award (2004), and, together with Amy, the Clark-Kent-Aronoff Award for service (2022).[31]

As of June 2026, Google Scholar listed Jim with an h-index of 41, an i10-index of 84, and more than 14,700 citations.[32] His research appeared in leading academic journals including the *American Economic Review*, *Journal of Political Economy*, *Southern Economic Journal*, and the *Journal of Institutional and Theoretical Economics*, while his commentary also appeared in publications such as the *Wall Street Journal*, *New York Times*, *Financial Times*, and *Investor's Business Daily*.

Examples of Gwartney's entrepreneurial spirit

Jim's entrepreneurial spirit extended well beyond the classroom and his scholarly research. Throughout his career, he repeatedly helped launch new organizations, initiatives, and enterprises that reflected his commitment to economic freedom, education, and service.

One example was the James Madison Institute (JMI), a free-market public policy organization headquartered in Tallahassee. Founded in 1987 by former Florida State University President Stanley Marshall, the institute benefited greatly from Jim's leadership during its formative years. Randall Holcombe recalled that Jim was instrumental not only in helping establish the institute but also in ensuring its survival during its early "lean" years. Holcombe remarked, "When it went through some lean years in its life, it is no exaggeration to say that it would not have survived without Jim's efforts."[33] Jim continued serving on JMI's Research and Advisory Council throughout the remainder of his life.

Jim's entrepreneurial interests also extended into the private sector. Together with fellow Florida State University professors Joan Haworth, Charles Haworth, and Ephraim Asher, he co-founded Economic Research Services, a consulting firm that specialized in statistical and economic analysis for employment discrimination litigation. The firm's work grew naturally out of Jim's doctoral research on racial income differences, which also resulted in several publications in the *American Economic Review* and other scholarly journals.[34]

30 See Universidad Francisco Marroquín (2008).

31 For Jim's awards, see Association of Private Enterprise Education (n.d.-a, n.d.-b, and n.d.-c).

32 The h-index is calculated by counting the number of publications for which an author has been cited by other authors at least that same number of times (so, an h-index of 41 means that 41 of Jim's published papers have been cited at least 41 times each. The i-10-index is the number of publications with at least 10 citations. For Jim's scholarly profile, see Google Scholar (n.d.).

33 Holcombe (2024). For more on JMI, see James Madison Institute (2026).

34 See Gwartney (1969, 1970a, and 1970b); Gwartney, Asher, and Haworth (1979); and Haworth, Gwartney, and

Jim's entrepreneurial spirit was evident in many other aspects of his life as well. Whether developing new textbooks, helping create the EFW index, directing an economic education center, helping launch a public policy institute, or assisting in the founding of Element3 Church, he consistently sought to build institutions that would continue influencing others long after his own direct involvement.

One story Jim shared with me offers an amusing glimpse into how his entrepreneurial spirit began to bud at a young age. On September 15, 2020, he told me that at six years old, while growing up on a Kansas farm, he started a duck business. The business, however, had one major flaw: Jim thought they were "so cute" and loved the ducks so much that he couldn't bring himself to sell any of them. Starting with only three or four ducks, he eventually grew his flock to around 100—all of which he considered pets. One day he came home to discover they had all disappeared. His father had sold every one of them. Jim laughed as he told the story, clearly amused by the memory decades later.

A life well lived... what a legacy!

James Gwartney leaves behind an extraordinary legacy as a scholar, teacher, mentor, and advocate for economic freedom. Few individuals have had as great of an impact on the field of economic education. His contributions to economics and economic education continue to influence students, teachers, policymakers, and researchers around the world. Through his textbooks, scholarly research, the EFW index, and numerous other professional endeavors, Jim helped shape how generations of people understand economics and the institutions that foster human flourishing.

Yet Jim's legacy extends well beyond his publications, awards, and professional accomplishments. Those who knew him personally remember not only his brilliance, but also his kindness, humility, generosity, unwavering faith, and joyful spirit. He invested deeply in his students, colleagues, and friends, leaving a lasting impression on countless lives.

I count myself extraordinarily fortunate to have worked alongside Dr. Jim Gwartney and to have learned directly from one of the world's very best economic educators of our time. He profoundly influenced my own development as an economist, educator, and person—as he did for many other students and mentees. I miss my professor, colleague, Ph.D. dissertation advisor, spiritual mentor, father figure, and friend, but I remain deeply grateful for the years I was able to learn from him.

Jim often devoted his research to understanding the institutions that enable individuals and societies to flourish. In many ways, his own life reflected those same ideals. His legacy

Haworth (1975).

serves as a reminder that a meaningful career is measured not only by scholarly accomplishments, but also by the lives one influences through character, generosity, and faithful service.

Those wishing to further explore Jim's remarkable life may visit JamesGwartneyLegacy.org, a digital archive dedicated to preserving Jim Gwartney's legacy through materials such as photographs, publications, tributes, and other archival material.

References

Association of Private Enterprise Education, The (n.d.-a). Adam Smith Award. The Association of Private Enterprise Education. <https://apee.org/adam-smith-award/>, accessed January 3, 2025.

Association of Private Enterprise Education, The (n.d.-b). Clark-Kent-Aronoff Award. The Association of Private Enterprise Education. <https://apee.org/clark-kent-aronoff-award/>, accessed January 3, 2025.

Association of Private Enterprise Education, The (n.d.-c). Distinguished Scholar Award. The Association of Private Enterprise Education. <https://apee.org/distinguished-scholar-award/>, accessed January 3, 2025.

Bennett, Daniel L., Hugo J. Faria, James D. Gwartney, and Daniel R. Morales (2017). Economic Institutions and Comparative Economic Development: A Post-Colonial Perspective. *World Development* 96 (August): 503–519. <https://myweb.fsu.edu/jdgwartney/Documents/Economic%20Institutions%20and%20Comparative%20Economic%20Development%20WD.pdf>, accessed February 20, 2025.

Block, Walter E. (ed.) (1991). *Economic Freedom: Toward a Theory of Measurement.* Fraser Institute. <https://www.fraserinstitute.org/sites/default/files/EconomicFreedomTheoryofMeasurement.pdf>, accessed February 27, 2025.

Buchanan, James M., and Gordon Tullock (1962). *The Calculus of Consent: Logical Foundations of Constitutional Democracy.* University of Michigan Press.

Connors, Joseph, James D. Gwartney, and Hugo M. Montesinos (2020). The Transportation-Communication Revolution: 50 Years of Dramatic Change in Economic Development. *Cato Journal* 40, 1 (Winter): 153–198. <https://www.cato.org/sites/cato.org/files/2020-02/cj-v40n1-9.pdf>, accessed February 19, 2025.

DeWind, Signè (n.d.). *Dr. James Gwartney Legacy*. Digital archive. JamesGwartneyLegacy.org. <https://jamesgwartneylegacy.org/>, accessed August 7, 2026.

Dignity Memorial (2024, January 7). Obituary: James David Gwartney. Dignity Memorial. <https://www.dignitymemorial.com/obituaries/tallahassee-fl/james-gwartney-11615143>, accessed March 30, 2024.

Easton, Stephen T., and Michael A. Walker (eds.) (1992). *Rating Global Economic Freedom.* Fraser Institute. <https://www.fraserinstitute.org/sites/default/files/Rating-Global-Economic-Freedom.pdf>, accessed February 26, 2025.

Federal Reserve History (n.d.). Wayne D. Angell. Federal Reserve History. <https://www.federalreservehistory.org/people/wayne-d-angell>, accessed November 21, 2025.

Fike, Rosemarie, and James D. Gwartney (2015). Public Choice, Market Failure, and Government Failure in Principles Textbooks. *The Journal of Economic Education* 46, 2 (April-June): 207–218. <https://www.jstor.org/stable/43608840>, accessed February 24, 2025.

Fraser Institute (n.d.). Economic Freedom: Citations. Citations in Professional Literature of the Fraser Institute's Economic Freedom Research. <https://efotw.org/economic-freedom/citations>, accessed June 16, 2026.

Google Scholar (n.d.). James Gwartney. Google. <https://scholar.google.com/citations?user=048gr8cAAAAJ&hl=en>, accessed June 14, 2026.

Gwartney Institute (2022, November 14). *Inflation Incentives Matter - Dr. Jim Gwartney* | #211 [Podcast]. Spotify. <https://open.spotify.com/episode/7oqATNNGrEGn2dWCCbWgCn>, accessed January 26, 2025.

Gwartney Institute (2024a, January 25). *Inspirational – Tribute to Dr. Jim Gwartney* | #273 [Podcast]. Spotify. <https://open.spotify.com/episode/3IqEJvoC4ygLpGc5pvVCYl>, accessed January 26, 2025.

Gwartney Institute (2024b, April 29). *Jim Gwartney – Celebration of Life 1/11/2024* [Video]. YouTube. <https://www.youtube.com/watch?v=ETpevRGJBdc>, accessed February 24, 2025.

Gwartney Institute (2026). *Faith and Economics* [Podcast]. Spotify. <https://open.spotify.com/show/4O7CGYbh4pQRI9M3nxHkqJ>, accessed January 26, 2025.

Gwartney, James D. (1969). *Income and Occupational Differences Between Whites and Nonwhites.* Ph.D. dissertation, University of Washington.

Gwartney, James D. (1970a). Changes in the Nonwhite/White Income Ratio—1939–67. *American Economic Review* 60, 5 (December): 872–883. <https://www.jstor.org/stable/1818287>, accessed February 23, 2025.

Gwartney, James D. (1970b). Discrimination and Income Differentials. *American Economic Review* 60, 3 (June): 396–408. <https://www.jstor.org/stable/1817989>, accessed February 23, 2025.

Gwartney, James D. (2002). How I Became a Classical Liberal. In Walter Block (ed.), *I Chose Liberty: Autobiographies of Contemporary Libertarians* (Ludwig von Mises Institute): 135–137. <https://cdn.mises.org/I%20Chose%20Liberty%20Autobiographies%20of%20Contemporary%20Libertarians_2.pdf>, accessed February 16, 2025.

Gwartney, James D. (2009). Institutions, Economic Freedom, and Cross-Country Differences in Performance. *Southern Economic Journal* 75, 4 (April): 937–956. <https://onlinelibrary.wiley.com/doi/10.1002/j.2325-8012.2009.tb00941.x>, accessed January 2, 2025.

Gwartney, James D. (2021). *Curriculum Vitae*. Florida State University. <https://myweb.fsu.edu/jdgwartney/Documents/James%20Gwartney%20CV.pdf>, accessed March 20, 2024.

Gwartney, J. R. (2013, September 24). *Jim and Amy Gwartney 50th Anniversary Slideshow* [Video]. YouTube. <https://www.youtube.com/watch?v=j0vFS-3APW4>, accessed March 30, 2024.

Gwartney, James, Ephraim Asher, and Charles Haworth (1979). Statistics, the Law and Title VII: An Economist's View. *Notre Dame Law Review* 54, 4 (April): 633–660. <https://scholarship.law.nd.edu/ndlr/vol54/iss4/3/>, accessed February 26, 2025.

Gwartney, James D., and Joseph S. Connors (2010). Economic Freedom and Global Poverty. In Mark D. White (ed.), *Accepting the Invisible Hand: Market-Based Approaches to Social-Economic Problems* (Palgrave Macmillan): 43–68. <https://myweb.fsu.edu/jdgwartney/Documents/Gwartney%20Connors-Economic%20Freedom%20and%20Global%20Poverty.pdf>, accessed February 13, 2025.

Gwartney, James D., Randall G. Holcombe, and Robert A. Lawson (2004). Economic Freedom, Institutional Quality, and Cross-Country Differences in Income and Growth. *Cato Journal* 24, 3 (Fall): 205–233. <https://myweb.fsu.edu/jdgwartney/Documents/GwartneyHolcombeLawsonCato2004.pdf>, accessed February 20, 2025.

Gwartney, James D., Randall G. Holcombe, and Robert A. Lawson (2006). Institutions and the Impact of Investment on Growth. *Kyklos* 59, 2 (May): 255–273. <https://myweb.fsu.edu/jdgwartney/Documents/GwartneyHolcombeLawsonKYKLOS2006.pdf>, accessed February 12, 2025.

Gwartney, James D., and Robert A. Lawson (2003). The Concept and Measurement of Economic Freedom. *European Journal of Political Economy* 19 (September): 405–430. <https://myweb.fsu.edu/jdgwartney/Documents/Gwartney%20Lawson%20EJPE%20article.pdf>, accessed January 14, 2025.

Gwartney, James D., and Robert A. Lawson (2004). What Have We Learned from the Measurement of Economic Freedom? In Mark A. Wynne, Harvey Rosenblum, and Robert L. Formaini (eds.), *The Legacy of Milton and Rose Friedman's* Free to Choose: *Economic Liberalism at the Turn of the 21st Century,* Proceedings of a Conference Sponsored by the Federal Reserve Bank of Dallas 22-24, October 2003 (Federal Reserve Bank of Dallas): 217–238. <https://www.dallasfed.org/-/media/Documents/research/pubs/ftc/gwartney.pdf>, accessed July 21, 2026.

Gwartney, James D., and Robert A. Lawson (2024). The Creation of the Economic Freedom of the World Index. In Niclas Berggren (ed.), *Handbook of Research on Economic Freedom* (Edward Elgar Publishing): 16–30. <https://cosspp.fsu.edu/economics/wp-content/uploads/sites/19/2024/10/Creation_of_Economic_Freedom_of_World_Index_2000.pdf>, accessed February 19, 2025.

Gwartney, James, Robert Lawson, and Walter Block (1996). *Economic Freedom of the World: 1975–1995.* Fraser Institute. <https://www.fraserinstitute.org/sites/default/files/EconomicFreedomoftheWorld1975-1995.pdf>, accessed January 6, 2025.

Gwartney, James D., Robert A. Lawson, and Randall G. Holcombe (1998). *The Size and Functions of Government and Economic Growth.* Joint Economic Committee, US Congress. <https://ohu.people.ysu.edu/articles/govt_size_economic_growth.pdf>, accessed February 20, 2025.

Gwartney, James D., Robert A. Lawson, and Randall G. Holcombe (1999). Economic Freedom and the Environment for Economic Growth. *Journal of Institutional and Theoretical Economics* 155, 4 (December): 643–663. <https://www.jstor.org/stable/40752161; https://myweb.fsu.edu/jdgwartney/Documents/JITE_Gwartney_1999.pdf>, accessed February 12, 2025.

Gwartney, James D., Dwight R. Lee, Tawni Hunt Ferrarini, Joseph P. Calhoun, and Jane Shaw Stroup (2024). *Common Sense Economics: What Everyone Should Know About Wealth and Prosperity.* 4th ed. St. Martin's.

Gwartney, James D., and Hugo M. Montesinos (2018). Former Centrally Planned Economies 25 Years After the Fall of Communism. *Cato Journal* 38, 1 (Winter): 285–309. <https://www.cato.org/sites/cato.org/files/serials/files/cato-journal/2018/2/cato-journal-v38n1-chapter-15.pdf>, accessed November 24, 2025.

Gwartney, James D., and Richard L. Stroup (1993). *What Everyone Should Know About Economics and Prosperity.* Fraser Institute and James Madison Institute. <https://www.fraserinstitute.org/sites/default/files/WhatEveryoneShoudKnowEconomics.pdf>, accessed February 25, 2025.

Gwartney, James D., Richard L. Stroup, and J. R. Clark (1985). *Essentials of Economics*. 2nd ed. Academic Press.

Gwartney, James D., Richard L. Stroup, and Dwight R. Lee (2002). *Introduction to Economics: The Wealth and Poverty of Nations*. 2nd ed. Dryden Press.

Gwartney, James D., Richard L. Stroup, and Dwight R. Lee (2005). *Common Sense Economics: What Everyone Should Know About Wealth and Prosperity.* St. Martin's Press.

Gwartney, James D., Richard L. Stroup, Dwight R. Lee, Tawni H. Ferrarini, and Joseph P. Calhoun (2016). *Common Sense Economics: What Everyone Should Know About Wealth and Prosperity.* 3rd ed. St. Martin's Press.

Gwartney, James D., Richard L. Stroup, Russell S. Sobel, and David A. Macpherson (2017). *Economics: Private and Public Choice.* 16th ed. Cengage Learning.

Gwartney, James D., Richard L. Stroup, Russell S. Sobel, and David A. Macpherson (2020). *Economics: Private and Public Choice.* 17th ed. Cengage Learning.

Gwartney, James D., Richard L. Stroup, Russell S. Sobel, and David A. Macpherson (2025). *Economics: Private and Public Choice.* 18th ed. Cengage Learning.

Gwartney, James D., and Richard E. Wagner (eds.) (1988). *Public Choice and Constitutional Economics*. JAI Press.

Hall, Joshua C., and Robert A. Lawson (2014). Economic Freedom of the World: An Accounting of the Literature. *Contemporary Economic Policy* 32, 1 (January): 1–19. <https://onlinelibrary.wiley.com/doi/abs/10.1111/coep.12010>, accessed January 2, 2025.

Haworth, Joan Gustafson, James D. Gwartney, and Charles Haworth (1975). Earnings, Productivity, and Changes in Employment Discrimination During the 1960's. *American Economic Review* 65, 1 (March): 158–168. <https://www.jstor.org/stable/1806404>, accessed February 23, 2025.

Holcombe, Randall G. (2024). James D. Gwartney (1940–2024). Blog (January 9). The Independent Institute. <https://www.independent.org/article/2024/01/09/james-d-gwartney-1940-2024/>, accessed January 9, 2024.

James Madison Institute (n.d.). Homepage. James Madison Institute. <https://jamesmadison.org/>, accessed February 25, 2025.

Lawson, Robert (2022). Economic Freedom in the Literature: What Is It Good (Bad) For? In James Gwartney, Robert Lawson, Joshua Hall, and Ryan Murphy (eds.), *Economic Freedom of the World: 2022 Annual Report* (Fraser Institute): 187–199. <https://www.fraserinstitute.org/sites/default/files/economic-freedom-of-the-world-2022.pdf>, accessed January 2, 2025.

List, Mitchell, and Kurt Schuler (2023). *An Interview with James D. Gwartney on His Life and Work in Economics*. KSP Books. <https://econsciences.com/wp-content/uploads/2024/01/978-625-6861-91-6-2.pdf>, accessed January 2, 2025.

Martinez-Vazquez, Jorge, Mark Rider, Riatu Qibthiyyah, and Sally Wallace (2006). *Who Bears the Burden of Taxes on Labor Income in Russia?* International Studies Program Working Paper 06–21. Andrew Young School of Policy Studies, Georgia State University. <https://ays.issuelab.org/resources/4573/4573.pdf>, accessed November 23, 2025.

Mont Pelerin Society, The (n.d.). Homepage. <https://montpelerin.org/>, accessed January 5, 2026.

Maxfield, Morgan, and James D. Gwartney (1976). *1929 Revisited: An Economic Handbook for the Turbulent Seventies*. National Youth Foundation.

Nobel Prize (1986a). Award Ceremony Speech. Presentation Speech by Professor Ingemar Ståhl of the Royal Academy of Sciences. Nobel Prize Outreach. <https://www.nobelprize.org/prizes/economic-sciences/1986/ceremony-speech/>, accessed August 7, 2026.

Nobel Prize (1986b). Facts: James M. Buchanan Jr. Nobel Prize Outreach. <https://www.nobelprize.org/prizes/economic-sciences/1986/buchanan/facts/>, accessed August 7, 2026.

Ottawa University (2026). Gwartney Institute Homepage. Ottawa University. <https://www.ottawa.edu/gwartney-institute>, accessed January 7, 2025.

Powell, Benjamin (2004). *The Pilgrims' Real Thanksgiving Lesson*. Independent Institute (November 25). <https://www.independent.org/article/2004/11/25/the-pilgrims-real-thanksgiving-lesson/>, accessed February 19, 2025.

Public Choice Society (n.d.). Statement of Purpose. Public Choice Society. <https://www.publicchoicesociety.org/about-pcs/>, accessed July 21, 2026.

Rabushka, Alvin (2002). The Flat Tax at Work in Russia. *Hoover Daily Report* (February 21). Hover Insitution. <https://www.hoover.org/research/flat-tax-work-russia>, accessed November 23, 2025.

Reuters (2024, May 28). Russia Proposes Higher Income Taxes for the Well-Off. *Reuters*. <https://www.reuters.com/world/europe/russian-finance-ministry-proposes-boosting-some-income-tax-rates-2024-05-28/>, accessed July 17, 2026.

Rode, Martin, and James D. Gwartney (2012). Does Democratization Facilitate Economic Liberalization? *European Journal of Political Economy* 28, 4 (December): 607–619. <https://myweb.fsu.edu/jdgwartney/Documents/Gwartney%20Rode%20-%20Democratization%20and%20Liberlization.pdf>, accessed February 12, 2025.

Universidad Francisco Marroquín (2008). James D. Gwartney. Universidad Francisco Marroquín. <https://newmedia.ufm.edu/autor/james-d-gwartney/>, accessed January 26, 2025.

Walker, Michael A. (ed.) (1988). *Freedom, Democracy, and Economic Welfare*. Fraser Institute. <https://www.fraserinstitute.org/sites/default/files/FreedomDemocracyEconomicWelfare.pdf>, accessed January 6, 2025.

Walker, Michael A. (1996). The Historical Development of the Economic Freedom Index. In James Gwartney, Robert Lawson, and Walter Block, *Economic Freedom of the World: 1975–1995* (Fraser Institute): 1–10. <https://www.fraserinstitute.org/sites/default/files/EconomicFreedomoftheWorld1975-1995.pdf>, accessed January 6, 2025.

Wynne, Mark A., Harvey Rosenblum, and Robert L. Formaini (eds.) (2004). The Legacy of Milton and Rose Friedman's Free to Choose. Proceedings of a Conference Sponsored by the Federal Reserve Bank of Dallas, October 2023. <https://www.dallasfed.org/-/media/Documents/research/pubs/ftc/ftc.pdf>, accessed July 21, 2026.

Appendix
Explanatory Notes and Data Sources

Area 1: Size of Government

A. Government consumption

i. Government consumption without interest payments

This component is measured as general government consumption spending as a percentage of total consumption. The rating for this component, as with many of the following components, is designed to mirror the actual distribution of the raw data but on a 0-to-10 scale. The rating is equal to: $(V_{max} - V_i) / (V_{max} - V_{min}) \times 10$. The V_i is the country's actual government consumption as a proportion of total consumption, while the V_{max} and V_{min} are set at 40% and 6%, respectively. The 1990 data were used to derive the maximum and minimum values for this component as well as most other components to follow. Countries with a larger proportion of government expenditures receive lower ratings.

ii. Government consumption with interest payments

This component is measured as general government consumption spending plus net interest payments on public debt as a percentage of total consumption plus interest payments. Interest payments will not enter the size of government area unless they are inserted here. The rating for this component, as with many of the following components, is designed to mirror the actual distribution of the raw data but on a 0-to-10 scale. The rating is equal to: $(V_{max} - V_i) / (V_{max} - V_{min}) \times 10$. The V_i is the country's actual government consumption plus interest payments as a proportion of total consumption, while the V_{max} and V_{min} are set at 40% and 6%, respectively. The 1990 data were used to derive the maximum and minimum values for this component as well as most other components to follow. Countries with a larger proportion of government expenditures receive lower ratings.

Sources: World Bank, *World Development Indicators*; International Monetary Fund, *International Financial Statistics*; United Nations National Accounts.

B. Transfers and subsidies

This component is measured as general government transfers and subsidies as a share of GDP. The rating for this component is equal to: $(V_{max} - V_i) / (V_{max} - V_{min}) \times 10$. The V_i is the country's ratio of transfers and subsidies to GDP, while the V_{max} and V_{min} values are set at 37.2% and 0.5%, respectively. The formula will generate lower ratings for countries with larger transfer sectors. When the size of

a country's transfer sector approaches that of the country with the largest transfer sector during the 1990 benchmark year, the rating of the country will approach 0.

Sources: International Monetary Fund, *Government Finance Statistics Yearbook*; World Bank, *World Development Indicators*; International Monetary Fund, *International Financial Statistics*; United Nations National Accounts; European Union, *eurostat*.

C. Government investment

Data on government investment as a share of total investment are used to construct the 0-to-10 ratings. Countries with more government investment as a share of total investment receive lower ratings. The rating for this component is equal to: $(V_{max} - V_i) / (V_{max} - V_{min}) \times 10$. The V_i is the country's ratio of government investment to total investment, while the V_{max} and V_{min} values are set at 50% and 15%, respectively.

Sources: International Monetary Fund, *Investment and Capital Stock Dataset*; World Bank, *World Development Indicators*; Organisation for Economic Co-operation and Development, *OECD Data*.

D. Top marginal tax rate

i. Top marginal income tax rate

Countries with higher marginal tax rates that take effect at lower income thresholds received lower ratings based on the matrix below. The income threshold data are converted from local currency to 1983 US dollars (using exchange rates and the US Consumer Price Index). These figures include sub-national rates if applicable.

ii. Top marginal income and payroll tax rates

Countries with higher marginal income and payroll (wage) tax rates that take effect at lower income thresholds received lower ratings based on the matrix below. The income threshold data are converted from local currency to 1983 US dollars (using exchange rates and the US Consumer Price Index). These figures include sub-national rates if applicable.

Sources: PricewaterhouseCoopers, *Worldwide Tax Summaries Online*; PricewaterhouseCoopers, *Individual Taxes: A Worldwide Summary* (various issues); Ernst & Young, *Worldwide Personal Tax and Immigration Guide* (various issues); Deloitte International Tax Source, *Guide to Fiscal Information*: Key Economies in Africa (various issues).

E. State ownership of assets

This component is based on ratings from the *Varieties of Democracy* (V-Dem) data on State Ownership of the Economy, which "gauges the degree to which the state owns and controls capital (including land) in the industrial, agricultural, and service sectors. It does not measure the extent of government revenue and expenditure as a share of total output; indeed, it is quite common for states with expansive fiscal policies to exercise little direct control (and virtually no ownership) over the economy." We use the original scale (*osp) data from V-Dem for this variable and for all

V-Dem-based variables to follow. The rating is equal to: $(V_i - V_{min}) / (V_{max} - V_{min}) \times 10$. The V_i is the country's state ownership score, while the V_{max} and V_{min} are set at 4.0 and 0, respectively. Countries with greater government ownership of assets get lower scores.

Source: V-Dem Institute, *Varieties of Democracy*, <www.v-dem.net>.

Table 1: Income Threshold at Which the Top Marginal Rate Applies (1983 US$)

Top Marginal Tax Rate	<$25,000	$25,000 - <$50,000	$50,000 - <$150,000	<$150,000 +
<21%	10	10	10	10
21% – <26%	9	9	10	10
26% – <31%	8	8	9	9
31% – <36%	7	7	8	9
36% – <41%	5	6	7	8
41% – <46%	4	5	6	7
46% – <51%	3	4	5	5
51% – <56%	2	3	4	4
56% – <61%	1	2	3	3
61% – <66%	0	1	2	2
66% – <70%	0	0	1	1
70%+	0	0	0	0

Area 2: Legal System and Property Rights

Note: The ratings for Area 2 are adjusted to reflect inequalities in the legal treatment of women using a Gender Disparity Index (GDI) provided annually by Rosemarie Fike. The primary data used in the GDI are from the World Bank's *Women, Business and the Law* reports. For additional details, see Rosemarie Fike (2018), *Impact of Economic Freedom and Women's Well-Being*, <https://www.fraserinstitute.org/studies/impact-of-economic-freedom-and-womens-well-being>.

A. Judicial independence

This component is based on three sources. (a) The first source of this component is from the *Global Competitiveness Report* question: "Is the judiciary in your country independent from political influences of members of government, citizens, or firms? No—heavily influenced (= 1) or Yes—entirely independent (= 7)". The question's wording has varied slightly over the years. All variables from the *Global Competitiveness Report* were converted from the original 1-to-7 scale to a 0-to–10 scale using this formula: $EFW_i = ((GCR_i - 1) \div 6) \times 10$. (b) The second source is a collection of questions from the V-Dem dataset, namely: Judicial Purges, Government Attacks on the Judiciary, Court Packing, High Court Independence, and Low Court Independence. Each of the V-Dem variables is individually rated using the formula $(V_i - V_{min}) / (V_{max} - V_{min}) \times 10$. The V_i is the country's V-Dem score according to V-Dem. For Judicial Purges, Government Attacks on the Judiciary, High Court

Independence, and Low Court Independence, V_{max} and V_{min} were set at 4.0 and 0, respectively. For Court Packing, V_{max} and V_{min} were set at 3.0 and 0, respectively. All five scores are then averaged. (c) The third data source is based on *Update, A Global Measure of Judicial Independence, 1900–2015* (Staton, Linzer, Reenock, and Holsinger, 2019). This data source scores on a 0-to-1 scale, so it was multiplied by 10 to place it on the scale of the other variables. The final rating is the average of whichever of these sources are available.

Sources: World Economic Forum, *Global Competitiveness Report*; V-Dem Institute, *Varieties of Democracy*, <www.v-dem.net>; Jeffrey Staton, Drew Linzer, Christopher Reenock, and Jordan Holsinger (2019), *Update, A Global Measure of Judicial Independence, 1900–2015* (Harvard Dataverse, V1), <https://doi.org/10.7910/DVN/NFXWUO>.

B. Impartial courts

This component is based on four sources. (a) The first source is the *Global Competitiveness Report* question: "The legal framework in your country for private businesses to settle disputes and challenge the legality of government actions and/or regulations is inefficient and subject to manipulation (= 1) or is efficient and follows a clear, neutral process (= 7)". The question's wording has varied slightly over the years. (b) The second source of this component is Judicial Corrupt Decision from the V-Dem dataset. The rating is equal to: $(V_i - V_{min}) / (V_{max} - V_{min}) \times 10$. The V_i is the country's Judicial Corrupt Decisions Score, while the V_{max} and V_{min} are set at 4.0 and 0, respectively. (c) The third source is the Rule of Law indicator found in the *Worldwide Governance Indicators*. The formula used to calculate the 0-to-10 ratings is: $(V_i - V_{min}) / (V_{max} - V_{min}) \times 10$. V_i represents the component value. The values for V_{max} and V_{min} are set at 2.5 and –2.5, respectively. Countries with values outside the V_{max} and V_{min} range received ratings of either 0 or 10, accordingly. (d) The fourth source is the "Transparency and the fairness of the legal system" indicator from the Economist Intelligence Unit (EIU). The original scale is 1-to-5, so the rating formula for data from the EIU is: $EFW_i = ((EIU_i - 1) \div 4) \times 10$. The final rating is the average of whichever of these sources are available.

Sources: World Economic Forum, *Global Competitiveness Report*; World Bank, *Worldwide Governance Indicators*; V-Dem Institute, *Varieties of Democracy*, <www.v-dem.net>; Economist Intelligence Unit, *Business Environment Rankings*.

C. Property rights

This component is based on three sources. (a) The first source is the *Global Competitiveness Report* question: "Property rights, including over financial assets, are poorly defined and not protected by law (= 1) or are clearly defined and well protected by law (= 7)". (b) The second source is Property Rights and Rule-Based Governance from *Country Policy and Institutional Assessment* (CPIA) data from the World Bank. This has been scaled to the Legal System and Property Rights data via regression. (c) The third source is the "Degree to which private property rights are guaranteed and protected" indicator from the Economist Intelligence Unit. The final rating is the average of whichever of these sources are available.

Sources: World Economic Forum, *Global Competitiveness Report*; World Bank, *Country Policy and Institutional Assessment*; Economist Intelligence Unit, *Business Environment Rankings.*

D. Military interference

This component is based on the *International Country Risk Guide* Political Risk Component G, Military in Politics: "A measure of the military's involvement in politics. Since the military is not elected, involvement, even at a peripheral level, diminishes democratic accountability. Military involvement might stem from an external or internal threat, be symptomatic of underlying difficulties, or be a full-scale military takeover. Over the long term, a system of military government will almost certainly diminish effective governmental functioning, become corrupt, and create an uneasy environment for foreign businesses". Originally on a 0-to-6 scale, the rating is algebraically converted to a 0-to-10 scale.

Source: PRS Group, *International Country Risk Guide*.

E. Integrity of the legal system

This component is based on two sources. (a) The first source is the *International Country Risk Guide* Political Risk Component I for Law and Order: "Two measures comprising one risk component. Each subcomponent equals half of the total. The 'law' subcomponent assesses the strength and impartiality of the legal system, and the 'order' subcomponent assesses popular observance of the law". Originally on a 0-to-6 scale, the rating is algebraically converted to a 0-to-10 scale. (b) The second source is Judicial Accountability, Compliance with the High Court, Judicial Review, Transparent Laws with Predictable Enforcement, and Access to Justice for Men from the V-Dem dataset. (An adjustment for the area as a whole is made later to account uniformly for gender disparities.) Each of the V-Dem variables is individually rated using the formula $(V_i - V_{min}) / (V_{max} - V_{min}) \times 10$. V_i is the country's V-Dem score according to V-Dem, and V_{max} and V_{min} are set at 4.0 and 0, respectively. The five measures from V-Dem are then averaged. The final rating is the average of whichever of these sources are available.

Sources: PRS Group, *International Country Risk Guide*; V-Dem Institute, *Varieties of Democracy*, <www.v-dem.net>.

F. Contracts

This component is based on three sources. (a) The first source uses the World Bank's *Doing Business* estimates for the time and money required to collect a debt. The debt is assumed to equal 200% of the country's per-capita income where the plaintiff has complied with the contract and judicial judgment is rendered in his favor. 0-to-10 ratings are constructed for (1) the time cost (measured in number of calendar days required from the moment the lawsuit is filed until payment); and (2) the monetary cost of the case (measured as a percentage of the debt). These two ratings are then averaged to arrive at the final rating for this component. The formula used to calculate the 0-to-10 ratings is: $(V_{max} - V_i) / (V_{max} - V_{min}) \times 10$. V_i represents the time or money cost value. The values for V_{max} and V_{min} are set at 725 days/82.3% and 62 days/0%, respectively. Countries with values outside

the range from V_{max} to V_{min} received ratings of either 0 or 10, accordingly. (b) The second source is the "Contract Viability/Expropriation" data from the PRS Group's *International Country Risk Guide*. The formula used to calculate the 0-to-10 ratings is: $(V_i - V_{min}) / (V_{max} - V_{min}) \times 10$. V_i represents the component value. The values for V_{max} and V_{min} are set at 4 and 0.5, which corresponds to the range of the variable. (c) The third source is the "Efficiency of the legal system" indicator from the Economist Intelligence Unit. The final rating is the average of whichever of these sources are available.

Sources: World Bank, *Doing Business*; Business Environment Risk Intelligence, *Historical Ratings Research Package*; Economist Intelligence Unit, *Business Environment Rankings*.

G. Real property

This component is based on the World Bank's *Doing Business* data on the time measured in days and monetary costs required to transfer ownership of property that includes land and a warehouse. 0-to-10 ratings are constructed for (1) the time cost (measured in the number of calendar days required to transfer ownership); and (2) the monetary cost of transferring ownership (measured as a percentage of the property value). These two ratings are then averaged to arrive at the final rating for this component. The formula used to calculate the 0-to-10 ratings is: $(V_{max} - V_i) / (V_{max} - V_{min}) \times 10$. V_i represents the time or money cost value. The values for V_{max} and V_{min} are set at 265 days/15% and 0 days/0%, respectively. Countries with values outside the range from V_{max} to V_{min} received ratings of either 0 or 10, accordingly.

Source: World Bank, *Doing Business*.

H. Police and crime

This component is based on two sources. (a) The first source is the *Global Competitiveness Report* question: "To what extent can police services be relied upon to enforce law and order in your country? (1 = Cannot be relied upon at all; 7 = Can be completely relied upon)". (b) The second source is the "Impact of crime" indicator from the Economist Intelligence Unit. The final rating is the average of whichever of these sources are available.

Sources: World Economic Forum, *Global Competitiveness Report*; Economist Intelligence Unit, *Business Environment Rankings*.

Area 3: Sound Money

A. Money growth

This component measures the average annual growth of the money supply in the last five years minus average annual growth of real GDP in the last 10 years. Countries where growth of the money supply greatly exceeds growth of real output receive lower ratings. The broad money supply (basically what used to be called M2) is used to measure the money supply. The rating is equal to: $(V_{max} - V_i) / (V_{max} - V_{min}) \times 10$. V_i represents the average annual growth rate of the money supply during the last five years adjusted for the growth of real GDP during the previous 10 years. The values for V_{min} and

V_{max} are set at 0% and 50%, respectively. Therefore, if the adjusted growth rate of the money supply during the last five years is 0%, indicating that money growth is equal to the long-term growth of real output, the formula generates a rating of 10. Ratings decline as the adjusted growth of the money supply increases toward 50%. When adjusted annual money growth is equal to (or greater than) 50%, a rating of 0 results.

Sources: World Bank, *World Development Indicators*; International Monetary Fund, *International Financial Statistics*; United Nations National Accounts.

B. Standard deviation of inflation

This component measures the standard deviation of the inflation rate over the last five years. Generally, the GDP deflator is used as the measure of inflation for this component. When these data are unavailable, the Consumer Price Index is used. The following formula is used to determine the 0-to-10 scale rating for each country: $(V_{max} - V_i) / (V_{max} - V_{min}) \times 10$. V_i represents the country's standard deviation of the annual rate of inflation during the last five years. The values for V_{min} and V_{max} are set at 0% and 25%, respectively. This procedure will allocate the highest ratings to the countries with the least variation in the annual rate of inflation. A perfect 10 results when there is no variation in the rate of inflation over the five-year period. Ratings will decline toward 0 as the standard deviation of the inflation rate approaches 25% annually.

Sources: World Bank, *World Development Indicators*; International Monetary Fund, *International Financial Statistics*.

C. Inflation: most recent year

Generally, the Consumer Price Index is used as the measure of inflation for this component as it is often available before the GDP deflator is available. When these data are unavailable, the GDP deflator inflation rate is used. The 0-to-10 country ratings are derived by the following formula: $(V_{max} - V_i) / (V_{max} - V_{min}) \times 10$. V_i represents the rate of inflation during the most recent year. The values for V_{min} and V_{max} are set at 0% and 25%, respectively: the lower the rate of inflation, the higher the rating. Countries that achieve perfect price stability earn a rating of 10. As the current annual inflation rate moves towards 25%, the rating for this component moves toward 0. A 0 rating is assigned to all countries with an inflation rate of 25% or more.

Sources: World Bank, *World Development Indicators*; International Monetary Fund, *International Financial Statistics*.

D. Foreign currency bank accounts

When foreign-currency bank accounts are permissible without *any* restrictions both domestically and abroad, the rating is 10; when these accounts are restricted, the rating is 0. If foreign currency bank accounts were permissible domestically but not abroad (or vice versa), the rating is 5.

Source: International Monetary Fund, *Annual Report on Exchange Arrangements and Exchange Restrictions*.

Area 4: Freedom to Trade Internationally

A. Tariffs

i. Trade tax revenue

This subcomponent measures the amount of tax on international trade as a share of exports and imports. The formula used to calculate the ratings for this subcomponent is: $(V_{max} - V_i) / (V_{max} - V_{min}) \times 10$. V_i represents the revenue derived from taxes on international trade as a share of the trade sector. The values for V_{min} and V_{max} are set at 0% and 15%, respectively. This formula leads to lower ratings as the average tax rate on international trade increases. Countries with no specific taxes on international trade earn a perfect 10. As the revenues from these taxes rise toward 15% of international trade, ratings decline toward 0.

Sources: International Monetary Fund, *Government Finance Statistics Yearbook*; International Monetary Fund, *International Financial Statistics*.

ii. Mean tariff rate

This subcomponent is based on the unweighted mean of tariff rates. The formula used to calculate the 0-to-10 rating for each country is: $(V_{max} - V_i) / (V_{max} - V_{min}) \times 10$. V_i represents the country's mean tariff rate. The values for V_{min} and V_{max} are set at 0% and 50%, respectively. This formula will allocate a rating of 10 to countries that do not impose tariffs. As the mean tariff rate increases, countries are assigned lower ratings. The rating will decline toward 0 as the mean tariff rate approaches 50%. (Note that, except for two or three extreme observations, all countries have mean tariff rates within this range from 0% to 50%.)

Source: World Trade Organization, *World Tariff Profiles*.

iii. Standard deviation of tariff rates

Compared to a uniform tariff, wide variations in tariff rates indicate greater efforts towards central planning of the economy's production and consumption patterns. Thus, countries with a greater variation in their tariff rates are given lower ratings. The formula used to calculate the 0-to-10 ratings for this component is: $(V_{max} - V_i) / (V_{max} - V_{min}) \times 10$. V_i represents the standard deviation of the country's tariff rates. The values for V_{min} and V_{max} are set at 0% and 25%, respectively. This formula will allocate a rating of 10 to countries that impose a uniform tariff. As the standard deviation of tariff rates increases towards 25%, ratings decline toward 0.

Source: World Trade Organization, *World Tariff Profiles*.

B. Regulatory trade barriers

i. Non-tariff trade barriers

This subcomponent is based on two sources. (a) The first source is the *Global Competitiveness Report* survey question: "In your country, tariff and non-tariff barriers significantly reduce the ability of imported goods to compete in the domestic market. 1–7 (best)". The question's wording has varied slightly over the years. (b) The second source is the "Tariff and non-tariff barriers" indicator

from the Economist Intelligence Unit. The final rating is the average of whichever of these sources are available. Note that, notwithstanding the subcomponent's title, this indicator captures both tariff and non-tariff barriers.

Sources: World Economic Forum, *Global Competitiveness Report*; Economist Intelligence Unit, *Business Environment Rankings.*

ii. Costs of importing and exporting

This subcomponent is based on the World Bank's *Doing Business* data on the time (i.e., non-money) cost of procedures required to import a full 20-foot container of dry goods that contains no hazardous or military items. Countries where it takes longer to import or export are given lower ratings. 0-to-10 ratings are constructed for (1) the time cost (in hours) associated with border compliance and documentary compliance when exporting; and (2) the time cost (in hours) associated with border compliance and documentary compliance when importing. These two ratings are then averaged to arrive at the final rating for this subcomponent. The formula used to calculate the 0-to-10 ratings is: $(V_{max} - V_i) / (V_{max} - V_{min}) \times 10$. V_i represents the time-cost value. The values for V_{max} and V_{min} are set, respectively, at 228.38 and 0 hours for exporting; and 338.00 hours and 0 hours for importing. Countries with values outside the V_{max} and V_{min} range receive ratings of either 0 or 10, accordingly.

Source: World Bank, *Doing Business.*

C. Black-market exchange rates

This component is based on the percentage difference between the official and the parallel (black-market) exchange rate. The formula used to calculate the 0-to-10 ratings for this component is the following: $(V_{max} - V_i) / (V_{max} - V_{min}) \times 10$. V_i is the country's black-market exchange-rate premium. The values for V_{min} and V_{max} are set at 0% and 50%, respectively. This formula will allocate a rating of 10 to countries without a black-market exchange rate; that is, those with a domestic currency that is fully convertible without restrictions. When exchange-rate controls are present and a black market exists, the ratings will decline toward 0 as the black-market premium increases toward 50%. A 0 rating is given when the black-market premium is equal to, or greater than, 50%.

Source: *MRI Bankers' Guide to Foreign Currency*.

D. Controls of the movement of capital and people

i. Financial openness

This subcomponent is based on two sources. (a) The first source is the Chinn-Ito Index of *de jure* financial openness. This index is composed of a series of dummy variables that "codify the tabulation of restrictions on cross-border financial transactions reported in the IMF's *Annual Report on Exchange Arrangements and Exchange Restrictions*." This data source scores on a continuous scale from 0-to-1, so it is multiplied by 10 to place it on the 0-to-10 scale. (b) The second source is the "Capital account liberalization" indicator from the Economist Intelligence Unit.

Sources: Menzie Chinn and Hiro Ito (2006), What Matters for Financial Development? Capital Controls,

Institutions, and Interactions, *Journal of Development Economics* 81, 1: 163–191; Menzi Chinn and Hiro Ito (2008), A New Measure of Financial Openness, *Journal of Comparative Policy Analysis* 10, 3: 309–322; see also <http://web.pdx.edu/~ito/Chinn-Ito_website.htm>; Economist Intelligence Unit, *Business Environment Rankings*.

ii. Capital controls

The International Monetary Fund reports on up to 13 types of international capital controls. The zero-to-10 rating is the percentage of capital controls not levied as a share of the total number of capital controls listed, multiplied by 10.

Source: International Monetary Fund, *Annual Report on Exchange Arrangements and Exchange Restrictions*.

iii. Freedom of foreigners to visit

This component measures the percentage of countries for which a country requires a visa from foreign visitors. It reflects the freedom of foreigners to travel to this country for tourist and short-term business purposes. The formula used to calculate the zero-to-10 ratings is: (Vi – Vmin) / (Vmax – Vmin) × 10. Vi represents the component value. The values for Vmax and Vmin were set at 47.2 (1 standard deviation above average) and 0. Countries with values outside the range between Vmax and Vmin received ratings of either 0 or 10, accordingly.

Source: Robert Lawson and Jayme Lemke (2012), Travel Visas, *Public Choice* 154, 1-2: 17–36; IATI, <https://www.iata.org/>; authors' calculations.

iv. Protection of foreign assets

This subcomponent is based on two sources. (a) The first source is the *Global Competitiveness Report* survey questions on "Prevalence of foreign ownership" and "Business impact of rules on FDI". (b) The second source is the "Risk of expropriation of foreign assets" from the Economist Intelligence Unit. The final rating is the average of whichever of these sources are available.

Sources: World Economic Forum, *Global Competitiveness Report*; World Bank, *Worldwide Governance Indicators*; Economist Intelligence Unit, *Business Environment Rankings*.

Area 5: Regulation

A. Credit market regulation

i. Ownership of banks

This component measures the extent to which government owns/controls the banking sector. The formula used to derive the country ratings for this subcomponent is $(V_{max} - V_i) / (V_{max} - V_{min}) \times 10$. V_i is the share of deposits held in government-owned banks, and the values for V_{max} and V_{min} are set at 75% and 0%, respectively. The formula allocates higher ratings as government ownership of banks gets smaller.

Sources: Panizza, Ugo. 2024. "Bank Ownership Around the World," *Journal of Banking and Finance*, <https://www.upanizza.com/general-4>; World Bank, *Bank Regulation and Supervision Survey*.

ii. Private sector credit

This subcomponent measures the extent of government borrowing relative to private-sector borrowing. If the data are available, this subcomponent is calculated as the government fiscal deficit as a share of gross saving. The formula used to derive the country ratings for this subcomponent is $(V_{max} - V_i) / (V_{max} - V_{min}) \times 10$. V_i is the [absolute value of the] the ratio of deficit to gross savings, and the values for V_{max} and V_{min} are set at 100% and 0%, respectively. The formula allocates higher ratings as the deficit gets smaller relative to gross saving.

If the deficit data are not available, the component is instead based on the share of private credit relative to total credit extended in the banking sector. Thus, the formula used to derive the country ratings for this subcomponent is $(V_i - V_{min}) / (V_{max} - V_{min}) \times 10$. V_i is the share of the country's total domestic credit allocated to the private sector and the values for V_{max} and V_{min} are set at 99.9% and 10.0%, respectively. The formula allocates higher ratings as the share of credit extended to the private sector increases.

Sources: World Bank, *World Development Indicators*; World Economic Forum, *Global Competitiveness Report*; International Monetary Fund, *International Financial Statistics*.

iii. Interest rate controls / negative real interest rates

Countries with interest rates determined by the market, stable monetary policy, and reasonable real-deposit and lending-rate spreads received higher ratings. When interest rates are determined primarily by market forces as evidenced by reasonable deposit and lending-rate spreads, and when real interest rates are positive, countries are given a rating of 10. When interest rates are primarily market-determined but the real rates are sometimes slightly negative (less than 5%) or the differential between the deposit and lending rates is large (8% or more), countries received a rating of 8. When the real deposit or lending rate is persistently negative by a single-digit amount or the differential between them is regulated by the government, countries are rated at 6. When the deposit and lending rates are fixed by the government and the real rates are often negative by single-digit amounts, countries are assigned a rating of 4. When the real deposit or lending rate is persistently negative by a double-digit amount, countries received a rating of 2. A 0 rating is assigned when the deposit and lending rates are fixed by the government and real rates are persistently negative by double-digit amounts or hyperinflation has virtually eliminated the credit market.

Sources: World Bank, *World Development Indicators*; International Monetary Fund, *International Financial Statistics*; CIA, *The World Factbook*.

B. Labor market regulation

i. Labor regulations and minimum wage

This subcomponent is based on three sources. (a) The first source is the *CBR Labour Regulation Index*, which includes three variables concerning (1) "Annual leave entitlements"; (2) "Public holiday entitlements"; and (3) "Overtime premia." The original data is on a [0,1] scale, which is flipped to reflect that these restrictions reflect lesser freedom. They are then averaged together and multiplied

by 10. (b) The second source is the "Employing Workers" section of the World Bank's *Doing Business* and uses the following data: (1) whether fixed-term contracts are prohibited for permanent tasks; (2) the maximum cumulative duration of fixed-term contracts; and (3) the ratio of the minimum wage for a trainee or first-time employee to the average value added per worker. Countries with restrictions on fixed-term contracts, restrictions on the duration of fixed-term contracts, and/or higher minimum wages receive lower ratings. (c) The third source is the "Wage regulation" indicator from the Economist Intelligence Unit. The *CBR Labour Regulation Index* is treated as the preferred data source, and if it is unavailable, the average of the *Doing Business* data and the Economist Intelligence Unit data are used.

Sources: Centre for Business Research, *CBR Labour Regulation Index*; World Bank, *Doing Business*; Economist Intelligence Unit, *Business Environment Rankings*.

ii. Hiring and firing regulations

This subcomponent is based on four sources. (a) The first source is the *CBR Labour Regulation Index*, which includes seven variables concerning (1) "The law as opposed to the contracting parties, determines the legal status of the worker"; (2) "Part-time workers have the right to equal treatment with full-time workers"; (3) "Fixed-term contracts are allowed only for work of limited duration"; (4) "Fixed-term workers have the right to equal treatment with permanent workers"; (5) "Maximum duration of fixed-term contracts"; (6) "Agency work is prohibited of strictly controlled"; and (7) "Agency workers have the right to equal treatment with permanent workers of the user undertaking." The original data is on a [0,1] scale, which is flipped to reflect that these restrictions reflect lesser freedom. They are then averaged together and multiplied by 10. (b) The second source is the *Structural Reform Database* variable, Valid Grounds, which "captures the freedom of the employer in deciding when to dismiss workers and which workers to dismiss." This variable scale on a [0,1] and is multiplied by 10. (c) The third source is the *Global Competitiveness Report* question: "The hiring and firing of workers is impeded by regulations (= 1) or flexibly determined by employers (= 7)". The question's wording has varied over the years. (d) The fourth source is the "Restrictiveness of labour laws" indicator from the Economist Intelligence Unit. Data from the *CBR Labour Regulation Index* and the *Structural Reform Database* area treated as preferred, and averaged together if both are available. If neither is available, then the average of data from the *Global Competitiveness Report* and the Economist Intelligence unit is used.

Sources: Centre for Business Research, *CBR Labour Regulation Index*; International Monetary Fund, *Structural Reform Database*; World Economic Forum, *Global Competitiveness Report*; Economist Intelligence Unit, *Business Environment Rankings*.

iii. Flexible wage determination

This subcomponent is based on three sources. (a) The first source is the *CBR Labour Regulation Index*, which includes 17 variables concerning (1) "Priority in re-employment"; (2) "Right to unionisation"; (3) "Right to collective bargaining"; (4) "Duty to bargain"; (5) "Extension of collective agreements"; (6) "Closed shops"; (7) "Codetermination: board membership"; (8) "Codetermination and

information/consultation of workers"; (9) "Unofficial industrial action"; (10) "Political industrial action"; (11) "Secondary industrial action"; (12) "Lockouts"; (13) "Right to industrial action"; (14) "Waiting period prior to industrial action"; (15) "Peace obligation"; (16) "Compulsory conciliation or arbitration"; and (17) "Replacement of striking workers." The original data is on a [0,1] scale, which is flipped to reflect that these restrictions reflect lesser freedom. They are then averaged together and multiplied by 10. (b) The second source is the *Structural Reform Database*, which includes the variable, Procedural Inconvenience, which "includes provisions such as consultation with workers' representatives and third-party approval." This variable is on a [0,1] scale and is multiplied by 10. (c) The third source is the *Global Competitiveness Report* question: "Flexibility of wage determination, 1–7 (best)". In earlier years, the question is "Wages in your country are set by a centralized bargaining process (= 1) or up to each individual company (= 7)". Data from the *CBR Labour Regulation Index* and the *Structural Reform Database* area treated as preferred, and averaged together if both are available. If neither is available, then data from the *Global Competitiveness Report* is used.

Sources: Centre for Business Research, *CBR Labour Regulation Index*, International Monetary Fund, *Structural Reform Database*, World Economic Forum, *Global Competitiveness Report*.

iv. Hours regulations

This subcomponent is based on two sources. (a) The first source is the *CBR Labour Regulation Index*, which includes four variables concerning (1) "Weekend working"; (2) "Limits to overtime working"; (3) "Duration of the normal working week"; and (4) "Maximum daily working time." The original data is on a [0,1] scale, which is flipped to reflect that these restrictions reflect lesser freedom. They are then averaged together and multiplied by 10. (b) The second source is based on the Employing Labor section in the World Bank's *Doing Business*; it uses the following five components: (1) whether there are restrictions on night work; (2) whether there are restrictions on holiday work; (3) whether the length of the work week can be 5.5 days or longer; (4) whether there are restrictions on overtime work; and (5) whether the average paid annual leave is 21 working days or more. For each question, when the regulations apply, a score of 1 is given. If there are no restrictions, the economy receives a score of 0. The 0-to-10 rating is based on how many of these regulations are in place: zero regulations results in a rating of 10; one regulation results in a rating of 8; and so on. For countries where the *CBR Regulation Index* is available, it is used, and when it is unavailable, *Doing Business* is used.

Sources: Centre for Business Research, *CBR Labour Regulation Index*, World Bank, *Doing Business*.

v. Costs of worker dismissal

This subcomponent is based on three sources. (a) The first source is the *CBR Labour Regulation Index*, which includes nine variables concerning (1) "The cost of dismissing part-time workers is equal in proportionate terms to the cost of dismissing full-time workers"; (2) "Legally mandated notice period"; (3) "Legally mandated redundancy compensation"; (4) "Minimum qualifying period of service for normal case of unjust dismissal"; (5) "Law imposes procedural constraints

on dismissal"; (6) "Law imposes substantive constraints on dismissal"; (7) "Reinstatement normal remedy for unfair dismissal"; (8) "Notification of dismissal"; and (9) "Redundancy selection." The original data is on a [0,1] scale, which is flipped to reflect that these restrictions reflect lesser freedom. They are then averaged together and multiplied by 10. (b) The second source is the *Structural Reform Database*, which includes three variables, (1) "Firing costs," which "consists of minimum notice periods and severance penalties"; (2) "Redress measures (in case of unfair dismissal)," which "concerns provisions such as the possibility for the worker being reinstated or to receive compensation following an unfair dismissal"; and (3) "Additional requirements for collective dismissals," which "accounts for additional restrictions imposed to the employer when dismissing a large number of workers for economic reasons." These variables are on a [0,1] scale and are multiplied by 10. The first and second variables are included normally, but to reflect the stacking nature of the third variable, it is multiplied by the second and then divided by 10 to put it back on the 0-to-10 scale. The three of these variables are then averaged. (c) The third source is the World Bank's *Doing Business* data on the cost of the advance-notice requirements, severance payments, and penalties due when dismissing a redundant worker with 10-years tenure. The formula used to calculate the 0-to-10 ratings is: $(V_{max} - V_i) / (V_{max} - V_{min}) \times 10$. V_i represents the dismissal cost (measured in weeks of wages). The values for V_{max} and V_{min} are set at 58 weeks and 0 weeks, respectively. Countries with values outside the V_{max} and V_{min} range received ratings of either 0 or 10, accordingly. Data from the *CBR Labour Regulation Index* and the *Structural Reform Database* area treated as preferred, and averaged together if both are available. If neither is available, then data from the *Doing Business* report is used.

Sources: Centre for Business Research, *CBR Labour Regulation Index*, International Monetary Fund, *Structural Reform Database*, World Bank, *Doing Business*.

vi. Conscription

Data on the use and duration of military conscription are used to construct rating intervals. Countries with longer conscription periods received lower ratings. A rating of 10 is assigned to countries without military conscription. When length of conscription is six months or less, countries are given a rating of 5. When length of conscription is more than six months but not more than 12 months, countries are rated at 3. When length of conscription is more than 12 months but not more than 18 months, countries are assigned a rating of 1. When conscription periods exceeded 18 months, countries are rated 0. If conscription is present but apparently not strictly enforced or the length of service could not be determined, the country is given a rating of 3. In cases where it is clear conscription is never used, even though it may be possible, a rating of 10 is given. If a country's mandated national service includes clear non-military options, the country is given a rating of 5.

Sources: International Institute for Strategic Studies, *The Military Balance*; War Resisters International, *World Survey of Conscription and Conscientious Objection to Military Service*; additional online sources used as necessary.

vii. Foreign labor

This subcomponent is based on two sources. (a) The first source is the *Global Competitiveness Report* question: "To what extent does labour regulation in your country limit the ability to hire foreign labour? (1 = Very much limits hiring foreign labour; 7 = Does not limit hiring foreign labour at all)". The question's wording has varied over the years. (b) The second source is the "Hiring of foreign nationals" indicator from the Economist Intelligence Unit. The final rating is the average of whichever of these sources are available.

Sources: World Economic Forum, *Global Competitiveness Report*; Economist Intelligence Unit, *Business Environment Rankings*.

C. Business regulation

i. Regulatory burden

This subcomponent is based on the *Global Competitiveness Report* question on the "Burden of government regulation, 1–7 (best)". The question's wording has varied slightly over the years.

Source: World Economic Forum, *Global Competitiveness Report*.

ii. Bureaucracy costs

This subcomponent is based on the "Regulatory Burden Risk Ratings" from IHS Markit, which measures "[t]he risk that normal business operations become more costly due to the regulatory environment. This includes regulatory compliance and bureaucratic inefficiency and/or opacity. Regulatory burdens vary across sectors so scoring should give greater weight to sectors contributing the most to the economy". The raw scores range, roughly, from 0 to 7, with higher values indicating greater risk. The formula used to calculate the 0-to-10 ratings is: $(V_{max} - V_i) / (V_{max} - V_{min}) \times 10$. V_i is the country's Regulatory Burden rating, while the V_{max} and V_{min} are set at 5 and 0.5, respectively.

Source: IHS Markit.

iii. Impartial public administration

This subcomponent is based on the "Rigorous and Impartial Public Admin-istration" data from the V-Dem dataset. If nepotism, cronyism, and discrimi-nation are widespread in the application of public administration, countries receive a lower score. The rating is equal to: $(V_i - V_{min}) / (V_{max} - V_{min}) \times 10$. The V_i is the country's impartial administration score, while the V_{max} and V_{min} are set at 4.0 and 0, respectively.

Source: V-Dem Institute, *Varieties of Democracy*, <www.v-dem.net>.

iv. Tax compliance

This subcomponent is based on two sources. (a) The first source is the World Bank's *Doing Business* data on the time required per year for a business to prepare, file, and pay taxes on corporate income, value added or sales taxes, and taxes on labor. The formula used to calculate the 0-to-10 ratings is: $(V_{max} - V_i) / (V_{max} - V_{min}) \times 10$. V_i represents the time cost (measured in hours) of tax compliance.

The values for V_{max} and V_{min} are set at 892 hours and 0 hours, respectively. Countries with values outside the V_{max} and V_{min} range received ratings of either 0 or 10, accordingly. (b) The second source is the "Tax complexity" indicator from the Economist Intelligence Unit. The final rating is the average of whichever of these sources are available.

Sources: World Bank, *Doing Business*; Economist Intelligence Unit, *Business Environment Rankings*.

D. Freedom to compete

i. Market openness

This subcomponent is based on two sources. (a) The first source is the World Bank's *Doing Business* data on the amount of time and money it takes to start a new limited-liability business. Countries where it takes longer or is costlier to start a new business are given lower ratings. 0-to-10 ratings are constructed for three variables: (1) time (measured in days) necessary to comply with regulations when starting a limited liability company; (2) money costs of the fees paid to regulatory authorities (measured as a share of per-capita income); and (3) minimum capital requirements, that is, funds that must be deposited into a company bank account (measured as a share of per-capita income). These three ratings are then averaged to arrive at the final rating for this subcomponent. The formula used to calculate the 0-to-10 ratings is: $(V_{max} - V_i) / (V_{max} - V_{min}) \times 10$. V_i represents the variable value. The values for V_{max} and V_{min} are set at 104 days/317%/1,017% and 0 days/0%/0%, respectively. Countries with values outside the V_{max} and V_{min} range received ratings of either 0 or 10, accordingly. (b) The second source are the "Freedom of existing businesses to compete" and "Level of government regulation and impact on private business" indicators from the Economist Intelligence Unit. The latter indicator is based heavily on regulations related to starting a business. The final rating is the average of whichever of these sources are available.

Sources: World Bank, *Doing Business*; Economist Intelligence Unit, *Business Environment Rankings*.

ii. Business permits

This subcomponent is based on the World Bank's *Doing Business* data on the time in days and monetary costs required to obtain a license to construct a standard warehouse. 0-to-10 ratings are constructed for (1) the time cost (measured in number of calendar days required to obtain a license) and (2) the monetary cost of obtaining the license (measured as a share of per-capita income). These two ratings are then averaged to arrive at the final rating for this subcomponent. The formula used to calculate the 0-to-10 ratings is: $(V_{max} - V_i) / (V_{max} - V_{min}) \times 10$. V_i represents the time or money cost value. The time values for V_{max} and V_{min} are set at 363/2763% days and 56 days/0% respectively, Countries with values outside the V_{max} and V_{min} range received ratings of either 0 or 10, accordingly.

Source: World Bank, *Doing Business*.

iii. Distortion of business environment

This subcomponent is based on the "Price controls" and "State control" indicators from the Economist Intelligence Unit.

Source: Economist Intelligence Unit, *Business Environment Rankings*.

The EFW Panel Dataset

Over the years, the EFW index has become more comprehensive and the available data more complete. As a result, the number and composition of the components and subcomponents for many countries vary across time. This makes it difficult to directly compare index values from earlier periods with those of later periods. To assist researchers who are interested in a consistent time-series for a particular country and/or longitudinal data for a panel of countries, we have developed the EFW Panel Dataset.

The EFW Panel Dataset is a chain-linked version of the index. It uses the most recent year as the base year, and changes in a country's scores backward in time are based only on changes in components that were pre-sent in adjoining years.

The table below illustrates the procedure using some illustrative numbers. In the years 2018–2021, Variables 1 and 2 are simply averaged to create a rating. The problem comes in 2012–2017 when Variable 2 is not available. If we took the usual raw average of just Variable 1 (since there is not a Variable 2), the average would be artificially lower in 2017 than 2018 by 0.5 points. The chain-linked version, though, would base the rating only on the changes in Variable 1, and since there was no change to Variable 1 in 2017 compared with 2018, the chain-linked rating would not change from 2018 to 2017. Now note that Variable 1's value in 2015 was 80% of its value for 2016 (4.0 is 80% of 5.0). We therefore compute the chain-linked version of the 2015 score as 80% of its 2016 value (4.4 is 80% of 5.5). This process is then continued to get chain-linked ratings backward in time.

Year	Variable 1	Variable 2	Raw Average	Chain-Linked
2021	6.0	8.0	7.0	7.0
2020	6.0	8.0	7.0	7.0
2019	5.0	7.0	6.0	6.0
2018	5.0	6.0	5.5	5.5
2017	5.0		5.0	5.5
2016	5.0		5.0	5.5
2015	4.0		4.0	4.4
2014	4.0		4.0	4.4
2013	3.0		3.0	3.3
2012	3.0		3.0	3.3

It should be noted that the EFW Panel Dataset contains area and summary ratings only for those years in which the country received a regular EFW index rating. Because some data for earlier years may have been up-dated or corrected, researchers are always encouraged to use the data from the most recent annual report to ensure the most reliable figures.

Acknowledgments

We are grateful for the continuing support of the Fraser Institute, its president, Niels Veldhuis, and its executive vice president, Jason Clemens. We are pleased to welcome Fraser Institute Senior Fellow Matthew Mitchell as a contributing author on this report. Many thanks to the Fraser team, who manage the publication, website, e-mails, and media requests on our behalf.

We are deeply honored to be able to continue the legacy that the late James Gwartney started so many years ago. Without his tenacity and vision, plus the assistance and guidance of Michael Walker, co-founder of the Fraser Institute, and the late Rose and Milton Friedman, this project would never have gotten off the ground.

The too-numerous-to-name members of the Economic Freedom Network again provided valuable support for this report. Rosemarie Fike deserves our special thanks for her efforts to provide the gender disparity index that we use. Our thanks also go to Kathy Makinen for her many years of research assistance on the marginal tax-rate component.

The authors would like to thank the Donner Canadian Foundation and the Sarah Scaife Foundation for their generous support of this project. They would also like to thank the many generous donors to the Fraser Institute and the Bridwell Institute for Economic Freedom at SMU for their financial support of this project.

Robert Lawson, Ryan Murphy, and Matthew Mitchell

About the Authors

JAMES D. GWARTNEY was a Professor Emeritus of Economics at Florida State University, where he remained until his passing in January 2024. He was a founding author of *Economic Freedom of the World* (publication and index). He co-authored *Economics: Private and Public Choice* (Cengage/South-Western Press, 2022), a widely used principles of economics text that will soon enter its 18th edition. He also co-authored the economics primer, *Common Sense Economics: What Everyone Should Know about Wealth and Prosperity* (St. Martin's Press, 2016). His publications appeared in both professional journals and popular media such as the *Wall Street Journal* and the *New York Times*. He served as Chief Economist of the Joint Economic Committee of the US Congress during 1999–2000. In 2004, he was the recipient of the Adam Smith Award of the Association of Private Enterprise Education for his contribution to the advancement of free-market ideals. He is a past President of the Southern Economic Association and the Association for Private Enterprise Education. He held a Ph.D. in economics from the University of Washington.

ROBERT LAWSON holds the Jerome M. Fullinwider Centennial Chair in Economic Freedom; he also is director of the Bridwell Institute for Economic Freedom at the Southern Methodist University (SMU) Cox School of Business. He earned his Ph.D. and M.S. in Economics from Florida State University and his B.S. in Economics from the Honors Tutorial College at Ohio University. He has authored or co-authored over 100 journal articles, book chapters, and policy reports. With Benjamin Powell, he is co-author of the Amazon best seller, *Socialism Sucks: Two Economists Drink Their Way through the Unfree World* (Regnery Publishing, 2019). Prof. Lawson is past-president of the Association of Private Enterprise Education, a Senior Fellow at the Fraser Institute, and a member of the Mont Pelerin Society. He was awarded the Adam Smith Award from the Association of Private Enterprise Education in 2019.

RYAN MURPHY is a Research Associate Professor in the Bridwell Institute for Economic Freedom at SMU Cox School of Business. He received his B.A. in Economics from Boston College and M.S. and Ph.D. in Economics from Suffolk University. His research has appeared in publications such as Economica, American Journal of Agricultural Economics, Public Choice, Public Health, and Contemporary Economic Policy. He is the author of Markets against Modernity: Ecological Irrationality, Public and Private (Rowman & Littlefield, 2019).

MATTHEW D. MITCHELL is a Senior Fellow in the Centre for Human Freedom. He is also an affiliated senior scholar at the Mercatus Center at George Mason University.

Mitchell received his Ph.D. and M.A. in economics from George Mason University and his B.A. in political science and B.S. in economics from Arizona State University. His writing and research focuses on economic freedom, public choice economics, the economic history of socialism, and the economics of government favoritism.

Mitchell has testified before the U.S. Congress and several state legislatures. He has advised federal, state, and local government policymakers in the United States on both fiscal and regulatory policy. His research has been featured in numerous national media outlets, including the *New York Times*, the *Wall Street Journal*, the *Washington Post*, National Public Radio, and C-SPAN.

About the Contributors

VINCENT GELOSO, Senior Fellow of the Fraser Institute, is an Assistant Professor of Economics at George Mason University and earned his Ph.D. from the London School of Economics. Previously, he was assistant professor of economics at King's University College and Bates College. He earned his undergraduate degree from the University of Montreal.

Professor Geloso specializes in the measurement of living standards today and in the distant past. He combines his specialization in economic history with a specialization in political economy in order to explain differences in living standards over time and space. His most recent articles have been published in *Public Choice*, *Explorations in Economic History*, *European Review of Economic History*, *Contemporary Economic Policy and Southern Economic Journal*. He has also authored opinion articles in the *Journal de Montréal*, *Journal de Québec*, *National Post*, *Globe & Mail*, Toronto *Star, Gazette, Le Devoir, La Presse, Le Soleil*, and *Huffington Post Québec*.

SIGNÈ DEWIND has taught courses on economics, personal finance, entrepreneurship, and formal organizations. She was the K. W. Davis Visiting Lecturer at Trinity College, where she taught courses within the Formal Organizations minor. Prior to joining Trinity, she was the Project Director for the Stavros Center for the Advancement of Free Enterprise and Economic Education at Florida State University (FSU). Her role included advancing economic literacy through teaching, textbook and curriculum development, and programs. While at FSU she also served as Research Associate for the DeVoe Moore Center and taught courses for the Jim Moran College of Entrepreneurship. She is pursuing a Ph.D. in economics at Universidad Francisco Marroquín.

Signè is a member of the Mont Pelerin Society, and enjoys promoting economic literacy across North America—particularly through partnering with organizations such as the Fraser Institute and the Foundation for Economic Education to train educators via teacher workshops and webinars, and also engage with college and high school students via student seminars. In 2018 she authored the curriculum *Lessons in Economic Freedom*, which is used in the classrooms of educators in Canada and the US. She co-authored the textbook *Economic Episodes in Civics and American Government*, which was published in 2022.

The Economic Freedom Network

Co-publishers of *Economic Freedom of the World*

Afghanistan	Afghanistan Economic and Legal Studies Organization (AELSO)
Albania	Albanian Center for Economic Research (ACER)
Argentina	Fundación Libertad
Armenia	Centre of Political, Legal and Economic Research and Forecasting (PLERF)
Australia	Institute of Public Affairs (IPA)
Azerbaijan	Center for Economic and Social Development
Bahamas, The	The Nassau Institute
Belgium	The Ludwig von Mises Institute – Europe
Bolivia	Política Publicas para la Libertad (POPULI)
Bosnia and Herzegovina	Center for Advancement of Free Enterprise
Brazil	Instituto Liberal
Bulgaria	Institute for Market Economics
Burundi	Centre for Development and Enterprises Great Lakes (CDE Great Lakes)
Canada	Fraser Institute
Chile	Libertad y Desarrollo
Colombia	Instituto de Ciencia Política
Côte d'Ivoire	Audace Institut Afrique
Croatia	The Institute of Economics
Czechia	Institut Liberalnich Studii
Denmark	Center for Politiske Studier (CEPOS)
Dominican Republic	CREES (Centro Regional de Estrategias Economicas Sostenibles)
Ecuador	Instituto Ecuatoriano de Economía Política
Finland	Libera Foundation

France	Institut Économique Molinari
Georgia	New Economic School – Georgia
Germany	Friedrich Naumann Foundation for Freedom
Ghana	The Institute of Economic Affairs
Greece	KeFiM – Center for Liberal Studies
Guatemala	Centro de Investigaciones Económicas Nacionales
Hong Kong SAR	Hong Kong Centre for Economic Research
Hungary	Free Market Foundation
Iceland	Centre for Social and Economic Research (RSE)
India	Centre for Civil Society
Indonesia	Institute for Development of Economics and Finance
Iraq	Iraqi Institute for Economic Reform
Italy	Centro Einaudi
Kenya	Eastern Africa Policy Centre
Korea, Rep.	Center for Free Enterprise
Kosovo	Group for Legal and Political Studies
Lithuania	Lithuanian Free Market Institute
Malaysia	Institute for Democracy and Economic Affairs (IDEAS)
Mali	Centre Kassoum Coulibaly
Mexico	Caminos de la Libertad
Mongolia	Open Society Forum
Montenegro	The Institute for Entrepreneurship and Economic Development (IPER)
Nepal	Samriddi, The Prosperity Foundation
New Zealand	The New Zealand Initiative
Nigeria	Initiative of Public Policy Analysis
North Macedonia	Institute for Research and European Studies (IRES)
Norway	Center for Business and Society Incorporated (Civita)
Pakistan	Alternate Solutions Institute
Panama	Fundación Libertad (Panama)
Paraguay	The Fundación Issos para la Libertad y el Desarrollo

Peru	Centro de Investigación y Estudios Legales (CITEL)
Philippines	Center for Research and Communication
Poland	Centrum IM. Adama Smitha
Portugal	Instituto + Liberdade
Romania	Center for Institutional Analysis and Development Eleutheria (CADI)
Russian Federation	Institute of Economic Analysis (IEA)
Sénégal	Pan-African Consortium of Experts (PACE)
Serbia	Libertarian Club – Libek
Singapore	Adam Smith Center
Slovak Republic	Institute of Freedom and Entrepreneurship
Slovenia	Visio Institute
South Africa	The Free Market Foundation (Southern Africa)
Spain	Fundación para el Avance de la Libertad
Sri Lanka	The Pathfinder Foundation
Sudan	Nile Institute of Economic Studies
Sweden	Timbro
Switzerland	Liberales Institut
Tajikistan	Tajikistan Free Market Centre
Trinidad and Tobago	Arthur Lok Jack Graduate School of Business, The University of the West Indies
Türkiye	Association for Liberal Thinking
Uganda	Action for Liberty and Economic Development
Ukraine	Bendukidze Free Market Center
United Kingdom	Institute of Economic Affairs (IEA)
United States of America	Cato Institute
Uruguay	Centro de Estudios para el Desarrollo
Venezuela, RB	Center for the Dissemination of Economic Knowledge (CEDICE)
Vietnam	Market Solutions Research Center for Social and Economic Issues (MASSEI)
Zambia	Zambia Institute for Public Policy Analysis (ZIPPA)

Associate members

The Economic Freedom Network accepts only one member per jurisdiction as a full member of the network and co-publisher of the report but the network also has a number of associate members. Although they are not co-publishers of *Economic Freedom of the World,* they work with the network and the Fraser Institute on special projects to promote economic freedom.

Albania	ICG Research
Argentina	Libertad y Progreso UCEMA Friedman Hayek Center
Armenia	Wide Opportunities Youth Non-Governmental Organization (WO YNGO)
Bolivia	Fundación Gobierno Abierto (FGA) Libera (Bolivia)
Brazil	Estudantes Pela Liberdade Fundação da Liberdade Econômica – FLE Brasil Instituto Liberdade Mackenzie Center of Economic Freedom
Burundi	Institute for Economics and Enterprises
Colombia	Centro para la Libre Iniciativa
Croatia	Centre for Public Policy and Economic Analysis (CEA)
Germany	REPUBLIC21
Ghana	Africa Centre for Entrepreneurship and Youth Empowerment IMANI Center for Policy & Education Institute for Liberty and Policy Innovation (ILAPI)
Hong Kong, SAR, China	The Lion Rock Institute
Indonesia	The Center for Indonesian Policy Studies (CIPS)
Malaysia	Center for Market Education
Mongolia	Mongolian National Chamber of Commerce and Industry
Nigeria	Ominira Initiative
Pakistan	Policy Research Institute of Market Economy (PRIME)
Philippines	Foundation for Economic Freedom
Poland	Civic Development Forum Economic Freedom Foundation of Poland
Sri Lanka	Advocata Institute
Tanzania	Liberty Sparks
Türkiye	Özgürlük Araştırmaları Derneği
Ukraine	Easy Business Ukrainian Center for Independent Political Research
United States of America	Atlas Network Bridwell Institute for Economic Freedom (SMU Cox) Independent Institute Puerto Rico Intstitute for Economic Liberty