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## Corrigendum: Stranded nations? Transition risks and opportunities towards a clean economy (2023 *Environ. Res. Lett.* [18 045004](#))

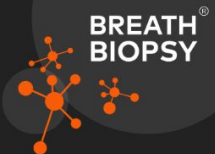
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## CORRIGENDUM


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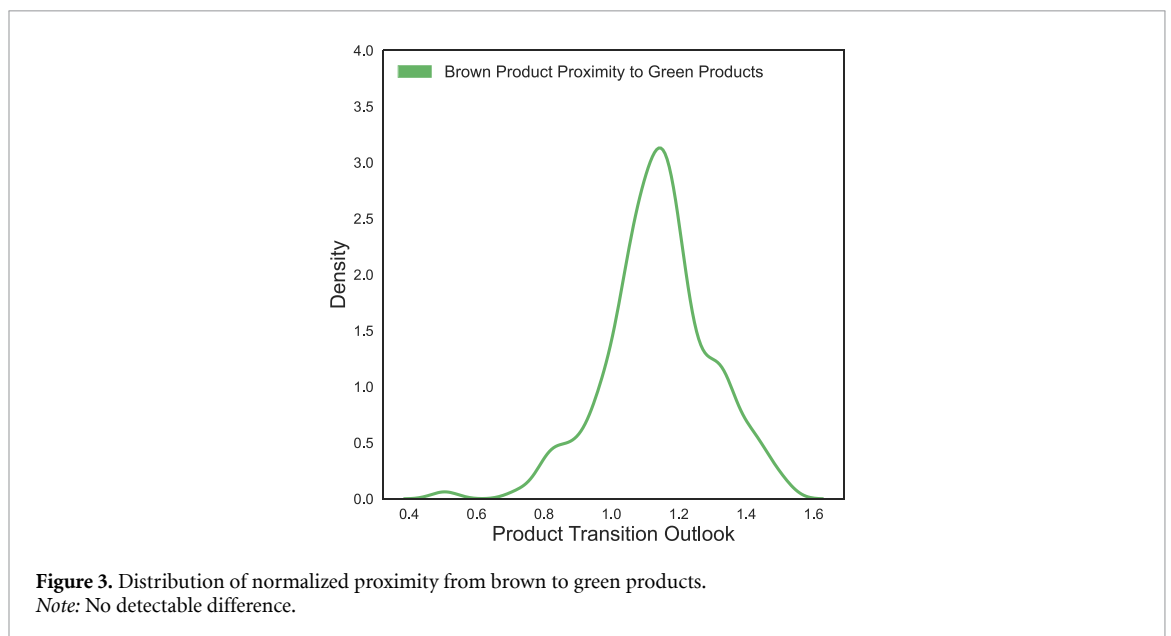
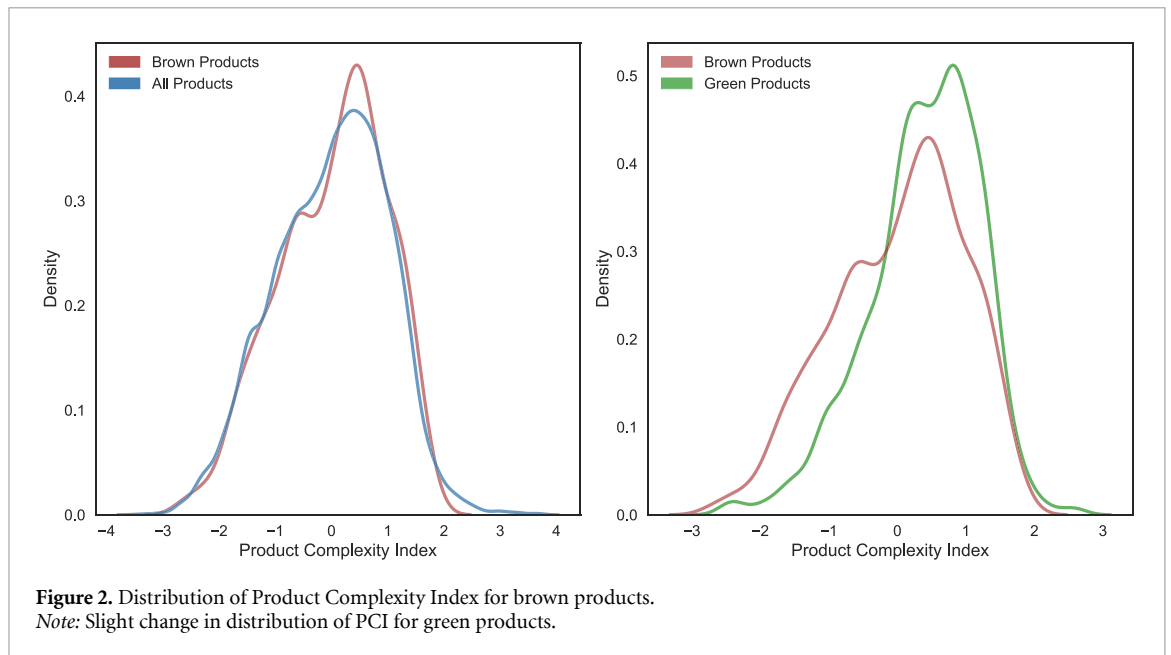
This corrigendum resolves an error in the list of green products used to construct the product and country ‘Green Transition Outlook’ measures, as well as trends in overall green trade volume.

The ‘green list’ used to calculate these measures in the original submitted manuscript erroneously omits 35 products which are used in Mealy and Teytelboym (2020) in addition to the 19 products we intentionally removed because they appeared in our keyword search for fossil-fuel related products, as discussed in the appendix to the original submitted manuscript. In order to increase consistency with other work using the list we included all of these 54 products to produce the revised results presented in this corrigendum. We continue to also include the list of CCUS-related products from Serin *et al* (2021), resulting in a final green list of 299 products<sup>8</sup>.

These changes affect all tables and figures which include the country- or product-level Green Transition Outlook measures, as well as measures of green trade volumes. However, results change only very marginally and the interpretation of our results is not affected, with the exception of the following sentence on page 8 of the original publication, in reference to table 3: *The coefficient on logged CO2 emissions per capita is unstable, likely due to its relationship with some measures of brown and green competitiveness.* This should instead read: *The coefficient on logged CO2 emissions per capita is insignificant.* In the following, we reproduce all affected tables and figures, including notes highlighting how these have changed in comparison to the original article.

<sup>8</sup> Products from the CCUS list which were flagged as directly related to fossil fuels remain excluded.

## 1. Main text tables and figures



**Table 1.** Countries ranking most highly on the Brown Lock-in Index.

Country	BLI	Brown exports [1 M USD]	Brown Export Share [%]	GDP per capita [USD]	Transition Outlook	Green TO
South Sudan	3.57	13.49	94.82	Not Available	-4.42	-2.39
Iraq	3.48	634.12	94.50	5115.69	-0.30	-0.55
Libya	3.29	193.89	90.92	5810.85	-2.45	-2.21
Angola	3.27	307.13	88.99	3095.46	-1.58	-1.67
Equatorial Guinea	3.21	38.62	88.80	8897.39	-1.87	-2.03
Azerbaijan	3.19	148.20	89.41	4358.97	-0.99	-0.55
Nigeria	3.18	449.05	87.69	2099.86	-1.51	-1.84
Brunei Darussalam	3.02	56.55	91.51	29 177.48	-0.73	-0.21
Chad	2.98	11.30	81.44	690.87	-4.42	-2.39
Venezuela	2.92	178.51	84.28	Not Available	-0.31	-0.47
Kuwait	2.92	479.84	90.00	29 599.34	-0.75	-0.76
Algeria	2.91	299.23	93.75	3898.94	-1.27	-1.28
Qatar	2.77	571.76	86.98	58 919.32	-1.71	-1.19
Turkmenistan	2.49	71.46	87.21	6888.55	-0.17	-0.86
Saudi Arabia	2.42	1592.41	74.14	21 453.67	-1.04	-0.40
Timor-Leste	2.25	0.63	69.09	1385.77	-2.05	-0.05
Gabon	2.19	32.41	64.23	7364.51	-2.51	-1.02
Oman	2.16	240.97	69.68	17 047.08	-1.22	-0.73
Kazakhstan	2.09	343.43	63.78	9141.98	-1.18	-1.21
Iran	1.99	369.01	63.00	3981.87	-0.85	-0.77

Note: Some differences in the 'Green Transition Outlook' column. All other results remain unchanged.

**Table 2.** Countries ranking most highly on the Brown Complexity Index.

Country	BCI	Brown exports [1 M USD]	Brown Export Share [%]	GDP per capita [USD]	Transition Outlook	Green TO
USA	4.93	2462.74	17.11	62 013.69	-0.52	0.14
Japan	4.27	1257.50	18.67	39 814.17	-0.24	0.31
Germany	3.95	1824.49	13.21	45 520.66	0.02	0.68
Belgium	3.73	460.61	14.92	45 068.76	-0.41	0.14
Netherlands	3.67	718.24	14.26	50 490.97	-0.44	-0.24
France	3.24	468.56	8.99	39 380.82	0.27	0.65
United Kingdom	3.03	802.30	19.29	42 026.79	-0.05	0.77
Rep. of Korea	2.84	871.01	15.49	31 579.38	-0.19	0.07
Thailand	2.76	321.74	13.03	6977.58	0.07	0.31
India	2.48	488.12	15.91	1947.72	0.43	-0.33
Spain	2.39	534.73	17.27	28 314.84	0.14	0.02
Italy	2.22	434.85	8.74	32 645.50	0.92	0.97
Austria	2.02	147.49	9.11	48 550.29	0.30	1.15
China	1.91	652.10	2.60	9479.06	0.88	-0.59
Poland	1.67	189.41	7.87	14 646.76	0.74	0.77
Finland	1.62	98.55	14.24	47 483.98	0.54	1.43
Canada	1.62	1269.66	31.52	44 725.29	-0.85	0.33
Singapore	1.61	507.49	16.89	62 028.43	-0.47	0.04
Turkey	1.44	222.47	12.58	9719.31	0.80	0.46
Portugal	1.40	76.23	11.80	22 094.78	0.48	0.18

Note: Some differences in the 'Green Transition Outlook' column. All other results remain unchanged.

**Table 3.** Correlates of Country Transition Outlook measures.

	(1) Overall	(2) Overall	(3) Overall	(4) Green	(5) Green	(6) Green
Brown Lock-in Index	−0.518*** (0.068)			−0.550*** (0.063)		
GDP per capita (current USD) (log)	−0.051 (0.058)	−0.028 (0.066)	−0.073 (0.066)	0.074 (0.068)	0.038 (0.072)	−0.030 (0.063)
Coal rents (% of GDP)	−0.066** (0.030)	−0.083** (0.038)	−0.083*** (0.030)	−0.151*** (0.041)	−0.172*** (0.057)	−0.165*** (0.062)
Oil rents (% of GDP)	0.006 (0.007)	−0.044*** (0.004)	−0.038*** (0.004)	0.005 (0.006)	−0.039*** (0.004)	−0.031*** (0.004)
Natural gas rents (% of GDP)	−0.021** (0.009)	−0.041** (0.016)	−0.038*** (0.013)	−0.001 (0.015)	−0.017 (0.018)	−0.015 (0.016)
CO2 emissions (metric tons per capita, log)	0.042 (0.099)	0.065 (0.114)	−0.005 (0.106)	0.176 (0.110)	0.061 (0.125)	0.053 (0.106)
Brown Complexity Index		−0.115*** (0.041)			0.208*** (0.052)	
Green Complexity Index			0.082 (0.050)			0.360*** (0.049)
Year FEs	X	X	X	X	X	X
Observations	854	854	854	854	854	854
R2	.267	.21	.204	.318	.274	.335

Linear regression. Cluster-robust standard errors in parentheses.

Dependent variables are country-level transition opportunities from brown to the list stated.

The label (log) refers to the natural logarithm of 1 + the variable in question.

Note: Slight changes to coefficient values in columns (4), (5) and (6). Columns (1)–(3) remain unchanged.

## 2. Appendix tables and figures

**Table 5.** Predictive Power of Green Transition Outlook.

	(1) BLI	(2) BLI	(3) BCI	(4) BCI
Brown Lock-in Index ( $t - 1$ )	0.957*** (0.017)	0.949*** (0.034)		
Green Transition Outlook ( $t - 1$ )	−0.006 (0.018)	−0.001 (0.019)	−0.027*** (0.010)	−0.024** (0.011)
GDP per capita (current USD, log, $t - 1$ )	−0.002 (0.009)	−0.015 (0.016)	0.023*** (0.007)	0.021 (0.017)
Coal rents (% of GDP, $t - 1$ )		0.026*** (0.009)		0.001 (0.010)
Oil rents (% of GDP, $t - 1$ )		0.002 (0.003)		−0.002 (0.001)
Natural gas rents (% of GDP, $t - 1$ )		0.004* (0.002)		−0.001 (0.001)
CO2 emissions (metric tons per capita, log, $t - 1$ )		0.024 (0.027)		0.021 (0.027)
Brown Complexity Index ( $t - 1$ )			0.955*** (0.014)	0.947*** (0.016)
Year FEs	X	X	X	X
Observations	715	661	715	661
R2	.931	.943	.926	.93

Linear regression. Cluster-robust standard errors in parentheses.

The label (log) refers to the natural logarithm of 1 + the variable in question.

$t - 1$  refers to the previous period's value.

Note: Very marginal changes to some coefficient values (e.g. coefficient on Brown Lock-in Index ( $t - 1$ ) in column (1) changes from 0.959\*\*\* to 0.957\*\*\*).

**Table 8.** Summary statistics for trade and policy variables.

	Mean	sd	min	max
Brown Export Volume (1000 USD)	$1.13 \times 10^{+07}$	$3.08 \times 10^{+07}$	11.94	$2.88 \times 10^{+08}$
% Share of Brown in Export Volume	19.90	26.66	0.07	99.70
Number of Competitive Brown Products	11.89	12.83	1.00	76.00
% Share of Brown in Export Diversity	3.45	4.67	0.14	50.00
Green Export Volume (1000 USD)	$5.19 \times 10^{+06}$	$2.22 \times 10^{+07}$	0.00	$3.30 \times 10^{+08}$
% Share of Green in Export Volume	4.27	4.35	0.00	29.01
Number of Competitive Green Products	31.32	35.89	0.00	200.00
% Share of Green in Export Diversity	5.82	2.98	0.00	16.67
CO2 emissions (metric tons per capita)	4.50	5.44	0.00	42.74
GDP per capita (current USD)	12 597.35	18 127.71	124.93	116 072.05
Coal rents (% of GDP)	0.14	0.65	0.00	10.63
Oil rents (% of GDP)	3.79	9.43	0.00	66.21
Natural gas rents (% of GDP)	0.66	3.25	0.00	57.32
RTA, Climate Change Adaptation Technologies	0.68	1.27	0.00	15.62
RTA, Energy-related Mitigation Technologies	0.50	0.82	0.03	8.81
RTA, Environment-related Technologies	0.81	0.87	0.08	5.38
RTA, Carbon Capture and Storage	0.06	0.18	0.00	1.75
RTA, Transport-related Mitigation Technologies	0.26	0.58	0.01	5.26
Observations	1051			

*Note:* Slight increase in the mean and maximum values of Green Export Volume (1000 USD), % Share of Green in Export Volume, Number of Competitive Green Products, % Share of Green in Export Diversity. Some changes in the standard deviation of the same variables. No other changes.

Table 9. Countries ranking most highly on the Brown Lock-in Index.

Country	BLI	Brown exports [1 M USD]	Brown Export Share [%]	GDP per capita [USD]	Transition Outlook	Green TO
South Sudan	3.57	13.49	94.82	Not Available	-4.42	-2.39
Iraq	3.48	634.12	94.50	5115.69	-0.30	-0.55
Libya	3.29	193.89	90.92	5810.85	-2.45	-2.21
Angola	3.27	307.13	88.99	3095.46	-1.58	-1.67
Equatorial Guinea	3.21	38.62	88.80	8897.39	-1.87	-2.03
Azerbaijan	3.19	148.20	89.41	4358.97	-0.99	-0.55
Nigeria	3.18	449.05	87.69	2099.86	-1.51	-1.84
Brunei Darussalam	3.02	56.55	91.51	29 177.48	-0.73	-0.21
Chad	2.98	11.30	81.44	690.87	-4.42	-2.39
Venezuela	2.92	178.51	84.28	Not Available	-0.31	-0.47
Kuwait	2.92	479.84	90.00	29 599.34	-0.75	-0.76
Algeria	2.91	299.23	93.75	3898.94	-1.27	-1.28
Qatar	2.77	571.76	86.98	58 919.32	-1.71	-1.19
Turkmenistan	2.49	71.46	87.21	6888.55	-0.17	-0.86
Saudi Arabia	2.42	1592.41	74.14	21 453.67	-1.04	-0.40
Timor-Leste	2.25	0.63	69.09	1385.77	-2.05	-0.05
Gabon	2.19	32.41	64.23	7364.51	-2.51	-1.02
Oman	2.16	240.97	69.68	17 047.08	-1.22	-0.73
Kazakhstan	2.09	343.43	63.78	9141.98	-1.18	-1.21
Iran	1.99	369.01	63.00	3981.87	-0.85	-0.77
Br. Indian Ocean Terr.	1.73	0.16	54.42	Not Available	-0.90	0.25
Congo	1.53	49.64	49.38	2208.69	-2.32	-0.93
Norway	1.52	580.71	55.28	74 254.91	-0.90	-0.44
Russian Federation	1.47	2130.54	57.93	10 467.39	-0.78	-0.63
Yemen	1.44	6.89	46.56	958.38	-1.41	-1.79
Trinidad and Tobago	1.40	46.02	53.31	16 305.01	-1.61	-1.20
Colombia	1.38	203.33	54.26	6147.32	-1.12	-0.82
Bonaire	1.13	0.12	66.64	Not Available	-0.53	-0.23
Cameroon	1.12	17.64	40.52	1507.63	-1.43	-1.18
Papua New Guinea	1.11	41.80	42.63	2716.75	-1.55	-2.06
Ecuador	0.88	72.13	35.01	6078.49	-0.92	-0.53
United Arab Emirates	0.84	932.20	41.47	40 322.40	-0.09	-0.21
Aruba	0.62	0.83	39.63	29 352.08	-0.13	-0.11
Curaçao	0.60	3.60	44.28	19 018.16	-0.37	-0.43
Saint Vincent and the Grenadines	0.59	0.63	29.35	7277.43	0.52	-0.43
Mozambique	0.55	24.90	37.38	469.77	-0.90	-1.78
Mongolia	0.54	25.93	34.84	3993.63	-0.82	-2.19
Bolivia (Plurinational State of)	0.54	26.19	31.54	3332.31	-2.18	-1.06
Myanmar	0.50	55.89	29.30	1255.32	-0.60	-1.11
Australia	0.48	774.30	30.92	53 512.98	-0.87	-1.07
Togo	0.46	9.45	37.88	868.74	0.95	0.27
Bahrain	0.35	43.99	35.98	22 879.85	0.13	-0.16
Canada	0.30	1269.66	31.52	44 725.29	-0.85	0.33
Gibraltar	0.28	1.08	47.31	Not Available	-0.17	1.54
Ghana	0.26	34.82	19.78	2151.85	-0.93	-0.31
Dem. People's Rep. of Korea	0.22	3.18	29.77	Not Available	0.57	0.36
Egypt	0.22	76.91	22.34	3017.92	-0.34	-0.50
Greece	0.16	100.15	28.84	18 590.33	0.34	-0.24
Maldives	0.13	0.57	21.76	9310.32	0.01	-0.10
Sudan	0.12	7.55	16.78	783.89	-2.48	-2.01

Note: Some differences in the 'Green Transition Outlook' column. All other results remain unchanged.

**Table 10.** Countries ranking most highly on the Brown Complexity Index.

Country	BCI	Brown exports [1 M USD]	Brown Export Share [%]	GDP per capita [USD]	Transition Outlook	Green TO
USA	4.93	2462.74	17.11	62 013.69	−0.52	0.14
Japan	4.27	1257.50	18.67	39 814.17	−0.24	0.31
Germany	3.95	1824.49	13.21	45 520.66	0.02	0.68
Belgium	3.73	460.61	14.92	45 068.76	−0.41	0.14
Netherlands	3.67	718.24	14.26	50 490.97	−0.44	−0.24
France	3.24	468.56	8.99	39 380.82	0.27	0.65
United Kingdom	3.03	802.30	19.29	42 026.79	−0.05	0.77
Rep. of Korea	2.84	871.01	15.49	31 579.38	−0.19	0.07
Thailand	2.76	321.74	13.03	6977.58	0.07	0.31
India	2.48	488.12	15.91	1947.72	0.43	−0.33
Spain	2.39	534.73	17.27	28 314.84	0.14	0.02
Italy	2.22	434.85	8.74	32 645.50	0.92	0.97
Austria	2.02	147.49	9.11	48 550.29	0.30	1.15
China	1.91	652.10	2.60	9479.06	0.88	−0.59
Poland	1.67	189.41	7.87	14 646.76	0.74	0.77
Finland	1.62	98.55	14.24	47 483.98	0.54	1.43
Canada	1.62	1269.66	31.52	44 725.29	−0.85	0.33
Singapore	1.61	507.49	16.89	62 028.43	−0.47	0.04
Turkey	1.44	222.47	12.58	9719.31	0.80	0.46
Portugal	1.40	76.23	11.80	22 094.78	0.48	0.18
Hungary	1.34	165.05	14.31	15 374.97	0.36	1.55
Russian Federation	1.31	2130.54	57.93	10 467.39	−0.78	−0.63
Czechia	1.26	220.90	11.88	21 844.52	0.63	1.22
Indonesia	1.25	392.90	21.41	3859.81	−0.52	−0.65
Slovenia	1.21	38.85	10.97	24 536.80	0.89	1.42
United Arab Emirates	1.07	932.20	41.47	40 322.40	−0.09	−0.21
South Africa	1.05	177.88	16.75	6346.73	−0.24	−0.07
Saudi Arabia	1.03	1592.41	74.14	21 453.67	−1.04	−0.40
Sweden	1.01	214.53	14.07	52 911.91	0.52	1.62
Brazil	0.95	314.56	14.47	8696.90	−0.58	−0.13
Iran	0.92	369.01	63.00	3981.87	−0.85	−0.77
Slovakia	0.91	202.41	23.43	18 389.28	0.08	1.27
Mexico	0.84	959.84	22.13	9199.81	0.26	1.70
Romania	0.81	65.12	8.68	11 710.00	0.30	1.00
Lithuania	0.80	43.68	14.10	18 165.61	0.41	0.93
Grenada	0.67	0.01	3.81	10 067.39	0.61	0.97
Belarus	0.66	71.87	24.71	6089.46	−0.07	0.62
Israel	0.62	29.40	4.99	41 657.61	−0.12	0.01
Denmark	0.61	50.99	5.14	58 941.02	0.71	0.87
Philippines	0.52	16.98	1.99	3246.64	0.40	−0.55
Brunei Darussalam	0.49	56.55	91.51	29 177.48	−0.73	−0.21
Oman	0.48	240.97	69.68	17 047.08	−1.22	−0.73
Ukraine	0.43	11.92	2.42	3061.80	0.52	0.28
Norway	0.40	580.71	55.28	74 254.91	−0.90	−0.44
Argentina	0.39	78.12	13.07	11 566.82	−0.77	−0.12
Latvia	0.35	9.55	6.47	16 697.55	0.40	0.17
Egypt	0.33	76.91	22.34	3017.92	−0.34	−0.50
Guam	0.31	0.02	5.78	36 407.51	−0.06	0.07
Cyprus	0.27	7.67	16.63	27 456.57	−0.02	−0.24
Serbia	0.25	13.92	7.34	6889.57	0.54	1.17

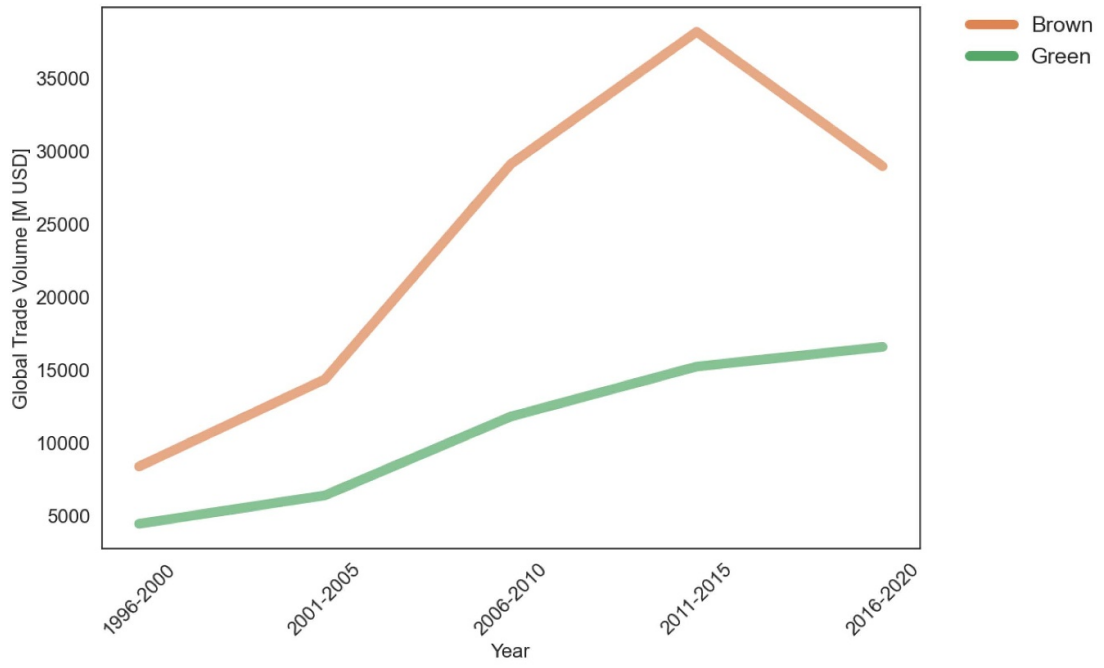
Note: Some differences in the 'Green Transition Outlook' column. All other results remain unchanged.



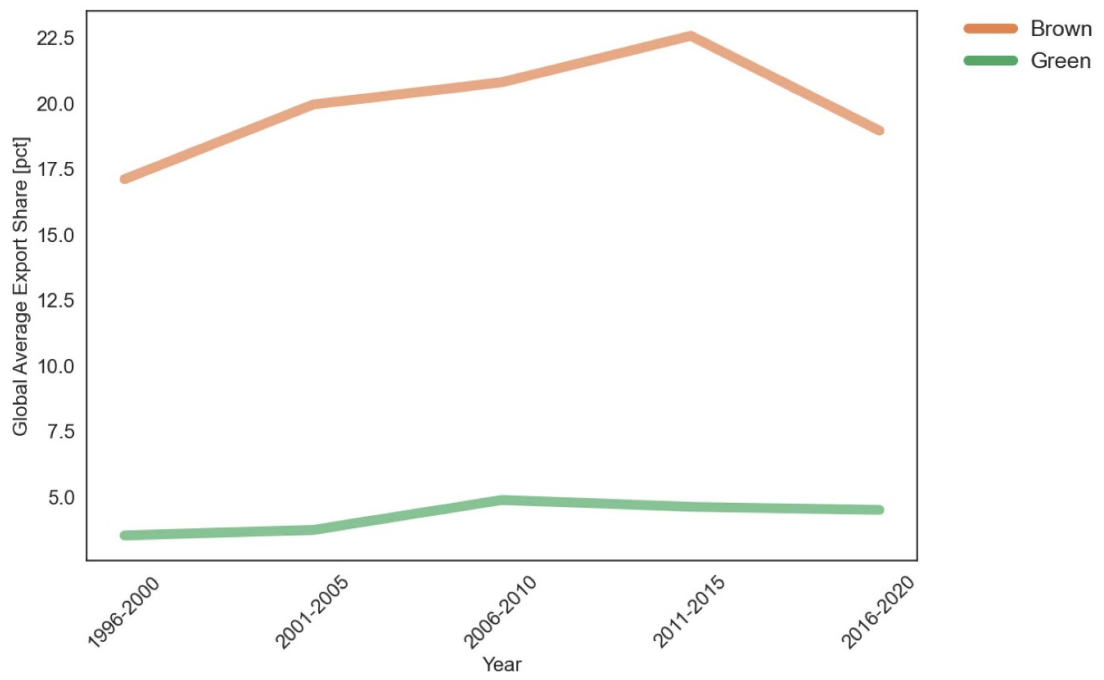
Table 11. Key relationships.

Variable 1	Variable 2	Correlation
Brown Complexity Index	Brown Diversity Share	0.04
Brown Complexity Index	Brown Export Diversity	0.99
Brown Complexity Index	Brown Export Share [%]	0.00
Brown Complexity Index	Diversity	0.78
Brown Complexity Index	Economic Complexity Index	0.62
Brown Complexity Index	GDP per capita [USD]	0.39
Brown Complexity Index	Green Complexity Index	0.80
Brown Diversity Share	Diversity	-0.26
Brown Export Diversity	Diversity	0.77
Brown Export Share [%]	Diversity	-0.25
Brown Lock-in Index	Brown Diversity Share	0.72
Brown Lock-in Index	Brown Export Diversity	0.00
Brown Lock-in Index	Brown Export Share [%]	0.98
Brown Lock-in Index	Diversity	-0.30
Brown Lock-in Index	Economic Complexity Index	-0.33
Brown Lock-in Index	GDP per capita [USD]	-0.03
Brown Lock-in Index	Green Complexity Index	-0.25
Green Complexity Index	Diversity	0.88
Green Complexity Index	Green Export Diversity	0.99
Green Export Diversity	Diversity	0.91

Note: Correlation between Green Export Diversity and Export Diversity changes from 0.90 to 0.91.



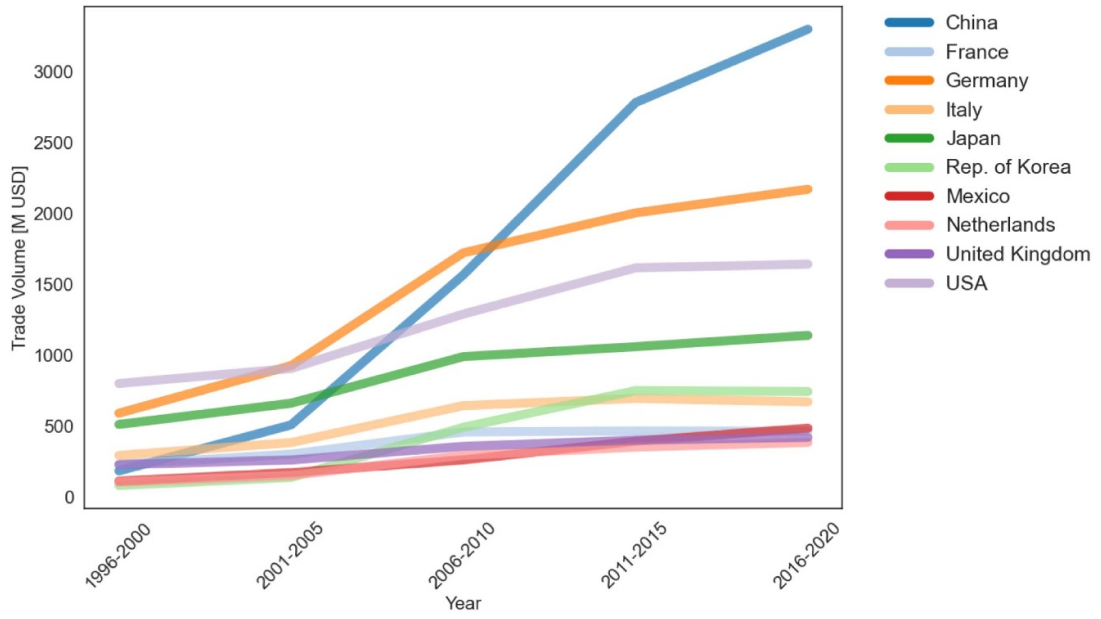
(a) Global Volume of Trade



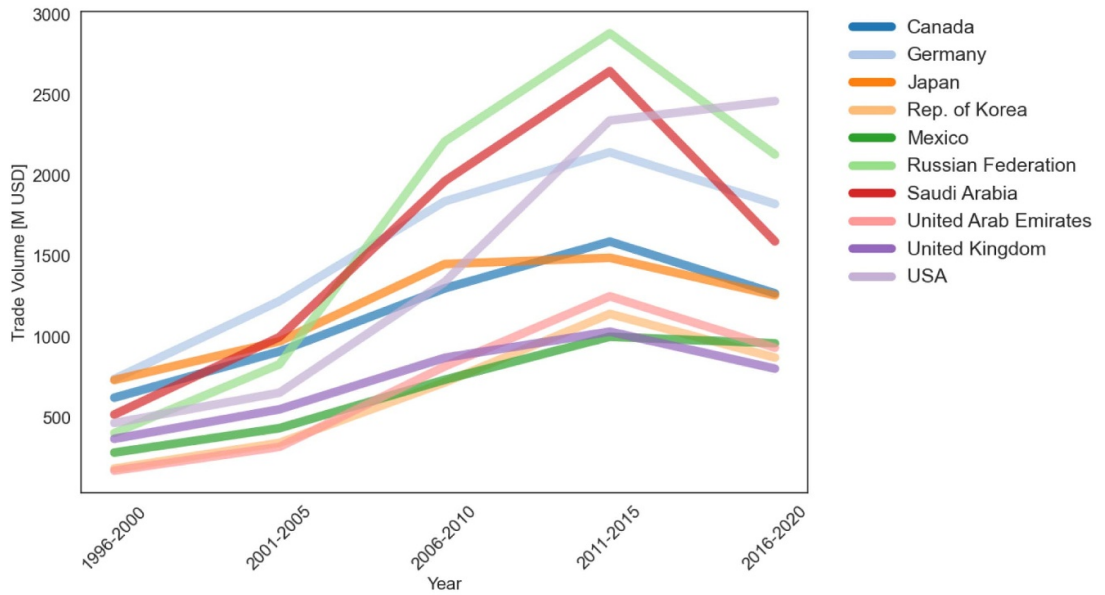
(b) Global Average Share in Exports

**Figure 4.** Global trends in green and brown trade.

*Note:* Slight increase in values of green trade, but no meaningful change to trends.



(a) Top 10 Green Exporters



(b) Top 10 Brown Exporters

**Figure 5.** Top 10 exporters of green and brown products.  
*Note:* Slight increase in volume of green exports, but no change in ranking.

**Table 16.** Predictive power of Green Transition Outlook.

	(1) BLI (Full)	(2) BLI (Full)	(3) BCI (Full)	(4) BCI (Full)
Brown Lock-in Index (full list, $t - 1$ )	0.911*** (0.024)	0.903*** (0.031)		
Green Transition Outlook ( $t - 1$ )	-60.03* (0.019)	-0.019 (0.019)	-0.019* (0.010)	-0.014 (0.011)
GDP per capita (current USD, log, $t - 1$ )	0.008 (0.010)	-0.005 (0.018)	0.025*** (0.007)	0.025 (0.018)
Coal rents (% of GDP, $t - 1$ )		0.026* (0.014)		-0.001 (0.009)
Oil rents (% of GDP, $t - 1$ )		0.004** (0.002)		-0.001 (0.001)
Natural gas rents (% of GDP, $t - 1$ )		0.010*** (0.003)		-0.001 (0.001)
CO2 emissions (metric tons per capita, log, $t - 1$ )		0.025 (0.029)		0.020 (0.028)
Brown Complexity Index ( $t - 1$ )			0.950*** (0.013)	0.938*** (0.015)
Year FEs	X	X	X	X
Observations	715	661	715	661
R2	.86	.884	.922	.926

Linear regression. Cluster-robust standard errors in parentheses.

The label (log) refers to the natural logarithm of 1 + the variable in question.

$t - 1$  refers to the previous period's value.

Note: Coefficient on Green Transition Outlook ( $t - 1$ ) in column (1) changes from  $-0.028$  to  $-0.036^*$ , strengthening support for the Green Transition Outlook as a meaningful measure. Coefficient on Green Transition Outlook ( $t - 1$ ) in column (3) changes marginally from  $-0.018^*$  to  $-0.019^*$ . Marginal changes in some other coefficients.

**Table 18.** Alternative BLI top 20.

Country	GDP per capita [USD]	BLI (binary)	Brown exports [1 M USD]	Brown Export Share [%]	Transition Outlook	Green TO
USA	62 013.69	4.39	2462.74	17.11	-0.52	0.14
India	1947.72	2.93	488.12	15.91	0.43	-0.33
Spain	28 314.84	2.89	534.73	17.27	0.14	0.02
Japan	39 814.17	2.86	1257.50	18.67	-0.24	0.31
Russian Federation	10 467.39	2.69	2130.54	57.93	-0.78	-0.63
Netherlands	50 490.97	2.65	718.24	14.26	-0.44	-0.24
United Kingdom	42 026.79	2.53	802.30	19.29	-0.05	0.77
Belgium	45 068.76	2.53	460.61	14.92	-0.41	0.14
United Arab Emirates	40 322.40	2.48	932.20	41.47	-0.09	-0.21
France	39 380.82	2.32	468.56	8.99	0.27	0.65
Germany	45 520.66	2.31	1824.49	13.21	0.02	0.68
Thailand	6977.58	2.12	321.74	13.03	0.07	0.31
Indonesia	3859.81	2.09	392.90	21.41	-0.52	-0.65
Canada	44 725.29	2.06	1269.66	31.52	-0.85	0.33
Turkey	9719.31	1.94	222.47	12.58	0.80	0.46
Rep. of Korea	31 579.38	1.94	871.01	15.49	-0.19	0.07
Saudi Arabia	21 453.67	1.83	1592.41	74.14	-1.04	-0.40
Iran	3981.87	1.82	369.01	63.00	-0.85	-0.77
South Africa	6346.73	1.77	177.88	16.75	-0.24	-0.07
Italy	32 645.50	1.77	434.85	8.74	0.92	0.97

Note: Some differences in the 'Green Transition Outlook' column. All other results remain unchanged.

**Table 20.** Predictive power of Green Transition Outlook.

	(1) BLI (binary)	(2) BLI (binary)	(3) BCI	(4) BCI
Brown Lock-in Index (binary RCA, $t - 1$ )	0.895*** (0.021)	0.881*** (0.024)		
Green Transition Outlook ( $t - 1$ )	-0.019 (0.012)	-0.005 (0.014)	-0.027*** (0.010)	-0.024** (0.011)
GDP per capita (current USD, log, $t - 1$ )	0.039*** (0.011)	0.037* (0.022)	0.023*** (0.007)	0.021 (0.017)
Coal rents (% of GDP, $t - 1$ )		0.028 (0.019)		0.001 (0.010)
Oil rents (% of GDP, $t - 1$ )		0.001 (0.001)		-0.002 (0.001)
Natural gas rents (% of GDP, $t - 1$ )		0.001 (0.002)		-0.001 (0.001)
CO2 emissions (metric tons per capita, log, $t - 1$ )		0.023 (0.037)		0.021 (0.027)
Brown Complexity Index ( $t - 1$ )			0.955*** (0.014)	0.947*** (0.016)
Year FEs	X	X	X	X
Observations	715	661	715	661
R2	.843	.849	.926	.93

Linear regression. Cluster-robust standard errors in parentheses.

The label (log) refers to the natural logarithm of 1 + the variable in question.

$t - 1$  refers to the previous period's value.

Note: Marginal changes to some coefficients, e.g. coefficient on Green Transition Outlook ( $t - 1$ ) in column (3) changes from  $-0.024^{**}$  to  $-0.027^{***}$ .

Table 22. Countries ranking most highly on the Brown Lock-in Index.

Country	BLI	Brown exports [1 M USD]	Brown Export Share [%]	GDP per capita [USD]	Transition Outlook	Green TO
Iraq	3.43	635.06	94.34	5115.69	-0.48	-0.45
South Sudan	3.37	13.49	91.06	Not Available	-4.67	-2.48
Libya	3.26	195.45	90.71	5810.85	-2.46	-2.39
Angola	3.20	307.47	87.87	3095.46	-1.74	-1.85
Equatorial Guinea	3.18	38.68	87.98	8897.39	-2.15	-2.21
Azerbaijan	3.16	148.25	88.81	4358.97	-1.00	-0.61
Nigeria	3.11	449.44	86.35	2099.86	-1.49	-2.13
Brunei Darussalam	2.93	60.42	91.25	29 177.48	-0.81	-0.24
Algeria	2.92	301.82	93.26	3898.94	-1.47	-1.42
Chad	2.89	11.30	80.07	690.87	-4.67	-2.48
Kuwait	2.86	481.19	88.85	29 599.34	-1.14	-0.86
Venezuela	2.82	178.86	82.68	Not Available	-0.35	-0.53
Qatar	2.81	571.86	86.56	58 919.32	-1.63	-1.10
Br. Indian Ocean Terr.	2.56	0.77	73.49	Not Available	-0.87	0.05
Turkmenistan	2.52	71.58	83.74	6888.55	-0.20	-0.97
Saudi Arabia	2.39	1595.39	74.05	21 453.67	-1.13	-0.50
Gabon	2.13	32.43	63.37	7364.51	-2.15	-1.04
Oman	2.12	241.70	68.81	17 047.08	-1.26	-0.83
Kazakhstan	2.07	344.28	63.60	9141.98	-1.40	-1.14
Iran	1.97	375.71	63.13	3981.87	-0.91	-0.84
Timor-Leste	1.87	0.77	62.43	1385.77	-2.11	-0.10
Norway	1.56	580.79	55.25	74 254.91	-0.99	-0.52
Bonaire	1.55	0.44	78.77	Not Available	-0.77	-0.32
Congo	1.49	49.69	48.83	2208.69	-1.59	-0.68
Russian Federation	1.46	2130.54	57.91	10 467.39	-0.87	-0.60
Trinidad and Tobago	1.43	46.66	53.38	16 305.01	-1.57	-1.66
Colombia	1.37	203.38	54.13	6147.32	-1.20	-0.87
Yemen	1.37	7.02	45.37	958.38	-1.33	-2.15
Papua New Guinea	1.14	42.12	42.48	2716.75	-1.76	-2.20
Cameroon	1.13	19.04	41.27	1507.63	-1.61	-1.26
Guyana	1.09	11.75	38.82	6329.52	-2.10	-1.30
Ecuador	0.85	72.18	34.89	6078.49	-0.96	-0.60
United Arab Emirates	0.82	932.20	41.46	40 322.40	-0.19	-0.23
Dem. People's Rep. of Korea	0.67	7.57	38.52	Not Available	0.45	0.15
Curaçao	0.62	4.02	44.30	19 018.16	-1.12	-0.70
Myanmar	0.61	61.47	30.68	1255.32	-0.83	-0.96
Bolivia (Plurinational State of)	0.59	26.19	31.26	3332.31	-2.06	-1.34
Mozambique	0.55	24.98	36.21	469.77	-0.78	-1.56
Mongolia	0.53	25.96	34.38	3993.63	-1.08	-2.26
Australia	0.50	774.31	30.89	53 512.98	-0.95	-1.16
Aruba	0.47	1.15	33.84	29 352.08	-0.21	-0.34
Togo	0.43	9.47	37.42	868.74	0.96	0.02
Maldives	0.42	0.93	29.46	9310.32	0.12	-0.16
Saint Vincent and the Grenadines	0.39	0.64	23.99	7277.43	0.13	-0.43
American Samoa	0.32	0.24	27.39	11 824.79	-0.26	-0.81
Bahrain	0.31	44.12	35.40	22 879.85	0.08	-0.30
Canada	0.28	1269.67	31.51	44 725.29	-0.92	0.42
Ghana	0.24	34.84	19.65	2151.85	-0.68	0.33
Egypt	0.22	78.75	22.67	3017.92	-0.49	-0.79
Greece	0.14	100.18	28.82	18 590.33	0.14	-0.36

Note: Minor differences in the 'Green Transition Outlook' column. All other results remain unchanged.

**Table 23.** Countries ranking most highly on the Brown Complexity Index.

Country	BCI	Brown exports [1 M USD]	Brown Export Share [%]	GDP per capita [USD]	Transition Outlook	Green TO
USA	4.97	2462.74	17.11	62 013.69	−0.56	0.22
Japan	4.27	1257.50	18.67	39 814.17	−0.25	0.40
Germany	3.93	1824.49	13.20	45 520.66	−0.04	0.77
Belgium	3.78	460.61	14.90	45 068.76	−0.48	0.21
Netherlands	3.64	718.24	14.25	50 490.97	−0.51	−0.24
France	3.28	468.56	8.98	39 380.82	0.19	0.73
United Kingdom	3.04	802.30	19.28	42 026.79	−0.15	0.80
Rep. of Korea	2.80	871.01	15.49	31 579.38	−0.24	0.11
Thailand	2.80	321.74	13.02	6977.58	−0.01	0.41
India	2.39	488.12	15.91	1947.72	0.24	−0.34
Italy	2.33	434.90	8.74	32 645.50	0.83	1.16
Spain	2.29	534.73	17.26	28 314.84	0.12	0.09
Austria	2.02	147.49	9.10	48 550.29	0.23	1.27
China	1.74	652.10	2.60	9479.06	0.77	−0.46
Poland	1.66	189.41	7.87	14 646.76	0.69	0.87
Canada	1.62	1269.67	31.51	44 725.29	−0.92	0.42
Finland	1.58	98.56	14.22	47 483.98	0.51	1.54
Singapore	1.57	507.52	16.88	62 028.43	−0.52	0.08
Turkey	1.43	222.47	12.58	9719.31	0.73	0.52
Portugal	1.38	76.24	11.80	22 094.78	0.40	0.23
Hungary	1.37	165.06	14.30	15 374.97	0.31	1.70
Czechia	1.30	220.90	11.86	21 844.52	0.57	1.39
Slovenia	1.21	38.85	10.95	24 536.80	0.84	1.60
Russian Federation	1.20	2130.54	57.91	10 467.39	−0.87	−0.60
Indonesia	1.18	393.05	21.39	3859.81	−0.61	−0.62
Grenada	1.07	0.02	4.26	10 067.39	0.51	1.18
Saudi Arabia	1.05	1595.39	74.05	21 453.67	−1.13	−0.50
United Arab Emirates	1.03	932.20	41.46	40 322.40	−0.19	−0.23
South Africa	0.99	177.88	16.74	6346.73	−0.36	−0.09
Sweden	0.91	214.53	14.04	52 911.91	0.56	1.69
Slovakia	0.91	202.41	23.41	18 389.28	−0.02	1.40
Brazil	0.88	314.64	14.46	8696.90	−0.61	−0.14
Mexico	0.88	960.02	22.13	9199.81	0.26	1.83
Iran	0.82	375.71	63.13	3981.87	−0.91	−0.84
Romania	0.78	65.18	8.68	11 710.00	0.26	1.07
Lithuania	0.77	43.72	14.07	18 165.61	0.34	1.00
Oman	0.63	241.70	68.81	17 047.08	−1.26	−0.83
Saint Lucia	0.60	0.37	25.76	10 629.27	0.64	0.51
Belarus	0.59	71.98	24.62	6089.46	−0.09	0.66
Denmark	0.57	50.99	5.13	58 941.02	0.68	0.89
Israel	0.54	29.41	4.98	41 657.61	−0.18	−0.10
Guam	0.54	0.03	8.54	36 407.51	−0.14	−0.13
Brunei Darussalam	0.52	60.42	91.25	29 177.48	−0.81	−0.24
Philippines	0.49	17.23	1.98	3246.64	0.20	−0.53
Ukraine	0.35	12.07	2.45	3061.80	0.43	0.32
Argentina	0.32	78.28	13.00	11 566.82	−0.78	−0.13
Norway	0.31	580.79	55.25	74 254.91	−0.99	−0.52
Estonia	0.31	18.53	11.22	21 629.33	0.28	0.38
Latvia	0.28	9.62	6.49	16 697.55	0.32	0.16
Egypt	0.25	78.75	22.67	3017.92	−0.49	−0.79

Note: Minor differences in the 'Green Transition Outlook' column. All other results remain unchanged.

Table 24. Correlates of Country Transition Outlook measures.

	(1) Overall	(2) Overall	(3) Overall	(4) Green	(5) Green	(6) Green
Brown Lock-in Index	−0.606*** (0.068)			−0.586*** (0.062)		
GDP per capita (current USD) (log)	−0.060 (0.050)	−0.027 (0.060)	−0.071 (0.059)	0.100 (0.064)	0.064 (0.069)	−0.006 (0.057)
Coal rents (% of GDP)	−0.088*** (0.023)	−0.108*** (0.034)	−0.105*** (0.028)	−0.130*** (0.037)	−0.145*** (0.052)	−0.136*** (0.057)
Oil rents (% of GDP)	0.008 (0.006)	−0.050*** (0.004)	−0.044*** (0.004)	0.007 (0.006)	−0.039*** (0.004)	−0.029*** (0.004)
Natural gas rents (% of GDP)	−0.011 (0.010)	−0.035* (0.019)	−0.031* (0.016)	−0.001 (0.014)	−0.017 (0.018)	−0.014 (0.016)
CO2 emissions (metric tons per capita, log)	0.001 (0.082)	0.016 (0.108)	−0.061 (0.098)	0.142 (0.109)	−0.004 (0.125)	−0.010 (0.104)
Brown Complexity Index		−0.140*** (0.037)			0.248*** (0.055)	
Green Complexity Index			0.065 (0.048)			0.403*** (0.050)
Year FEs	X	X	X	X	X	X
Observations	873	873	873	873	873	873
R2	.356	.276	.263	.332	.291	.36

Linear regression. Cluster-robust standard errors in parentheses.

Dependent variables are country-level transition opportunities from brown to the list stated.

The label (log) refers to the natural logarithm of 1 + the variable in question.

Note: Slight changes to coefficient values in columns (4), (5) and (6). Columns (1)–(3) remain unchanged.

Table 26. Predictive power of Green Transition Outlook.

	(1) BLI	(2) BLI	(3) BCI	(4) BCI
Brown Lock-in Index ( $t - 1$ )	0.949*** (0.017)	0.921*** (0.035)		
Green Transition Outlook ( $t - 1$ )	−0.007 (0.015)	−0.006 (0.016)	−0.023** (0.010)	−0.023* (0.012)
GDP per capita (current USD, log, $t - 1$ )	−0.002 (0.009)	−0.017 (0.017)	0.029*** (0.007)	0.028 (0.018)
Coal rents (% of GDP, $t - 1$ )		0.025** (0.010)		0.000 (0.011)
Oil rents (% of GDP, $t - 1$ )		0.005 (0.003)		−0.002* (0.001)
Natural gas rents (% of GDP, $t - 1$ )		0.002 (0.003)		−0.003** (0.001)
CO2 emissions (metric tons per capita, log, $t - 1$ )		0.028 (0.027)		0.021 (0.028)
Brown Complexity Index ( $t - 1$ )			0.947*** (0.015)	0.938*** (0.016)
Year FEs	X	X	X	X
Observations	749	687	749	687
R2	.92	.932	.917	.922

Linear regression. Cluster-robust standard errors in parentheses.

The label (log) refers to the natural logarithm of 1 + the variable in question.

$t - 1$  refers to the previous period's value.

Note: Marginal changes to some coefficient values, e.g. coefficient on Brown Lock-in Index ( $t - 1$ ) in column (1) changes from 0.951\*\*\* to 0.949\*\*\*.



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