

NOTE

# Global economic freedom during the second year of the pandemic

Vincent J. Miozzi and Benjamin Powell

Free Market Institute, Texas Tech University, Lubbock, TX, USA

**Corresponding author:** Benjamin Powell; Email: [benjaminwpowell@gmail.com](mailto:benjaminwpowell@gmail.com)

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## Abstract

This note updates a measure of *lockdown regulatory freedom* for 2021 and then uses it to adjust countries' 2021 economic freedom scores to account for pandemic regulations that impact economic freedom but otherwise would go unmeasured. We directly follow Miozzi and Powell's (2023a, *Journal of Institutional Economics* 19(2), 229–250) methods to measure lockdown regulations and adjust 2020 economic freedom scores. Thus, when paired with those findings we provide a data set that consistently measures coronavirus disease 2019 regulations and economic freedom over the course of the pandemic that can be used in other research. We find that *lockdown regulatory freedom* increased as countries scaled back pandemic regulations, while other areas of economic freedom continued declining. We also find that adjusting for *lockdown regulatory freedom* continues to significantly impact countries' relative ranking in economic freedom.

**Keywords:** COVID-19; economic freedom; institutions; pandemic; liberty

**JEL classification:** I18; H1

## Introduction

Governments around the world imposed many pandemic regulations that significantly restricted individuals' ability to engage in numerous market transactions in response to the coronavirus disease 2019 (COVID-19) pandemic. These restrictions significantly reduced people's economic freedoms according to some prominent definitions. This paper measures how differences in COVID lockdown policy impact the relative ranking of economic freedom in a large cross section of countries in 2021 and how global economic freedom evolved over the course of the first 2 years of the pandemic.

Our institutional measure of economic freedom is the well cited *Economic Freedom of the World Annual Report* (EFW) by Gwartney *et al.* (2023). The EFW index measures the extent to which individuals and private groups are free to engage in market transactions without interference by the state. The EFW index measures economic freedom across five broad areas: size of government; legal system and property rights; sound money; freedom to trade internationally; and regulation. Economic freedom has been shown to correlate with a wide range of developmental outcomes. Hall and Lawson (2014) surveyed 402 papers employing EFW index as an independent variable and found that economic freedom is associated with 'good' economic outcomes (growth, income, life expectancy, literacy, etc.) in more than two-thirds of the studies, while economic freedom is associated with 'bad' outcomes (such as inequality) in less than 4% of the studies. In a more recent quantitative survey, Lawson *et al.* (2023) analyse over 2,000 point estimates published in scholarly journals and find that economic freedom is positively associated with growth, income, and investment, but does not have a significant direct impact on inequality.

This note updates Miozzi and Powell (2023a, 2023b), which measured how COVID lockdown policy impacted global economic freedom in 2020. We employ Miozzi and Powell's *lockdown regulatory*

*freedom* measure, updated with 2021 data, that is comprised of adjusted measures of *mandatory workplace closures*, *mandatory cancellations of public events*, *restrictions on gathering sizes*, *stay at home orders*, *mandatory school closings*, *mandatory public transit closings*, and *mandated facial coverings*, derived from the Our World in Data *Covid-19 Stringency Index* (Hale et al., 2021). We then update the 2021 EFW scores following the same method employed in Miozzi and Powell that used the *lockdown regulatory freedom* measure on a zero to one scale to multiply area 5 (*regulation*) of the EFW index by to adjust for COVID lockdown regulations' impact on economic freedom.<sup>1</sup> The description and justification for the method of constructing the *lockdown regulatory freedom* measure and the method of adjusting the EFW index can be found in sections two and three in Miozzi and Powell (2023a). They are identical to what we omit here for the sake of brevity.

Section 'Lockdown regulatory freedom scores' reports countries' 2021 *lockdown regulatory freedom*. Section 'EFW lockdown-adjusted 2021 scores' adjusts countries' 2021 EFW scores and ranks using this measure. Section 'The evolution of economic freedom during the pandemic' summarizes how economic freedom has evolved over the course of the pandemic. The final section concludes.

### Lockdown regulatory freedom scores

Table 1 ranks countries' 2021 *lockdown regulatory freedom* scores from least stringent to most stringent lockdown regulations.<sup>2</sup> The last column shows the percentage change in each country's *lockdown regulatory freedom* score from 2020. Overall, average *lockdown regulatory freedom* increased 11.1% as governments scaled back some of their pandemic regulations. Scores for seven countries were adjusted for their available subnational data: Australia, Brazil, Canada, China, India, United States, and United Kingdom.<sup>3</sup>

Most of the highest ranked countries are relatively poor. Tanzania is ranked first with a score of 9.92 out of 10. Japan is the only developed country in the top five with a score of 9.02. Nicaragua, Burundi, and Yemen round out the top five. It is likely that these countries, and other poor countries that rank high, lack the capacity to effectively implement and enforce lockdown measures beyond border restrictions.

The next highest ranked developed nation in Iceland (11th) with a score of 8.23. Although the Nordic countries scored high as a group in 2020, most of their scores fell in 2021. Only Iceland's and Sweden's scores increased. Norway's score fell almost by 3% to 7.39 from that of 2020, ranking 32nd in the world. Finland, which was ranked 10th in 2020, now ranks 33rd after its score fell by more than 9%. Denmark's score fell the most among the Nordic countries (12.72%) to 6.54, and now ranked 50th.

The United States' *lockdown regulatory freedom* score improved by 48% to 7.91, ranking 17th in the world, up from 71st. Its lowest indicators were for *face coverings* (3.90) and *restrictions on gatherings* (6.35). None of its remaining lockdown indicators were below seven. *Lockdown regulatory freedom* varied significantly across states, from a low of 5.24 (Hawaii) to a high of 9.38 (Nebraska).

China's score increased by 0.36% to seven in 2021 but fell 19 spots in the rankings to 41st as a result of larger improvements in other countries' scores. China's relatively high ranking compared to coverage of their authoritarian lockdowns remains a result of the targeted nature of these lockdowns. In each month, certain provinces were severely locked down, while others remained relatively open. Weighting these lockdowns by population across regions results in a relatively high score for the country overall, as was the case in 2020.

<sup>1</sup>Miozzi and Powell (2023a) used two separate methods to adjust EFW scores. This note replicates only their first adjustment method. Following their second method would not be strictly comparable with 2020 because it would lead to COVID regulations contributing 5 percentage points less to countries' area 5 (*regulation*) score in 2021 than in 2020 due to changes in the underlying EFW index. We again make our raw data available online for researchers who would like to use other adjustment and weighting schemes.

<sup>2</sup>Five countries were dropped since they did not have any data in the *COVID-19 Stringency Index*: Armenia, Comoros, Guinea-Bissau, Montenegro, and North Macedonia.

<sup>3</sup>Australia and India's 2020 scores were updated to adjust for newly available subnational data when calculating per cent changes.

**Table 1.** 2021 Lockdown regulatory freedom scores

Rank	Country	Lockdown regulatory freedom score 2021	Change in score from 2020 (%)	Rank	Country	Lockdown regulatory freedom score 2021	Change in score from 2020 (%)
1	Tanzania	9.92	20.83	33	Finland	7.36	-9.07
2	Nicaragua	9.78	1.09	34	Taiwan	7.29	-24.16
3	Burundi	9.45	-5.49	35	Serbia	7.22	35.46
4	Yemen, Rep.	9.10	19.18	36	Mauritania	7.18	7.88
5	Japan	9.02	-5.52	37	Benin	7.12	8.89
6	Central African Republic	8.90	31.58	38	Congo, Rep.	7.08	55.47
7	Cote d'Ivoire	8.79	32.13	39	Poland	7.06	18.20
8	Belarus	8.62	-0.81	40	Uruguay	7.03	-7.53
9	Burkina Faso	8.46	29.82	41	China	7.00	0.36
10	Tajikistan	8.36	23.90	42	Namibia	6.98	16.15
11	Iceland	8.23	12.88	43	Nigeria	6.88	34.82
12	Senegal	8.19	24.71	44	Jordan	6.81	51.79
13	Ethiopia	7.97	106.92	45	Singapore	6.77	14.31
13	Somalia	7.97	3.18	46	Zambia	6.75	1.36
13	Sudan	7.97	51.00	47	Brunei Darussalam	6.64	-17.75
16	Cameroon	7.93	22.19	48	Hungary	6.63	-0.69
17	United States	7.91	47.75	49	Australia	6.58	5.05
18	Niger	7.84	-5.68	50	Denmark	6.54	-12.72
19	Luxembourg	7.82	17.78	51	United Kingdom	6.53	41.54
19	Sweden	7.82	6.40	52	Switzerland	6.50	3.70
21	Gambia, The	7.81	33.95	53	Haiti	6.47	17.38
22	Croatia	7.80	17.45	54	Cyprus	6.42	19.44
22	El Salvador	7.80	108.94	55	Bahrain	6.41	29.93

(Continued)

Table 1. (Continued.)

Rank	Country	Lockdown regulatory freedom score 2021	Change in score from 2020 (%)	Rank	Country	Lockdown regulatory freedom score 2021	Change in score from 2020 (%)
24	Malawi	7.75	25.55	56	Czech Republic	6.39	-0.56
25	Estonia	7.71	0.03	56	Lithuania	6.39	-3.56
26	Djibouti	7.62	43.20	58	Paraguay	6.34	70.54
27	Bosnia and Herzegovina	7.53	51.26	58	South Africa	6.34	21.56
28	Sierra Leone	7.52	8.24	60	New Zealand	6.32	-18.24
29	Liberia	7.47	56.21	61	Hong Kong SAR, China	6.30	4.76
30	Bolivia	7.43	230.09	62	Bulgaria	6.28	-9.73
31	Chad	7.41	80.61	63	Latvia	6.24	-6.72
32	Norway	7.39	-2.75	64	Madagascar	6.20	38.82
65	Netherlands	6.19	-1.44	97	Ukraine	5.30	31.04
66	Congo, Dem. Rep.	6.16	17.94	98	Rwanda	5.24	51.19
67	Belgium	6.14	21.77	99	Eswatini	5.20	-4.68
67	Korea, Rep.	6.14	10.97	100	Guatemala	5.16	51.33
67	Mali	6.14	-6.53	100	Tunisia	5.16	-15.19
70	Canada	6.13	9.82	102	Lesotho	5.13	-25.31
71	Qatar	6.11	23.81	103	Bhutan	5.08	37.95
72	Malta	6.07	-1.98	104	Brazil	5.07	30.35
73	Moldova	6.04	26.48	105	Portugal	5.05	-0.40
74	Slovenia	6.03	23.19	106	Gabon	5.00	37.84
75	Angola	6.02	50.20	107	Mexico	4.98	73.31
76	Russian Federation	5.98	33.52	108	Guyana	4.96	26.28
77	Israel	5.97	41.14	109	Dominican Republic	4.95	57.03
78	Ghana	5.95	-2.43	110	Costa Rica	4.94	2.36

(Continued)

**Table 1.** (Continued.)

Rank	Country	Lockdown regulatory freedom score 2021	Change in score from 2020 (%)	Rank	Country	Lockdown regulatory freedom score 2021	Change in score from 2020 (%)
79	Togo	5.93	6.44	111	Lao PDR	4.92	-28.19
80	Papua New Guinea	5.87	-10.37	111	Slovak Republic	4.92	-17.17
81	Kyrgyz Republic	5.86	100.70	113	Pakistan	4.91	27.54
82	Kuwait	5.81	60.57	114	Spain	4.86	17.81
83	United Arab Emirates	5.80	5.33	115	Kenya	4.77	12.37
84	Saudi Arabia	5.75	25.38	115	Thailand	4.77	-29.47
85	Botswana	5.73	-5.87	117	Ecuador	4.74	55.38
86	Syrian Arab Republic	5.70	17.92	118	Algeria	4.72	38.00
87	Albania	5.63	33.55	119	Georgia	4.67	13.27
88	Mauritius	5.61	-29.28	120	Azerbaijan	4.65	58.25
89	Romania	5.59	0.30	120	Lebanon	4.65	19.00
90	Mozambique	5.57	2.81	120	Zimbabwe	4.65	8.74
91	Egypt, Arab Rep.	5.54	24.00	123	Germany	4.63	-4.11
92	India	5.53	51.65	124	Libya	4.59	101.92
93	Ireland	5.39	18.43	125	Austria	4.56	-25.14
94	Oman	5.38	89.59	125	Guinea	4.56	5.53
95	Cabo Verde	5.35	42.88	127	Belize	4.50	13.06
96	Nepal	5.33	50.90	127	Colombia	4.50	-3.91
Rank	Country	Lockdown regulatory freedom score 2021		Change in score from 2020 (%)			
129	Turkey	4.46		-9.55			
130	Mongolia	4.39		-5.12			
131	Barbados	4.31		-37.70			

(Continued)

Table 1. (Continued.)

Rank	Country	Lockdown regulatory freedom score 2021	Change in score from 2020 (%)
132	Uganda	4.21	38.43
133	France	4.19	-12.04
134	Bahamas, The	4.12	75.23
135	Fiji	4.01	-33.80
136	Seychelles	3.98	-53.08
137	Morocco	3.96	20.64
138	Timor-Leste	3.93	-49.67
139	Kazakhstan	3.69	34.98
140	Trinidad and Tobago	3.53	-16.38
141	Iraq	3.43	4.36
142	Argentina	3.42	122.20
143	Bangladesh	3.36	45.15
144	Jamaica	3.34	-10.22
145	Malaysia	3.33	-18.56
146	Greece	3.29	-37.92
147	Venezuela, RB	3.11	26.63
148	Chile	3.07	41.43
149	Vietnam	3.06	-34.62
150	Indonesia	2.98	-24.55
150	Myanmar	2.98	30.81
152	Panama	2.97	3.42
153	Sri Lanka	2.89	-41.02
154	Italy	2.79	-1.06

(Continued)

Table 1. (Continued.)

Rank	Country	Lockdown regulatory freedom score 2021	Change in score from 2020 (%)
154	Suriname	2.79	-21.85
156	Peru	2.75	28.51
157	Philippines	2.73	-13.94
158	Honduras	2.71	33.89
159	Iran, Islamic Rep.	2.51	-46.18
160	Cambodia	2.33	-65.65

New Zealand's *lockdown regulatory freedom* score fell by more than 18% to 6.32, as its lockdown indicators were lower across the board in 2021. Its lowest indicator was *restrictions on internal movement* (5.97). However, New Zealand had the lowest score for *international travel restrictions* in both 2020 (0.16) and 2021 (0.0) but these regulations are not included in our *lockdown regulatory freedom* measure because they are already included in the normal EFW index.<sup>4</sup>

Australia's *lockdown regulatory freedom* score ranks 49th in the world at 6.58. Its lowest indicators were *restrictions on internal movement* (2.34) and *restrictions on gatherings* (3.43). However, like New Zealand, its 2020 and 2021 policies towards international travel were highly restrictive but not reflected in these scores.

### EFW lockdown-adjusted 2021 scores

Table 2 ranks each country from most to least economically free using our adjusted economic freedom scores that account for *lockdown regulatory freedom*. Column 4 lists each country's unadjusted EFW score and rank in parentheses for comparison purposes.

#### Biggest movers

The five countries that increase the most are primarily poor countries with historically low-EFW scores. Nicaragua was the top mover for the 2020 adjustments and remains so for 2021. It vaulted 34 spots from 92nd to 58th in the world after adjusting for lockdown regulations. Tanzania holds the top score for 2021 *lockdown regulatory freedom* and has the second largest increase in the adjusted index moving up 32 spots in the rankings to 70th. Belarus and Tajikistan share the third largest improvement spot, both increasing 24 spots to 82nd and 73rd in the world, respectively. Among top movers, Croatia had the highest initial rank at 51st before accounting for pandemic regulations, which increases their rank to 30th. El Salvador rounds out the top five largest movers as it tied with Croatia by moving up 21 spots to 39th.

The five countries that decreased their rankings the most after adjusting for lockdown regulations include a mix of both developed and underdeveloped countries. Fiji experienced the largest drop falling 30 spots to 128th. Peru had the second largest drop, and among the five countries decreasing the most, it had the highest initial unadjusted rank, falling 24 spots to 59th. Vietnam fell 23 spots, making it the third largest drop. Italy, Jamaica, and Sri Lanka all fell 20 spots in the rankings. Italy stands out among developed countries for having the greatest contrast between relatively higher normal economic freedoms, ranking 51st in the unadjusted index, and more severe restrictions on freedoms via pandemic regulations, ranking 154th in *lockdown regulatory freedom*.

#### Other countries of interest

The top five countries remain the same in the adjusted and unadjusted index, though their order varies slightly. Singapore is ranked first in each index. Hong Kong, second in the unadjusted index, falls one spot to number three in the adjusted index, switching spots with Switzerland. The United States, ranked fifth in the unadjusted index, switches spots with New Zealand to fourth after adjusting for *lockdown regulatory freedom*. The United States' score fell by a little more than 4% from the unadjusted to adjusted index. The variation in lockdown severity across the states limited its fall in the rankings.

New Zealand's relatively high score is surprising at first glance, especially given the news coverage of its strict lockdown policies. However, it follows a pattern we see for several island nations where strict border controls, already accounted for in the unadjusted index, are paired with relatively lighter internal lockdown regulation. Though, in New Zealand's case, there were strict restrictions on internal

<sup>4</sup>An online Appendix includes this measure in our *lockdown regulatory freedom* index for researchers wishing to use this index independently from the economic freedom index.



**Table 2.** Adjusted EFW scores

Rank	Country	Adjustment 1 EFW score	Unadjusted EFW (rank)	Rank	Country	Adjustment 1 EFW score	Unadjusted EFW (rank)	Rank	Country	Adjustment 1 EFW score	Unadjusted EFW (rank)
1	Singapore	8.00	8.56 (1)	32	Hungary	6.92	7.36 (47)	65	Botswana	6.32	6.84 (74)
2	Switzerland	7.92	8.47 (3)	34	Bahrain	6.91	7.44 (43)	65	Kyrgyz Republic	6.32	6.88 (72)
3	Hong Kong SAR, China	7.91	8.55 (2)	34	Korea, Rep.	6.91	7.47 (40)	67	Seychelles	6.30	7.12 (57)
4	United States	7.80	8.14 (5)	36	Germany	6.90	7.73 (23)	68	Mongolia	6.28	7.04 (64)
5	New Zealand	7.77	8.43 (4)	36	Austria	6.90	7.69 (28)	69	Kazakhstan	6.27	7.13 (56)
6	Iceland	7.68	7.93 (14)	38	Portugal	6.86	7.54 (34)	70	Tanzania	6.26	6.27 (102)
7	Japan	7.64	7.79 (20)	39	Guatemala	6.85	7.50 (38)	71	Italy	6.25	7.25 (51)
8	Estonia	7.58	7.95 (12)	39	El Salvador	6.85	7.11 (60)	71	Nigeria	6.25	6.67 (78)
9	Taiwan	7.56	7.97 (11)	41	Belgium	6.84	7.43 (44)	73	Malaysia	6.18	7.19 (54)
10	Luxembourg	7.55	7.91 (15)	42	Jordan	6.81	7.30 (49)	73	Tajikistan	6.18	6.38 (97)
11	Denmark	7.52	8.10 (7)	43	Gambia, The	6.80	7.11 (60)	75	Barbados	6.13	6.94 (69)
12	Australia	7.49	8.05 (8)	44	Spain	6.78	7.52 (35)	76	Saudi Arabia	6.11	6.64 (80)
13	United Kingdom	7.47	8.01 (9)	45	Slovak Republic	6.77	7.49 (39)	76	Rwanda	6.11	6.77 (77)
14	Sweden	7.46	7.81 (17)	46	Cabo Verde	6.75	7.38 (46)	78	Kenya	6.10	6.82 (75)
15	Lithuania	7.39	7.95 (12)	47	Chile	6.73	7.66 (30)	78	Indonesia	6.10	6.93 (71)
16	Finland	7.38	7.81 (17)	48	United Arab Emirates	6.73	7.35 (48)	80	Qatar	6.09	6.58 (87)
17	Canada	7.36	7.98 (10)	49	Poland	6.71	7.12 (57)	80	Greece	6.09	6.94 (69)
17	Ireland	7.36	8.11 (6)	50	Dominican Republic	6.69	7.30 (49)	82	Kuwait	6.08	6.63 (82)
19	Norway	7.29	7.67 (29)	50	Slovenia	6.69	7.23 (53)	82	India	6.08	6.62 (84)
20	Czech Republic	7.28	7.81 (17)	52	Moldova	6.67	7.18 (55)	82	Belarus	6.08	6.23 (106)
21	Mauritius	7.22	7.82 (16)	53	Uruguay	6.66	7.06 (63)	85	South Africa	6.07	6.53 (91)

(Continued)

Table 2. (Continued.)

Rank	Country	Adjustment 1 EFW score	Unadjusted EFW (rank)	Rank	Country	Adjustment 1 EFW score	Unadjusted EFW (rank)	Rank	Country	Adjustment 1 EFW score	Unadjusted EFW (rank)
22	Netherlands	7.17	7.76 (21)	54	Brunei Darussalam	6.60	7.12 (57)	86	Philippines	6.05	7.01 (67)
23	Latvia	7.13	7.71 (25)	55	Panama	6.59	7.51 (37)	86	Honduras	6.05	6.97 (68)
24	Malta	7.12	7.73 (23)	56	France	6.56	7.40 (45)	88	Brazil	6.03	6.58 (87)
25	Costa Rica	7.08	7.76 (21)	57	Paraguay	6.54	7.02 (65)	89	Benin	6.02	6.41 (95)
25	Romania	7.08	7.70 (27)	58	Nicaragua	6.50	6.52 (92)	90	Oman	6.00	6.58 (87)
27	Cyprus	7.05	7.57 (32)	59	Peru	6.48	7.52 (35)	91	Senegal	5.98	6.20 (107)
28	Albania	6.99	7.60 (31)	60	Serbia	6.47	6.85 (73)	92	Cambodia	5.96	6.82 (75)
29	Israel	6.98	7.57 (32)	61	Jamaica	6.46	7.46 (41)	93	Burkina Faso	5.93	6.14 (112)
30	Croatia	6.95	7.25 (51)	62	Mexico	6.39	7.02 (65)	94	Ghana	5.92	6.41 (95)
31	Bulgaria	6.94	7.46 (41)	63	Thailand	6.38	7.07 (62)	94	Bhutan	5.92	6.62 (84)
32	Georgia	6.92	7.71 (25)	64	Bosnia and Herzegovina	6.33	6.66 (79)	96	Uganda	5.91	6.64 (80)
Rank	Country	Adjustment 1 EFW score	Unadjusted EFW (rank)	Rank	Country	Adjustment 1 EFW score	Unadjusted EFW (rank)				
97	Colombia	5.89	6.60 (86)	129	Lesotho	5.38	5.95 (121)				
98	Cote d'Ivoire	5.88	6.04 (116)	130	Burundi	5.34	5.40 (143)				
99	Trinidad and Tobago	5.85	6.63 (82)	130	Mali	5.34	5.80 (130)				
99	China	5.85	6.18 (108)	132	Azerbaijan	5.30	5.99 (119)				
101	Ecuador	5.83	6.46 (93)	133	Sri Lanka	5.27	6.13 (113)				
101	Bolivia	5.83	6.08 (114)	134	Timor-Leste	5.19	5.82 (127)				
101	Russian Federation	5.83	6.28 (101)	134	Ethiopia	5.19	5.44 (140)				
104	Namibia	5.82	6.16 (110)	136	Belize	5.17	5.91 (123)				
105	Bahamas, The	5.74	6.55 (90)	137	Chad	5.07	5.31 (148)				

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**Table 2.** (Continued.)

Rank	Country	Adjustment 1 EFW score	Unadjusted EFW (rank)	Rank	Country	Adjustment 1 EFW score	Unadjusted EFW (rank)
106	Haiti	5.72	6.15 (111)	138	Bangladesh	5.06	5.81 (129)
107	Togo	5.71	6.24 (104)	139	Egypt, Arab Rep.	5.05	5.47 (139)
108	Turkey	5.68	6.32 (98)	140	Angola	5.01	5.38 (144)
109	Sierra Leone	5.67	5.91 (123)	141	Guinea	4.98	5.62 (136)
109	Lao PDR	5.67	6.24 (104)	142	Congo, Dem. Rep.	4.94	5.33 (145)
111	Ukraine	5.66	6.17 (109)	143	Central African Republic	4.90	5.01 (150)
112	Nepal	5.65	6.30 (100)	144	Gabon	4.87	5.41 (142)
113	Morocco	5.63	6.42 (94)	145	Guyana	4.84	5.43 (141)
114	Malawi	5.60	5.87 (125)	146	Eswatini	4.80	5.33 (145)
115	Liberia	5.59	5.82 (127)	147	Iraq	4.72	5.49 (138)
116	Niger	5.53	5.80 (130)	148	Suriname	4.61	5.52 (137)
117	Papua New Guinea	5.52	6.05 (115)	149	Myanmar	4.60	5.33 (145)
117	Zambia	5.52	5.84 (126)	150	Congo, Rep.	4.59	4.85 (151)
119	Mozambique	5.51	6.03 (117)	151	Lebanon	4.58	5.15 (149)
119	Madagascar	5.51	5.92 (122)	152	Algeria	4.31	4.82 (152)
121	Somalia	5.49	5.66 (135)	153	Libya	4.18	4.65 (154)
122	Cameroon	5.47	5.72 (134)	154	Yemen, Rep.	4.13	4.18 (156)
123	Djibouti	5.46	5.79 (132)	155	Argentina	4.07	4.77 (153)
123	Tunisia	5.46	6.02 (118)	156	Iran, Islamic Rep.	3.85	4.53 (155)
125	Mauritania	5.43	5.78 (133)	157	Sudan	3.82	3.98 (157)
126	Vietnam	5.42	6.26 (103)	158	Syrian Arab Republic	3.60	3.90 (158)
127	Pakistan	5.40	5.98 (120)	159	Zimbabwe	3.33	3.81 (159)
128	Fiji	5.39	6.32 (98)	160	Venezuela, RB	2.71	3.01 (160)

movement picked up in our *lockdown regulatory freedom* measure and as a result its adjusted EFW score is 7.8% lower than the unadjusted score.

The rest of the top 10 see more variation after lockdown regulations are taken into account. Iceland moves up eight spots to sixth in EFW. Japan, the highest scoring developed country in *lockdown regulatory freedom*, breaks into the top 10 in EFW rankings moving up 13 spots to seventh in the world. Estonia moves to eighth up from 12th. Taiwan moves up two spots to ninth and Luxembourg rounds out the top 10 moving up from 15th.

Denmark, Australia, the United Kingdom, Canada, and Ireland all fell out of the top 10 in the adjusted EFW index. Denmark's score fell by more than 7% once adjusted for *lockdown regulatory freedom* – where it was the lowest-ranked Nordic country. Australia's EFW score fell by 6.9% dropping from 8th to 12th in the rankings and the United Kingdom's score fell by 6.73%, dropping to 13th from 9th. Canada and Ireland had the two largest drops in EFW rankings of the countries in the top 10 in the unadjusted index. Canada, ranked 10th in the unadjusted index, fell to 17th in the adjusted index. Ireland, initially ranked 6th, also fell to 17th with the same score as Canada.

Among the rest of the Nordic countries, Sweden's EFW ranking increased three spots to 14th after adjusting for pandemic regulations. Despite their drops in *lockdown regulatory freedom* from 2020, Finland and Norway both still increase in the adjusted EFW rankings. Norway experienced a relatively large jump of 10 spots to 19th. As a group, the Nordic countries continued to have relatively lighter lockdown regulations compared to countries otherwise similar on other margins of economic freedom.

China's EFW rank increases nine spots after adjusting for *lockdown regulatory freedom*. Like 2020, China's increase reflects its relatively higher *lockdown regulatory freedom score* – due to the targeted nature of its lockdown policies that strictly regulated activity in some provinces while leaving much of the country lightly regulated – and its low position in the unadjusted EFW index (108th).

### The evolution of economic freedom during the pandemic

Global economic freedom plummeted after the onset of the pandemic. The unadjusted EFW index fell by 2.61% in 2020 and the adjusted EFW index, that accounted for lockdown regulations, fell by 12.7%. Although lockdown regulations remained prevalent in 2021, in general, countries scaled back lockdown regulations, as reflected in our *lockdown regulatory freedom* measure increasing by 11.1%. However, economic freedom continued decreasing on other margins in 2021 and as a result the normal unadjusted EFW index fell by another 1.7%.<sup>5</sup> Netting these together results in our lockdown-adjusted overall economic freedom score remaining the same in 2021 as it was in 2020 at 6.09.<sup>6</sup> Though the gap between the unadjusted and adjusted scores narrowed in 2021, average lockdown-adjusted economic freedom is still 8.1% lower than the unadjusted EFW score (see [Figure 1](#)).

Decomposing the scores for individual areas and some components of economic freedom illustrate which margins of economic freedom government policy responses to the pandemic impacted. Area 1 (*size of government*) decreased by 2.5% in 2020 as it picked up governments' immediate stimulus spending and economic freedom fell further to 2.8% below the 2019 levels as spending levels were maintained in 2021. Area 3 (*sound money*) was barely impacted in 2020 but decreased by 2.1% as the monetization of stimulus spending materialized in higher inflation rates in 2021. Area 4 (*freedom to trade internationally*) plunged by 3.8% from 2019 to 2021; however, the 2021 score is 3.4% higher than it was in 2020. These movements are largely driven by *restrictions on freedom of foreigners to visit* which plunged from 7.07 in 2019 to 1.39 in 2020 and subsequently recovered by 23.6% to 1.72. Area 2 (*legal system and property rights*) was largely unchanged in 2020 but subsequently fell by 2.3% in 2021. Some of the survey-based data comprising this area may be picking up perceived decreases in the security of property rights related to pandemic interventions.

<sup>5</sup>Economic freedom likely fell further but went partially unmeasured because some individual measures in the EFW index do not appear to have updated their underlying data.

<sup>6</sup>More precisely, it is 0.00047 higher in 2021.

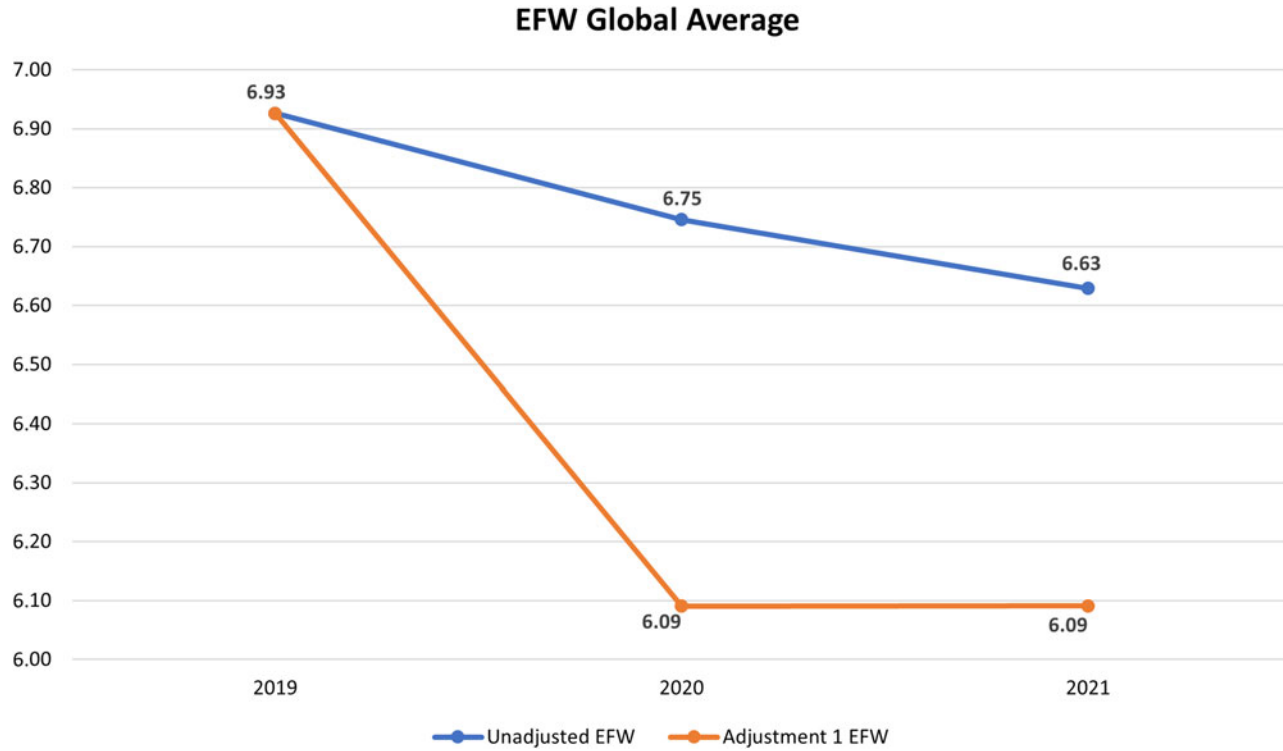


Figure 1. Economic freedom global average 2019–2021.

Interestingly, although pandemic-related regulations began to scale back, area 5 (*regulation*) saw the biggest decrease from 2020 to 2021 at 7.1% in the unadjusted EFW index. However, when we examine the subcomponents within this area these decreases do not appear to be directly related to the lockdowns. The EFW index added a fourth component area to the index in 2021, *freedom to enter markets and compete*, but its score at 6.5 is slightly above the overall area score of 6.42, so this change to the index is not responsible for the decreased score. In 2021, the *labour market regulations* score decreased by 2.7%, *business regulations* decreased by 21.9%, and *credit market regulations* improved slightly but are down by 5.5% overall since 2019. Unfortunately, due to the end of the Doing Business index, the measures within *business regulations* component changed from 2020 to 2021. Among the individual measures that stayed the same within *the business regulations* component, *tax compliance* decreased the most in 2021 at 19.4%.<sup>7</sup> Meanwhile, since our *lockdown regulatory freedom* measure increased 11.1% our adjusted measure of area 5 (*regulation*) increased by 2.6% in 2021, though it is still down a whopping 47.6% from 2019 due to the remaining pervasiveness of lockdown regulations.

When we look at changes in countries' economic freedom from 2019 through 2021 there are substantially larger changes in relative rankings after adjusting for our *lockdown regulatory freedom* measure. The standard deviation in rankings between countries from 2019 to 2021 increases from 12.70 in the unadjusted index to 17.23. There are 15 countries that increased in rank from 2019 to 2021 in the unadjusted index but decreased in rank after adjusting for lockdown regulations and 15 countries that decreased in rank in the unadjusted index but increased in rank after our adjustment. Among the countries that moved in the same direction across both the unadjusted and adjusted indexes, 24% of those countries saw a difference in their ranking greater than one standard deviation following our adjustment.

The specific countries that move also differed across both indexes. Among the top five increases in rank between the unadjusted and adjusted indexes from 2019 to 2021, only two countries appear in both lists (Burkina Faso and The Gambia). Similarly, only two countries among the top decreases in rank appear in both lists (Lebanon and The Bahamas).

Several countries of interest experienced different changes across the indexes. Japan fell three spots in the unadjusted index from 2019 to 2021 but increased 10 spots in the adjusted index. Australia, Canada, Denmark, and the United Kingdom all increased in rank in the unadjusted index but decreased in rank in the adjusted index. Nordic countries, Finland, Iceland, Norway, and Sweden increased in both indexes. However, their movements in the unadjusted index were larger. This was also the case for the United States, China, and Taiwan. Italy decreases in rank in both indexes but falls only six spots between 2019 and 2021 in the unadjusted index while it falls 26 spots in the lockdown-adjusted index.

## Conclusion

As Countries scaled back their pandemic-related lockdowns in 2021 we find that *lockdown regulatory freedom* increased by 11.1%. However, this increase in *lockdown regulatory freedom* was offset by decreases in other areas of economic freedom and as a result, our lockdown-adjusted measure of overall economic freedom remained unchanged from 2020 and remains 8.1% below the unadjusted 2021 EFW index. We also find that adjusting for *lockdown regulatory freedom* significantly impacts countries' relative ranking in economic freedom in 2021 and our understanding of the direction and magnitude of countries' movements since 2019.

Other research has already built on Miozzi and Powell (2023a) by measuring state-level *lockdown regulatory freedom* and adjusting state's economic freedom scores (Miozzi and Powell, 2023b) and by studying the pre-pandemic political economy factors correlated with the restrictiveness of lockdowns (Miozzi and Powell, forthcoming) and indicating how accounting for lockdown regulatory freedom

<sup>7</sup>There is a new measure of *bureaucracy costs* which replaced the previous *administrative requirements*, *licensing restrictions*, and *starting a business* measures.

would impact countries considered open access orders (Murphy, 2023). An online Appendix contains our indexes for scholars wishing to use them in further research.<sup>8</sup>

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<sup>8</sup>To access our adjusted 2021 economic freedom index presented in this article electronically, visit: <http://www.benjaminpowell.com/Lockdownadjustedefw.html>.