

## APPENDIX A: SUMMARY OF THE LITERATURE

**TABLE A1** Related literature on financial development, economic growth and institutional quality.

Literature	Study object	Methods and models	Variables	Time period	Effects and results
<i>Case 1: Financial development and economic growth</i>					
Nazir et al. (2021)	China, India, Pakistan	ARDL, GC-ECM	11, 22, 44	1970–2016	$H^A_1, H^B_1$
Pradhan et al. (2020)	32 European countries	GC-VECM	11, 22, 44	1996–2016	$H^A_1, H^B_1$
Mhadhbi et al. (2020)	40 developing countries	GC-VAR	11, 22	1970–2012	$H^A_1, H^B_1$
Opoku et al. (2019)	47 African countries	GC-VAR	11, 22	1980–2016	$H^A_1, H^B_1$
Pradhan et al. (2018)	G-20 countries	GC-VECM	11, 22, 44	1980–2015	$H^A_1, H^B_1$
Ibrahim and Alagidede (2018)	29 Sub-Saharan African countries	GMM	11, 22, 44	1980–2014	$H^A_1$
Pradhan et al. (2017)	ASEAN countries	GC-VECM	11, 22	1961–2012	$H^A_1, H^B_1$
Samargandi et al. (2015)	52 middle-income countries	ARDL	11, 22, 44	1980–2008	$H^A_1, H^B_1$
Kar et al. (2011)	15 countries	GMM	11, 22	1980–2007	$H^B_1$
<i>Case 2: Institutional quality and economic growth</i>					
Nair et al. (2021)	67 developing countries	VECM	11, 33, 44	2005–2018	$H^B_2$
Aluko and Ibrahim (2020)	28 Sub-Saharan African countries	GMM	11, 22, 33, 44	1996–2015	$H^A_2$
Haini (2020)	ASEAN countries	GMM	11, 22, 33, 44	1995–2017	$H^B_2$
Corradini (2020)	NUTS-3 countries	P-VAR	11, 33	2004–2012	$H^A_2$
Nirola and Sahu (2019)	23 States of India	P-OLS	11, 33, 44	2005–2014	$H^A_2$
Salman et al. (2019)	G-20 countries	PVECM	11, 33	1990–2014	$H^A_2, H^B_2$
Kutan et al. (2017)	Middle Eastern and North African countries	VECM	11, 22, 33, 44	1980–2012	$H^A_2$
Afonso and Jalles (2016)	140 countries	GMM	11, 33, 44	1970–2010	$H^A_2$
Nawaz et al. (2014)	Asian countries	GMM	11, 33, 44	1996–2012	$H^A_2$
Law et al. (2013)	85 countries	GMM	11, 22, 33, 44	1980–2008	$H^A_2$

**TABLE A1** (Continued)

Literature	Study object	Methods and models	Variables	Time period	Effects and results
Osman et al. (2012)	27 Sub-Saharan African countries	GMM	11, 33, 44	1984–2003	$H^A_2$
<i>Case 3: Financial development and institutional quality</i>					
Aluko and Ibrahim (2020)	28 Sub-Saharan African countries	GMM	11, 22, 33, 44	1996–2015	$H^B_2$
Khan et al. (2019)	The United States	ARDL	11, 22, 33, 44	1984–2016	$H^B_2$
Law et al. (2018)	87 countries	GMM	11, 22, 33, 44	1984–2014	$H^A_3$
Hamdi et al. (2017)	143 countries	GMM	11, 22, 33, 44	2006–2013	$H^B_2$
Kutan et al. (2017)	Middle Eastern and North African countries	VECM	11, 22, 33, 44	1980–2012	$H^B_2$
Abid (2017)	99 countries	GMM	11, 22, 33, 44	1990–2011	$H^A_3$

Note:  $H^A_1$ – $H^B_3$  are described in the text. Institutional quality is used for all kinds of institutions and relates to government policy. Finance here is interpreted as banking and/or stock market(s), depending on the study. ARDL: Autoregressive distributed lag model; GC-ECM: Granger causality-based error-correction model; GC-VAR: Granger causality-based vector autoregressive model; PVECM: Granger causality-based panel vector error correction model GMM: causality-based generalized method of moments; and P-OLS: causality-based pooled ordinary least squares model. 11: Economic growth-related variables; 22: Financial development-related variables; 33: Institutional quality-related variables; and 44: Other macroeconomic-related variables. Most of the studies in Table A1 used Granger causality tests in providing a vector autoregressive model framework to examine interdependencies between these variables.

**APPENDIX B: ROOT OF THE COMPOSITE INDICES OF INSTITUTIONAL QUALITY AND FINANCIAL DEVELOPMENT, DEPLOYING PCA**

**TABLE B1** Originating the Composite Index of Institutional Quality (CIQ).

Part A: Eigen value analysis										
PC	Eigen value	Proportion	Cumulative value		Cumulative proportion					
1	6.078	0.608	6.078		0.608					
2	1.024	0.102	7.101		0.710					
3	0.638	0.064	7.739		0.774					
4	0.614	0.061	8.353		0.835					
5	0.488	0.049	8.842		0.884					
6	0.347	0.035	9.188		0.919					
7	0.302	0.030	9.490		0.949					
8	0.268	0.027	9.759		0.976					
9	0.223	0.022	9.982		0.998					
10	0.018	0.002	10.00		1.000					
Part B: Eigen vector (component loadings) analysis										
Variable	PC1	PC2	PC3	PC4	PC5	PC6	PC7	PC8	PC9	PC10
CBH	0.293	0.350	-0.161	-0.321	-0.601	0.462	0.220	0.099	0.174	0.002
CBE	0.314	0.071	0.422	-0.409	-0.097	-0.620	0.221	-0.288	0.157	-0.023
CDP	0.343	-0.319	-0.156	0.033	0.047	0.249	0.132	-0.640	-0.325	0.398
CEM	0.361	-0.392	-0.216	-0.024	0.063	0.031	0.124	0.033	-0.095	-0.799
CER	0.269	0.496	-0.020	-0.081	0.733	0.181	0.310	0.094	-0.012	0.004
CFS	0.286	-0.184	0.766	0.016	0.024	0.392	-0.264	0.236	-0.133	0.014
CMM	0.327	-0.429	-0.219	-0.032	0.056	-0.197	0.188	0.591	0.185	0.446
CQF	0.344	0.078	-0.237	-0.106	0.151	-0.012	-0.749	-0.162	0.444	0.021
CQP	0.328	0.351	-0.145	0.148	-0.189	-0.328	-0.270	0.212	-0.681	0.031
CTP	0.284	0.154	0.116	0.829	-0.155	-0.077	0.188	-0.108	0.341	-0.035
Part C: Correlations										
Variable	CBH	CBE	CDP	CEM	CER	CFS	CMM	CQF	CQP	CTP
CBH										
CBE	0.563									
CDP	0.511	0.572								
CEM	0.521	0.600	0.906							
CER	0.510	0.502	0.428	0.431						
CFS	0.401	0.608	0.574	0.956	0.378					
CMM	0.444	0.554	0.723	0.922	0.360	0.533				
CQF	0.602	0.598	0.682	0.723	0.587	0.503	0.640			
CQP	0.659	0.596	0.557	0.593	0.602	0.444	0.523	0.698		
CTP	0.442	0.433	0.611	0.527	0.454	0.486	0.473	0.521	0.637	1.000

Note: PCs (PC1 to PC10) are principal components; other notations as described in the text.

**TABLE B2** Deriving the Composite Index of Financial Development (CFD).

Part A: Eigen value analysis				
PCs	Eigen value	Proportion	Cumulative value	Cumulative proportion
1	7.777	0.864	7.777	0.864
2	0.914	0.102	8.691	0.966
3	0.216	0.023	8.907	0.989
4	0.079	0.009	8.987	0.998
5	0.012	0.001	8.988	0.999
6	0.001	0.000	8.999	0.999
7	0.001	0.000	8.999	1.000
8	0.000	0.000	8.999	1.000
9	0.000	0.000	9.000	1.000

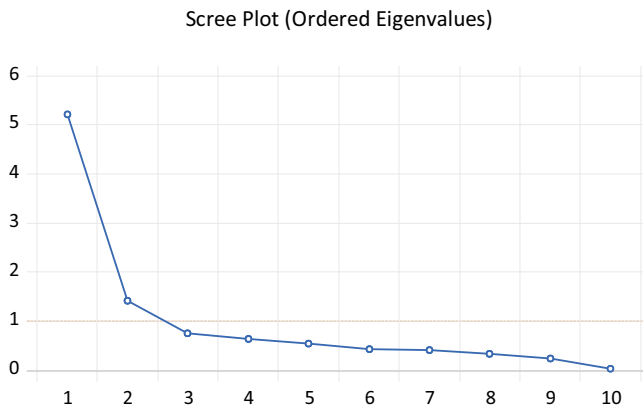
  

Part B: Eigen vector (component loadings) analysis									
Variable	PC1	PC2	PC3	PC4	PC5	PC6	PC7	PC8	PC9
BRM	0.355	-0.114	-0.211	-0.048	0.132	0.058	0.323	0.826	-0.081
CPS	0.304	-0.367	0.839	0.219	0.121	-0.067	0.040	0.015	-0.004
DCF	0.356	-0.085	-0.190	-0.130	0.057	-0.320	0.624	-0.480	-0.296
DCP	0.355	-0.094	-0.171	-0.187	0.337	-0.189	-0.158	-0.123	0.782
DCB	0.356	-0.086	-0.150	-0.139	0.252	-0.170	-0.672	-0.028	-0.529
MAC	0.345	-0.208	-0.270	0.471	-0.057	0.691	-0.029	-0.245	0.020
LDC	0.357	-0.020	-0.003	0.025	-0.867	-0.272	-0.161	0.069	0.121
STU	0.313	0.458	0.293	-0.603	-0.076	0.479	0.037	-0.069	-0.022
STR	0.241	0.758	0.063	0.540	0.163	-0.210	0.009	0.036	0.012

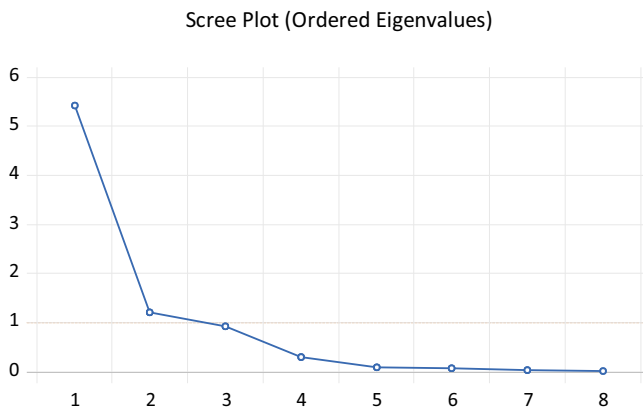
  

Part C: Correlations									
Variable	BRM	CPS	DCF	DCP	DCB	MAC	LDC	STU	STR
BRM									
CPS	0.839								
DCF	0.999	0.834							
DCP	0.998	0.839	0.999						
DCB	0.998	0.842	0.999	0.999					
MAC	0.984	0.846	0.977	0.974	0.975				
LDC	0.986	0.845	0.989	0.985	0.988	0.965			
STU	0.803	0.629	0.823	0.822	0.827	0.713	0.857		
STR	0.507	0.336	0.598	0.589	0.599	0.518	0.653	0.880	1.000

Note: PCs (PC1-PC10) are principal components; other notations as described in the text.



**FIGURE B1** CIQ Scree Plot. Notations are defined in Table B1.



**FIGURE B2** CFD Scree plot.

## APPENDIX C: SUMMARY STATISTICS AND UNIT ROOT STATISTICS

**TABLE C1** Summary statistics and unit root statistics.

Variable	Summary statistics							Unit root statistics		
	1	2	3	4	5	6	7	BRE	IPS	Inference
<i>Sample 1: LICs</i>										
CBH	0.512	0.653	0.301	0.077	-0.411	2.604	13.84*	-7.46*	-7.00*	I [1]
CBE	0.473	0.653	0.176	0.086	-0.814	3.989	60.28*	-5.49*	-6.88*	I [1]
CDP	0.480	0.699	0.001	0.145	-1.137	4.102	106.1*	-7.85*	-7.07*	I [1]
CEM	0.508	0.653	0.001	0.106	-1.183	8.210	669.9*	-6.41*	-5.71*	I [1]
CER	0.503	0.653	0.001	0.069	-0.670	2.962	29.92*	-8.20*	-9.21*	I [1]
CFS	0.436	0.544	0.001	0.089	-2.211	11.17	143.6*	-5.82*	-5.57*	I [1]
CMM	0.535	0.653	0.001	0.107	-2.146	9.445	996.8*	-6.14*	-4.52*	I [1]
CQF	0.478	0.653	0.001	0.105	-1.160	5.780	217.9*	-3.62*	-6.53*	I [1]
CQP	0.439	0.653	0.001	0.082	-1.423	7.921	537.2*	-8.93*	-10.5*	I [1]
CTP	0.403	0.544	0.176	0.097	-0.485	2.583	18.56*	-10.6*	-6.47*	I [1]
CIQ	1.199	1.302	0.628	0.082	-2.807	16.99	377.9*	-6.97*	-4.89*	I [1]
CBD	0.823	1.063	-0.367	0.163	-2.854	16.38	351.9*	-5.78*	-9.84*	I [1]
CSD	-0.43	0.640	-0.039	0.155	-0.713	3.387	8.369*	-3.62*	-2.84*	I [1]
CFD	1.371	1.579	-0.523	0.240	-5.350	34.32	182.1*	-3.94*	-7.19*	I [1]
PEG	1.692	1.820	-0.387	0.115	-15.39	27.29	1227.0*	-15.5*	-20.1*	I [1]
<i>Sample 2: LMICs</i>										
CBH	0.562	0.653	0.398	0.076	-0.944	2.953	16.07*	-6.91*	-6.61*	I [1]
CBE	0.544	0.653	0.477	0.052	0.077	1.962	4.961***	-7.17*	-8.43*	I [1]
CDP	0.599	0.699	0.001	0.122	-1.703	6.884	573.9*	-6.16*	-5.25*	I [1]
CEM	0.534	0.669	0.001	0.091	-2.093	11.38	188.6*	-6.03*	-5.39*	I [1]
CER	0.539	0.653	0.398	0.058	-0.672	3.039	38.85*	-5.75*	-5.93*	I [1]
CFS	0.477	0.653	0.001	0.082	-0.753	4.927	129.9*	-8.09*	-6.17*	I [1]
CMM	0.552	0.653	0.001	0.091	-2.042	12.01	210.5*	-6.76*	-9.19*	I [1]
CQF	0.501	0.653	0.176	0.073	-1.203	5.535	262.6*	-6.86*	-8.88*	I [1]
CQP	0.463	0.602	0.001	0.076	-0.889	5.933	252.9*	-2.34*	-4.62*	I [1]
CTP	0.457	0.653	0.001	0.098	-0.791	5.570	195.8*	-7.09*	-5.52*	I [1]
CIQ	1.228	1.313	0.542	0.067	-3.644	29.59	163.4*	-5.07*	-5.97*	I [1]
CBD	0.900	1.120	-0.324	0.143	-3.549	27.00	161.8*	-2.32*	-10.4*	I [1]
CSD	0.539	0.872	-0.364	0.250	-1.378	4.921	78.51*	-2.87*	-4.44*	I [1]
CFD	1.461	1.672	-0.480	0.181	-7.135	66.60	109.7*	-3.32*	-7.74*	I [1]
PEG	1.704	1.823	1.470	0.030	-0.566	9.183	1111*	-13.5*	-18.2*	I [1]
<i>Sample 3: LMICs and LICs</i>										
CBH	0.531	0.653	0.001	0.084	-1.166	6.386	673.9*	-10.6*	-9.75*	I [1]
CBE	0.477	0.653	0.001	0.096	-1.363	6.187	701.4*	-8.85*	-10.8*	I [1]
CDP	0.506	0.699	0.001	0.139	-1.448	5.255	537.3*	-9.71*	-8.58*	I [1]

**TABLE C1** (Continued)

Variable	Summary statistics							Unit root statistics		
	1	2	3	4	5	6	7	BRE	IPS	Inference
CEM	0.519	0.669	0.001	0.102	-1.928	8.869	1967*	-8.77*	-7.72*	I [1]
CER	0.523	0.653	0.301	0.066	-0.731	3.198	86.89*	-9.94*	-10.5*	I [1]
CFS	0.455	0.653	0.001	0.094	-1.684	9.019	1897*	-9.91*	-8.27*	I [1]
CMM	0.541	0.740	0.001	0.103	-2.047	9.663	2438*	-9.13*	-9.69*	I [1]
CQF	0.489	0.653	0.001	0.091	-1.330	6.377	736.9*	-7.23*	-10.9*	I [1]
CQP	0.452	0.602	0.001	0.081	-1.124	6.739	759.1*	-7.52*	-11.1**	I [1]
CTP	0.429	0.653	0.001	0.104	-0.603	3.769	81.52*	-12.4*	-8.58*	I [1]
CIQ	1.213	1.313	0.542	0.079	-2.920	18.10	10455*	-8.39*	-7.71*	I [1]
CBD	0.876	1.151	-0.367	0.160	-2.840	18.44	10256*	-4.98*	-14.3*	I [1]
CSD	0.519	0.872	-0.364	0.239	-1.187	4.620	70.20*	-2.19*	-5.09*	I [1]
CFD	1.432	1.672	-0.523	0.209	-5.974	46.61	91075*	-2.39*	-10.6*	I [1]
PEG	1.699	1.823	-0.388	0.073	-20.92	583.1	16701*	-20.1*	-26.8*	I [1]

Note: 1–7 are the mean, maximum, minimum, standard deviation, skewness, Kurtosis and Jarque–Bera statistics. IPS refers to the Im-Pesaran-Shin statistics and BRE to the Breitung statistics. \*\*\*, \*\* and \* are significant at the 10%, 5% and 1% levels, respectively. All notations are as described in the text.

## APPENDIX D: RESULTS FROM THE PEDRONI PANEL COINTEGRATION TEST

See Table D1.

**TABLE D1** Empirical results of the cointegration test for cointegration between INQ, CBD and PEG.

Sample 1: LICs									
Cases	Panel-statistics				Group-statistics			Inference	
	v-	rho-	PP-	ADF-	rho-	PP-	ADF-		
Case 1	-32.12	-1.683	-9.130*	-1.139	0.649	-4.229*	0.679	Cointegrated	
Case 2	-18.28	-1.270	-5.717*	0.662	0.294	-3.939*	-0.276	Cointegrated	
Case 3	-4.921	1.638	-1.434**	5.879	0.972	-4.771*	-0.214	Cointegrated	
Case 4	-2.058	1.032	-1.389**	5.290	1.263	-4.494*	-0.379	Cointegrated	
Case 5	-37.37	-0.434	-2.564*	-2.617	1.310	-4.439*	-5.666*	Cointegrated	
Case 6	-34.90	0.926	-1.892*	-1.619**	0.699	-4.475*	-1.569	Cointegrated	
Case 7	-14.36	0.985	-2.063*	5.164	0.219	-5.939*	-0.370	Cointegrated	
Case 8	-5.237	0.852	-2.669*	5.234	0.215	-8.464*	-2.811*	Cointegrated	
Case 9	-26.34	1.269	0.707	5.312	-0.169	-6.405*	-3.271*	Cointegrated	
Case 10	-15.67	-0.747	-5.383*	-3.987*	0.596	-5.094*	-2.239*	Cointegrated	
Case 11	1.963	-2.024	-10.49*	-0.783	0.731	-9.779*	-3.452*	Cointegrated	
Sample 2: LMICs									
	v-	rho-	PP-	ADF-	rho-	PP-	ADF-	Inference	
Case 1	-3.796	-1.33**	-2.29**	-1.249	1.175	-4.192*	-3.218*	Cointegrated	
Case 2	-5.005	-1.710*	-4.089*	-1.439*	-0.146	-6.635*	-4.016*	Cointegrated	
Case 3	-15.56	-2.618*	-5.503*	-3.973*	0.873	-6.549*	-3.652*	Cointegrated	
Case 4	-4.422	-2.895*	-6.178*	-8.455*	1.302	-5.723*	-5.005*	Cointegrated	
Case 5	-3.538	1.677	1.971	-4.023*	0.136	-5.805*	-1819**	Cointegrated	
Case 6	-3.698	-0.779	-2.298*	-5.469*	0.607	-5.053*	-4.208*	Cointegrated	

**TABLE D1** (Continued)

Sample 2: LMICs								
	v-	rho-	PP-	ADF-	rho-	PP-	ADF-	Inference
Case 7	-4.053	-2.333*	-4.407*	-5.055*	-0.237	-7.191*	-4.809*	Cointegrated
Case 8	-4.043	-1.22***	-3.166*	-7.761*	0.340	-8.379*	-5.082*	Cointegrated
Case 9	-3.628	-2.018*	-4.848*	-6.922*	0.745	-5.883*	-1.263***	Cointegrated
Case 10	-3.882	0.446	2.059	0.585	0.762	-5.661*	-2.481*	Cointegrated
Case 11	-3.656	0.838	-2.15**	-0.655	0.378	-8.097*	-3.510*	Cointegrated
Sample 3: LICs and LMICs								
	v-	rho-	PP-	ADF-	rho-	PP-	ADF-	Inference
Case 1	0.227	-0.90***	-17.9*	-2.441*	1.511	-15.44*	-5.564*	Cointegrated
Case 2	-2.054	2.876	-15.94*	-3.213*	4.928	-17.70*	-6.671*	Cointegrated
Case 3	-17.69	2.916	-15.41*	-4.493*	4.919	-19.84*	-8.824*	Cointegrated
Case 4	-2.121	2.610	-15.53*	-1.468*	5.141	-19.63*	-9.284*	Cointegrated
Case 5	-15.61	0.795	-8.714*	-2.234*	3.848	-15.03*	-5.794*	Cointegrated
Case 6	-1.247	2.695	-13.72*	-1.145*	5.261	-19.04*	-7.293*	Cointegrated
Case 7	-1.940	2.450	-15.03*	-1.342*	4.284	-17.90*	-5.167*	Cointegrated
Case 8	-1.981	2.448	-14.97*	-2.019*	4.727	-17.45*	-6.899*	Cointegrated
Case 9	-16.34	2.829	-14.53*	-11.01*	5.349	-12.07*	-6.253*	Cointegrated
Case 10	-1.371	2.604	-15.36*	-3.438*	4.672	-17.21*	-4.527*	Cointegrated
Case 11	4.312	3.946	-6.396*	-6.017*	5.334	-19.09*	-7.583*	Cointegrated

Note: INQ refers to CBH, CBE, CDP, CEM, CER, CFS, CQP, CMM, CTP, CQF or CIQ.

**TABLE D2** Empirical results of cointegration test for cointegration between INQ, CSD and PEG.

Sample 2: LMICs								
	v-	Rho-	PP-	ADF-	Rho-	PP-	ADF-	Inference
Case 1	-1.634	-0.511	-2.048*	-2.336*	0.581	-2.580*	-3.120*	Cointegrated
Case 2	-1.875	1.077	1.037	1.175	1.482	-1.48***	-1.849**	Cointegrated
Case 3	-2.618	0.218	0.393	0.241	0.448	-2.13**	-1.681**	Cointegrated
Case 4	-2.307	0.760	0.182	-0.346	2.360	1.231	-1.719**	Cointegrated
Case 5	-1.316	-0.279	0.449	0.335	0.486	0.848	-1.739**	Cointegrated
Case 6	-2.181	1.216	1.194	0.871	1.676	-0.587	-1.515**	Cointegrated
Case 7	-2.182	0.863	-0.044	-1.194***	1.952	0.004	-3.478*	Cointegrated
Case 8	-1.531	0.832	0.668	0.669	1.162	0.275	-1.711**	Cointegrated
Case 9	-1.882	0.235	-0.547	-1.936*	0.293	-1.85**	-1.903**	Cointegrated
Case 10	-1.540	0.105	-0.257	-0.271	0.909	-2.284*	-3.398*	Cointegrated
Case 11	-1.802	1.629	2.112	-1.541*	1.748	-1.96**	-2.956*	Cointegrated
Sample 3: LICs and LMICs								
	v-	rho-	PP-	ADF-	rho-	PP-	ADF-	Inference
Case 1	-4.697	-0.419	-2.46**	-2.395*	0.581	-2.580*	-3.120*	Cointegrated
Case 2	-2.510	0.439	-0.369	-0.623	1.418	-0.471	-1.849**	Cointegrated
Case 3	-8.322	-0.145	-1.383	-1.277	0.448	-2.129*	-1.681*	Cointegrated
Case 4	-2.217	0.671	-0.111	-0.661	2.360	1.231	-1.192***	Cointegrated
Case 5	-9.071	0.058	0.108	-0.004	0.486	0.849	-1.739***	Cointegrated
Case 6	-5.213	0.822	0.386	0.260	1.676	-0.587	-0.515	Cointegrated
Case 7	-3.142	0.820	-0.034	-1.310***	1.952	0.037	-3.478*	Cointegrated
Case 8	-4.601	-0.096	-0.618	0.073	1.162	0.275	1.701***	Cointegrated
Case 9	-2.339	-0.186	-0.922	0.253	0.293	-1.847**	1.904	Cointegrated
Case 10	-4.762	0.054	-0.581	-0.826	0.909	-2.284*	-3.397*	Cointegrated
Case 11	-0.143	0.133	-1.836	-2.101	1.748	-1.96**	-2.96*	Cointegrated

Note: The results for Sample 1 (LICs) are not available here, because the sample size was too small.

**TABLE D3** Empirical results of cointegration test for cointegration between INQ, CFD and PEG.

Sample 1: LICs								
Case	Panel-statistics				Group-statistics			
	v-	rho-	PP-	ADF-	rho-	PP-	ADF-	Inference
Case 1	-35.59	-1.975	-10.40*	-2.934*	1.068	-5.385*	-2.168**	Cointegrated
Case 2	-20.19	-1.163	-6.756*	-1.126	0.538	-5.242*	-2.631*	Cointegrated
Case 3	-5.204	1.992	0.917	3.679	1.334	-5.632*	-1.807**	Cointegrated
Case 4	-2.266	1.692	-1.935**	-1.140	0.866	-5.544*	-1.925**	Cointegrated
Case 5	-7.316	-1.118	-3.503*	-1.727	1.448	-3.837*	-1.484***	Cointegrated
Case 6	-36.96	1.567	0.045	5.266	1.176	-4.059*	-1.732**	Cointegrated
Case 7	-12.91	1.958	1.559	7.234	0.054	-7.115*	-1.871**	Cointegrated
Case 8	-4.973	1.842	1.295	-1.371***	1.063	-5.791*	-1.884***	Cointegrated
Case 9	-31.99	-1.615**	-2.985*	3.382	-0.149	-6.634*	-2.948*	Cointegrated
Case 10	-18.93	-1.611**	-7.523*	-3.339*	0.409	-6.374*	-3.360*	Cointegrated
Case 11	2.818	-2.22***	-12.34*	-1.991**	-0.165	-9.014*	-3.685*	Cointegrated
Sample 2: LMICs								
Case	v-	rho-	PP-	ADF-	rho-	PP-	ADF-	Inference
Case 1	-3.756	0.764	-0.781	-1.507***	1.792	-4.666*	-3.921*	Cointegrated
Case 2	-3.206	-0.616	-3.017*	-2.653*	0.574	-6.649*	-5.303*	Cointegrated
Case 3	-3.833	-0.272	-2.619*	-1.991*	1.926	-4.637*	-4.403*	Cointegrated
Case 4	-4.167	-0.546	-3.224*	-2.238*	1.618	-4.348*	-4.972*	Cointegrated
Case 5	-3.103	-1.68**	-5.221*	-2.564*	-0.612	-6.484*	-2.722*	Cointegrated
Case 6	-3.632	0.153	-1.4***	-2.273*	1.206	-4.817*	-4.271*	Cointegrated
Case 7	-3.667	-1.019	-3.587*	-2.553*	0.766	-4.842*	-3.207*	Cointegrated
Case 8	-3.662	-0.701	-1.819**	-0.040	1.217	-4.718*	-2.151*	Cointegrated
Case 9	-3.316	-0.031	-1.4***	-1.438***	1.161	-5.187*	-1.156***	Cointegrated
Case 10	-3.490	0.665	-0.489	-0.166	1.169	-4.979*	-3.829*	Cointegrated
Case 11	-3.378	-0.803	-4.351*	-2.926*	1.042	-6.988*	-5.322*	Cointegrated
Sample 3: LICs and LMICs								
Case	v-	rho-	PP-	ADF-	rho-	PP-	ADF-	Inference
Case 1	-12.79	-2.543	-13.79*	-3.784*	2.044	-7.077*	-4.357*	Cointegrated
Case 2	-10.57*	-1.7***	-9.384*	-2.212***	0.787	-8.426*	-5.644*	Cointegrated
Case 3	-2.628	2.737	1.134*	-4.994*	2.318	-7.234*	-4.449*	Cointegrated
Case 4	-3.417	2.429	1.371*	-8.425*	1.783	-6.939*	-4.988*	Cointegrated
Case 5	-1.923	-1.458	-4.564*	-2.051***	0.573	-7.320*	-2.985*	Cointegrated
Case 6	-10.49	2.242	-0.073	7.469	1.680	-6.299*	-4.386*	Cointegrated
Case 7	-4.267	2.703	2.090	9.718	0.602	-8.373*	-3.629*	Cointegrated
Case 8	-3.865	2.399	1.657	8.969***	1.612	-7.380*	-2.288*	Cointegrated
Case 9	-11.7	-0.22	-2.221*	4.668	0.736	-8.333*	-2.800*	Cointegrated
Case 10	-11.3	-2.125	-10.3*	-0.51*	1.12	-8.028*	-5.083*	Cointegrated
Case 11	4.087	-3.239*	-17.1*	-2.592*	0.665	-11.22*	-6.422*	Cointegrated

Note: All notations are as described in the text.

**APPENDIX E: FULLY MODIFIED ORDINARY LEAST SQUARES, DYNAMIC ORDINARY LEAST SQUARES AND GMM ESTIMATION RESULTS**

**TABLE E1** Fully modified ordinary least squares estimation results.

Dependent variable: Per capita economic growth (PEG)											
IVs:	CBH	CBE	CDP	CEM	CER	CFS	CMM	CQF	CQP	CTP	CIQ
<i>Specification 1: INQ, CBD and PEG</i>											
Sample 1: LICs											
CBD	0.98*	0.98*	1.72*	1.22*	0.82*	1.13*	1.13*	1.41*	1.22*	1.48*	1.14*
INQ	1.72*	1.80*	0.48*	1.26*	1.99*	1.78*	1.37*	1.02*	1.47*	1.06*	1.51*
Sample 2: LMICs											
CBD	1.02*	1.53*	1.64*	1.22*	0.66*	1.38*	1.07*	1.13*	1.43*	1.58*	1.02*
INQ	1.38*	0.65*	0.38*	1.10*	1.98*	0.88*	1.30*	1.32*	0.88*	0.55*	1.40*
Sample 3: LICs + LMICs											
CBD	1.03*	1.20*	1.73*	1.26*	0.85*	1.36*	1.11*	1.30*	1.30*	1.59*	1.14*
INQ	1.48*	1.32*	0.33**	1.11*	1.79*	1.07*	1.30*	1.11*	1.27*	0.68*	1.49*
<i>Specification 2: INQ, CSD and PEG</i>											
Sample 2: LMICs											
CSD	0.56*	0.41*	0.30*	0.21*	0.52*	0.68*	0.63*	0.61*	0.30*	0.49*	0.37*
INQ	2.44*	2.44*	2.39*	2.65*	2.82*	2.34*	2.20*	2.02*	2.22*	2.97*	2.38*
Sample 3: LICs + LMICs											
CSD	0.56*	0.41*	0.31*	0.21***	0.52***	0.67*	0.39*	0.61*	0.30*	0.49*	0.37*
INQ	2.45*	2.44*	2.39*	2.65*	2.82*	2.34*	2.66*	2.02*	2.22*	2.97*	1.38*
<i>Specification 3: INQ, CFD and PEG</i>											
Sample 1: LICs											
CFD	0.75*	0.76*	1.10*	0.93*	0.80*	0.84*	0.88*	0.99*	0.89*	0.97*	0.97*
INQ	1.29*	1.30*	0.32***	0.75*	1.15*	1.21*	0.84*	0.59*	0.99*	0.79*	1.49*
Sample 2: LMICs											
CFD	1.12*	1.11*	1.06*	0.89*	1.08*	1.12*	0.92*	1.04*	0.99*	1.08*	0.88*
INQ	0.13**	0.13**	0.23*	0.68*	0.19***	0.11	0.59*	0.35*	0.53*	0.18*	1.04*
Sample 3: LICs + LMICs											
CFD	1.08*	1.01*	0.84*	0.84*	1.07*	1.00*	0.85*	0.96*	0.88*	1.03*	0.96*
INQ	0.27*	0.56*	1.80*	1.03*	0.31*	0.56*	0.96*	0.72*	1.00*	0.52*	1.08*

Note: The results for Sample 1 for Specification 2 are not available because the sample size was too small. Hence, results are not reported. All notations are as described in the text.

**TABLE E2** Dynamic ordinary least squares estimation results.

Dependent variable: Per capita economic growth (PEG)											
IVs:	CBH	CBE	CDP	CEM	CER	CFS	CMM	CQF	CQP	CTP	CIQ
<i>Specification 1: INQ, CBD and PEG</i>											
Sample 1: LICs											
CBD	1.41*	1.10*	1.64*	1.16*	0.89*	1.58*	1.30*	1.60*	1.45*	1.80*	0.89*
INQ	0.93*	1.59*	0.51*	1.29*	1.85*	0.79*	1.02*	0.56**	0.99*	0.29***	1.34*
Sample 2: LMICs											
CBD	0.93*	1.63*	1.38*	1.09*	0.41*	1.31*	1.20*	1.27*	1.34*	1.65*	1.04*
INQ	1.50*	0.46*	0.81*	1.30*	2.34*	0.97*	1.09*	1.02*	1.09*	0.39***	1.40*
Sample 3: LICs + LMICs											
CBD	0.75*	1.30*	1.63*	0.75*	1.63*	1.57*	1.20*	1.46*	1.40*	1.78*	1.28*
INQ	1.82*	1.14*	0.47*	1.88*	0.43*	0.62*	1.12*	0.75*	1.05*	0.23*	1.18*
<i>Specification 2: INQ, CSD, PEG</i>											
Sample 2: LMICs											
CSD	0.46***	0.32***	0.17***	0.57*	0.46*	0.13***	0.84*	0.47**	0.19***	0.42***	0.24**
INQ	2.66*	2.45*	2.73*	2.55*	2.76*	2.12*	2.33*	2.47*	2.67*	2.54*	1.36*
Sample 3: LICs + LMICs											
CSD	0.34*	0.24*	0.77*	0.62*	0.46*	0.30*	1.57*	0.47*	0.38*	0.41*	1.46*
INQ	2.78*	2.89*	2.08*	2.47*	2.76*	2.92*	1.65*	2.47*	2.47*	2.54*	2.63*
<i>Specification 3: INQ, CFD and PEG</i>											
Sample 1: LICs											
CFD	1.06*	1.01*	1.09*	0.94*	1.12*	1.12*	1.01*	1.16*	1.12*	1.21*	0.94*
INQ	0.38*	0.53*	0.26*	0.53*	0.24**	0.25**	0.47*	0.25***	0.21*	0.29***	0.87*
Sample 2: LMICs											
CFD	1.13*	0.65*	1.14*	1.05*	0.83*	1.22*	0.96*	1.08*	1.06*	1.14*	0.84*
INQ	0.18***	1.49*	0.27***	0.27**	0.82*	0.18**	0.50*	0.20***	0.34*	0.17***	0.86*

(Continues)

**TABLE E2** (Continued)

Dependent variable: Per capita economic growth (PEG)											
IVs:	CBH	CBE	CDP	CEM	CER	CFS	CMM	CQF	CQP	CTP	CIQ
Sample 3: LICs + LMICs											
CFD	1.11*	1.13	1.12*	1.01*	1.15*	1.18*	1.01*	0.97*	1.16*	1.26*	1.11*
INQ	0.19***	0.15***	0.14***	0.44*	0.19***	0.25***	0.39*	0.60*	0.15*	0.19***	0.89*

Note: The results for Sample 1 for Specification 2 are not available because the sample size was too small. Hence, results are not reported. All notations are as described in the text.

**TABLE E3** GMM estimation results.

Dependent variable: Per capita economic growth (PEG)											
IVs:	CBH	CBE	CDP	CEM	CER	CFS	CMM	CQF	CQP	CTP	CIQ
<i>Specification 1: INQ, CBD and PEG</i>											
Sample 1: LICs											
CBD	0.66*	0.88*	1.63*	1.05*	0.48*	1.09*	0.97*	1.17*	0.92*	1.29*	1.15*
INQ	2.19*	1.97*	0.60*	1.53*	2.53*	1.73*	1.58*	1.43*	2.05*	1.44*	1.51*
Sample 2: LMICs											
CBD	1.15*	1.44*	1.58*	1.16*	0.81*	1.38*	1.20*	1.07*	1.28*	1.50*	1.01*
INQ	1.19*	0.80*	0.48*	1.20*	1.79*	0.93*	1.09*	1.31*	1.15*	0.73*	1.38*
Sample 3: LICs + LMICs											
CBD	0.84*	1.14*	1.61*	1.08*	0.58*	1.21*	1.00*	1.13*	1.05*	1.42*	1.11*
INQ	1.77*	1.41*	0.52*	1.40*	2.25*	1.35*	1.47*	1.41*	1.69*	1.01*	1.47*
<i>Specification 2: INQ, CSD and PEG</i>											
Sample 2: LMICs											
CSD	0.09**	0.01**	0.05**	0.05***	0.15*	0.13**	0.20*	0.15*	0.03**	0.19*	0.03**
INQ	3.08*	3.11*	2.81*	2.92*	2.99*	2.12*	2.78*	3.34*	3.42*	3.36*	2.37*
Sample 3: LICs + LMICs											
CSD	0.09***	0.01*	0.05*	0.05*	0.15*	0.01*	0.20*	0.15*	0.03**	0.19*	0.03*
INQ	3.08*	3.11*	2.81*	2.92*	2.99*	3.17*	2.78*	3.34*	3.42*	3.36*	3.37*
<i>Specification 3: INQ, CFD and PEG</i>											
Sample 1: LICs											
CFD	0.47*	0.60*	1.00*	0.72*	0.38*	0.73*	0.68*	0.78*	0.62*	0.82*	0.73*
INQ	1.99*	1.76*	0.56*	1.29*	2.29*	1.50*	1.34*	1.23*	1.85*	1.30*	1.55*
Sample 2: LMICs											
CFD	0.99*	1.04*	1.10*	0.97*	0.84*	1.06*	0.99*	0.97*	1.01*	1.06*	0.23*
INQ	0.47*	0.37*	0.18*	0.53*	0.86*	0.31*	0.68*	0.54*	0.47*	0.32*	1.11*

(Continues)

**TABLE E3** (Continued)

Dependent variable: Per capita economic growth (PEG)											
IVs:	CBH	CBE	CDP	CEM	CER	CFS	CMM	CQF	CQP	CTP	CIQ
Sample 3: LICs + LMICs											
CFD	0.66*	0.82*	1.05*	0.83*	0.54*	0.88*	0.78*	0.84*	0.78*	0.95*	1.04*
INQ	1.39*	1.06*	0.36*	0.95*	1.76*	0.92*	1.04*	0.97*	1.25*	0.74*	1.45*

Note: The results for Sample 1 for Specification 2 are not available because the sample size was too small. Hence, results are not reported. All notations are as described in the text.

**TABLE E4** Quantile-on-quantile regression estimation results.

Dependent variable: Per capita economic growth (PEG)											
IVs:	CBH	CBE	CDP	CEM	CER	CFS	CMM	CQF	CQP	CTP	CIQ
<i>Specification 1: INQ, CBD and PEG</i>											
Sample 1: LICs											
CBD	0.84*	1.16*	1.72*	1.19*	0.85*	1.18*	1.02*	1.41*	1.22*	1.64*	1.27*
INQ	1.83*	1.44*	0.44*	1.27*	1.86*	1.50*	1.46*	1.01*	1.49*	0.69*	1.37*
Sample 2: LMICs											
CBD	1.27*	1.39*	1.54*	1.23*	0.87*	1.43*	1.14*	1.09*	1.35*	1.52*	1.40*
INQ	1.00*	0.83*	0.54*	1.08*	1.67*	0.82*	1.16*	1.38*	1.00*	0.68*	1.39*
Sample 3: LICs + LMICs											
CBD	1.05*	1.21*	1.67*	1.18*	0.80*	1.37*	1.08*	1.24*	1.29*	1.67*	1.41*
INQ	1.42*	1.25*	0.42*	1.21*	1.83*	1.03*	1.31*	1.16*	1.20*	0.47*	1.48*
<i>Specification 2: INQ, CSD and PEG</i>											
Sample 2: LMICs											
CSD	0.02**	0.03**	0.04**	0.05**	0.03*	0.02**	0.03*	0.03*	0.19**	0.03**	0.06**
INQ	2.85*	3.13*	2.81*	2.90*	3.12*	3.16*	2.83*	3.17*	3.50*	3.56*	2.39*
Sample 3: LICs + LMICs											
CSD	0.02**	0.03*	0.04*	0.03*	0.03*	0.02*	0.03*	0.03*	0.19*	0.03*	0.06*
INQ	2.85*	3.13*	2.81*	2.90*	3.12*	3.16*	2.83*	3.17*	3.50*	3.56*	3.39*
<i>Specification 3: INQ, CFD and PEG</i>											
Sample 1: LICs											
CFD	0.98*	1.01*	1.12*	1.01*	0.96*	1.06*	0.89*	1.09*	1.02*	1.14*	1.18*
INQ	0.60*	0.55*	0.22*	0.52*	0.65*	0.46*	0.53*	0.32*	0.56*	0.23*	1.19*
Sample 2: LMICs											
CFD	1.16*	1.13*	1.18*	1.10*	0.97*	1.20*	0.96*	1.09*	1.16*	1.16*	1.26*
INQ	0.12*	0.11*	0.10*	0.22*	0.52*	0.11*	0.54*	0.22*	0.12*	0.13*	1.07*
Sample 3: LICs + LMICs											
CFD	1.06*	1.08*	1.15*	1.03*	0.99*	1.11*	0.98*	1.06*	1.09*	1.18*	1.18*
INQ	0.32*	0.30*	0.37*	0.42*	0.50*	0.21*	0.53*	0.33*	0.30*	0.35*	1.17*

Note: The results for Sample 1 for Specification 2 are not available, because the sample size was too small. Hence, results are not reported. All notations are as described in the text.