Economics and Business Letters
14(3), 126-133, 2025

The output effects of reforms: empirical evidence from 90 countries

Christos Mavrogiannis[1] • **Athanasios Tagkalakis**[2]

[1] *European Central Bank and University of Patras, Greece*
[2] *Bank of Greece and University of Patras, Greece*

Received: 23 September 2024
Revised: 19 January 2025
Accepted: 10 February 2025

Supplementary material

Appendix A

Country coverage of the Structural Reforms Database (SRD) as provided by Alesina et al. (2024):

Albania, Algeria, Argentina, Australia, Austria, Azerbaijan, Bangladesh, Belarus, Belgium, Bolivia, Botswana, Brazil, Bulgaria, Burkina Faso, Cameroon, Canada, Chile, China, Colombia, Costa Rica, Côte d'Ivoire, Czech Republic, Denmark, Dominican Republic, Ecuador, Egypt, El Salvador, Estonia, Ethiopia, Finland, France, Georgia, Germany, Ghana, Greece, Guatemala, Honduras, Hong Kong SAR, Hungary, India, Indonesia, Ireland, Israel, Italy, Jamaica, Japan, Jordan, Kazakhstan, Kenya, Korea, Kyrgyz Republic, Latvia, Lesotho, Lithuania, Madagascar, Malawi, Malaysia, Mexico, Morocco, Mozambique, Namibia, Nepal, Netherlands, New Zealand, Nicaragua, Nigeria, Norway, Pakistan, Paraguay, Peru, Philippines, Poland, Portugal, Romania, Russia, Senegal, Singapore, South Africa, Spain, Sri Lanka, Swaziland, Sweden, Switzerland, Tanzania, Thailand, Tunisia, Turkey, Uganda, Ukraine, United Kingdom, United States, Uruguay, Uzbekistan, Venezuela, Vietnam, Zambia, Zimbabwe.

Advanced countries:

Australia, Austria, Belgium, Canada, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hong Kong SAR, Ireland, Israel, Italy, Japan, Latvia, Lithuania, Netherlands, New Zealand, Norway, Portugal, Singapore, South Korea, Spain, Sweden, Switzerland, United Kingdom, United States

Emerging countries:

Albania, Algeria, Argentina, Azerbaijan, Burkina Faso, Bangladesh, Bulgaria, Belarus, Bolivia Brazil, Chile, China, Cote d'Ivoire, Cameroon, Colombia, Costa Rica, Dominican Republic, Ecuador, Egypt, El Salvador, Ethiopia, Georgia Ghana, Guatemala, Hungary Indonesia, India, Jamaica, Jordan, Kazakhstan, Kenya, Sri Lanka, Morocco, Madagascar, Mexico, Mozambique, Malaysia, Nigeria, Nicaragua, Nepal, Pakistan, Peru, Philippines, Poland, Paraguay, Russia, Romania, Thailand, Tunisia, Turkiye, Tanzania, Uganda, Ukraine, Uruguay, Uzbekistan, Venezuela, Viet Nam, South Africa, Zimbabwe

Low to lower middle-income countries:

Algeria, Burkina Faso, Bangladesh, Bolivia, Cote d'Ivoire, Cameroon, Egypt, Ethiopia, Ghana, India, Jordan, Kenya, Kyrgyz Republic, Morocco, Madagascar, Mozambique, Nigeria, Nicaragua, Nepal, Pakistan, Philippines, Sri Lanka, Senegal, Tunisia, Tanzania, Uganda, Ukraine, Uzbekistan, Viet Nam

Table A1. Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
Real GDP in million usd	3534	649521.55	1682597.5	4638.593	18215924
Human capital index	3434	2.317	.721	1.009	3.734
Employment in millions	3518	25.388	82.38	.379	794.646
Output gap in millions	3534	-14345.023	237130.12	-8689270	1787160
Capital stock	3534	2586322.3	6272915.9	4007.133	64118472
KOF index	3472	56.654	17.286	15.78	91.11
Chinn Ito index	3342	.49	.37	0	1
Trade as % of GDP	3362	68.871	51.268	6.32	442.62
Years in office	3351	6.287	6.934	1	46
Elections	3356	.107	.31	0	1
Political ideology	3516	1.4	1.256	0	3
Gross capital formation	3287	23.528	7.075	-5.74	57.99
Reform	3690	.111	.314	0	1
Counter reform	3690	.049	.215	0	1

Table A2. Balance test of covariates in treatment and control group.

	(1) All countries	(2) Advanced	(3) Emerging	(4) Low to lower-middle income
d.Human capital (t-1)	-0.023	-0.063	0.101^{***}	0.168^{***}
	(-0.62)	(-1.38)	(2.83)	(3.49)
d.Human capital (t-2)	-0.032	-0.067	0.093^{***}	0.149^{***}
	(-0.85)	(-1.44)	(2.64)	(3.11)
d.Employment (t-1)	-0.002^{**}	-0.004^{*}	-0.003^{**}	-0.000
	(-1.95)	(-1.82)	(-2.12)	(0.001)
d.Employment (t-2)	-0.002^{*}	-0.004^{**}	-0.002	-0.004^{**}
	(-1.82)	(-2.09)	(-1.63)	(-2.33)
d.Capital (t-1)	-0.003^{**}	0.000	-0.005^{***}	-0.006^{**}
	(-2.18)	(0.36)	(-2.99)	(-2.02)
d.Capital (t-2)	-0.003^{**}	0.001	-0.005^{***}	-0.006^{**}
	(-2.06)	(0.51)	(-2.88)	(-2.28)
KOF Index (t-1)	-2.09^{**}	-3.81^{***}	1.373	3.97^{***}
	(-2.26)	(-3.43_	(1.66)	(3.53)
KOF Index (t-2)	-2.42^{***}	-4.12^{***}	1.042	3.61^{***}
	(-2.61)	(-3.67)	(1.26)	(3.24)
Observations	3443	1121	2,274	1135

Table A3. Post weighting balance test.

	(1) All countries	(2) Advanced	(3) Emerging	(4) Low to lower-middle income
d.Human capital (t-1)	-0.052	-0.027	0.016	-0.029
	(-0.97)	(-0.48)	(0.30)	(-0.42)
d.Human capital (t-2)	-0.053	-0.028	0.016	-0.031
	(-0.99)	(-0.49)	(0.28)	(-0.46)
d.Employment (t-1)	-0.001	0.002	0.000	0.002
	(-0.64)	(0.91)	(0.37)	(1.19)
d.Employment (t-2)	-0.003	0.000	-0.004	-0.003
	(-1.18)	(0.34)	(-1.00)	(-0.71)
d.Capital (t-1)	0.000	0.007	-0.000	-0.000
	(0.34)	(1.42)	(-0.19)	(-0.23)
d.Capital (t-2)	-0.000	0.006	-0.002	-0.002
	(-0.02)	(1.40)	(-0.88)	(-0.76)
KOF Index (t-1)	-1.16	-6.288	0.448	-0.410
	(-0.71)	(-1.58)	(0.29)	(-0.20)
KOF Index (t-2)	-1.207	-6.22	0.309	-0.728
	(-0.70)	(-1.60)	(0.19)	(-0.33)
Observations	2630	913	1731	911

Table A4. Number of reform shocks per country group

	(1) All countries	(2) Advanced	(3) Emerging	(4) Low to lower-middle income
Reform				
1	561	120	310	131
0	3129	1069	2150	1058
Total	3690	1189	2460	1189
Counter reform				
1	251	51	130	70
0	3504	1138	2325	1119
Total	3690	1189	2460	1189

Table A5. Marginal effects of predictors on liberalization reform treatment

	(1) All countries	(2) Advanced	(3) Emerging	(4) Low to lower middle income
L. dy	-0.403*	0.977	-0.582*	-1.327*
	(0.230)	(0.717)	(0.341)	(0.805)
L2. dy	0.511	-1.935**	0.856*	1.318
	(0.403)	(0.963)	(0.514)	(1.114)
L3. dy	-0.085	0.653	-0.186	0.533
	(0.398)	(0.952)	(0.473)	(0.719)
L4. dy	0.136	0.971	0.095	0.597
	(0.359)	(0.937)	(0.427)	(0.803)
L5. dy	-0.047	-0.270	-0.023	-1.186*
	(0.319)	(0.891)	(0.396)	(0.623)
L6. dy	-0.110	-0.597	-0.070	0.372
	(0.172)	(0.658)	(0.215)	(0.363)
L. Output gap	-0.047	-0.559	0.122	0.247
	(0.104)	(0.519)	(0.192)	(0.742)
L2. Output gap	0.015	0.363	-0.123	-0.076
	(0.050)	(0.461)	(0.171)	(0.793)
L. Human capital	0.979	2.029**	0.531	1.768
	(0.808)	(0.947)	(1.138)	(1.790)
L2.Human capital	-0.840	-1.781*	-0.522	-1.694
	(0.848)	(0.963)	(1.167)	(1.799)
L. Chinn Ito Index	0.017	0.408***	-0.018	-0.289**
	(0.066)	(0.156)	(0.072)	(0.125)
L2. Chinn Ito Index	-0.135*	-0.498***	-0.079	0.240
	(0.074)	(0.139)	(0.089)	(0.157)
L. KOF index	0.001	-0.016	0.003	0.005
	(0.005)	(0.013)	(0.007)	(0.012)
L2. KOF index	-0.000	0.029**	-0.007	-0.016
	(0.006)	(0.013)	(0.007)	(0.014)
L. Trade (% of GDP)	0.002*	-0.001	0.003	0.001
	(0.001)	(0.003)	(0.002)	(0.003)
L2.Trade (% of GDP)	-0.003*	0.001	-0.003	-0.001
	(0.002)	(0.003)	(0.002)	(0.003)

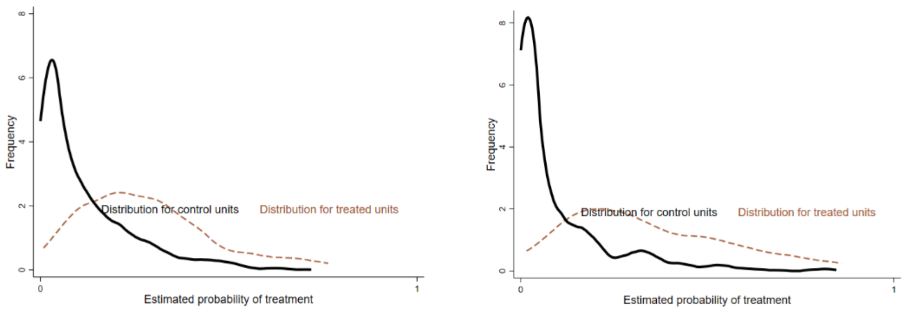
L. Years in Office	-0.002	-0.001	-0.002	-0.004
	(0.002)	(0.006)	(0.002)	(0.003)
L2. Years in Office	-0.001	-0.004	-0.001	-0.002
	(0.002)	(0.005)	(0.003)	(0.004)
L. Elections	0.040	0.074	0.048	0.046
	(0.025)	(0.070)	(0.030)	(0.037)
L2. Elections	0.010	0.030	0.011	-0.023
	(0.025)	(0.067)	(0.031)	(0.036)
L. Political Ideology	-0.004	-0.012	-0.006	0.010
	(0.013)	(0.020)	(0.018)	(0.019)
L2. Political Ideology	-0.002	0.010	-0.002	-0.005
	(0.013)	(0.020)	(0.019)	(0.029)
L. Reform	0.007	-0.036	0.020	0.057
	(0.021)	(0.038)	(0.030)	(0.036)
L2. Reform	0.018	0.014	0.019	0.045
	(0.020)	(0.036)	(0.028)	(0.047)
Area under ROC curve	0.834	0.898	0.839	0.874
Observations	2630	913	1731	911

Notes: Standard errors are shown in parentheses: *** p<0.01, ** p<0.05, * p<0.1

Figure A1. Overlap of propensity scores for treatment and control group

all countries

advanced countries



Emerging countries

low income to lower middle-income countries

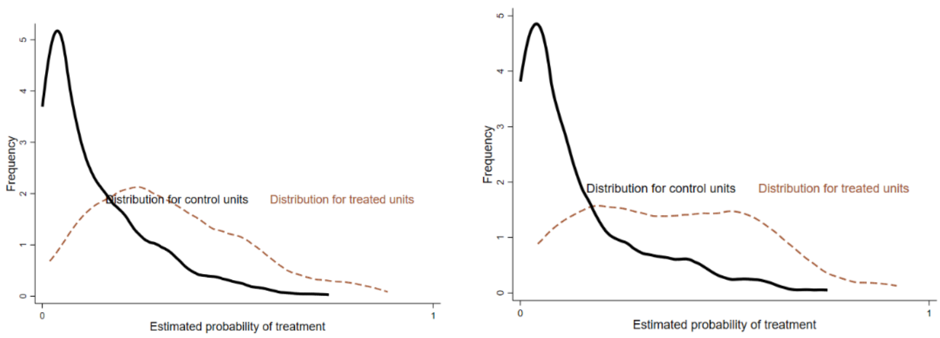


Table A6. The impact of liberalization reforms on GDP growth for all countries using the simple unweighted LP.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	h=0	h=1	h=2	h=3	h=4	h=5	h=6	h=7	h=8	h=9
d.y (t-1)	0.283***	0.384***	0.470***	0.451***	0.475***	0.437***	0.423***	0.387**	0.281*	0.188
	(0.038)	(0.035)	(0.055)	(0.082)	(0.105)	(0.106)	(0.120)	(0.148)	(0.160)	(0.136)
d.y (t-2)	-0.008	0.093*	0.078	0.103	0.101	0.115	0.091	0.025	-0.038	-0.089
	(0.036)	(0.052)	(0.071)	(0.084)	(0.067)	(0.084)	(0.097)	(0.092)	(0.100)	(0.113)
d.y (t-3)	0.113***	0.107***	0.147***	0.153***	0.158**	0.122*	0.051	0.001	-0.047	-0.083
	(0.021)	(0.034)	(0.045)	(0.046)	(0.060)	(0.064)	(0.065)	(0.076)	(0.086)	(0.081)
d.y (t-4)	-0.050*	-0.035	-0.027	-0.003	-0.034	-0.093	-0.117	-0.152*	-0.183*	-0.129
	(0.027)	(0.033)	(0.031)	(0.043)	(0.053)	(0.065)	(0.077)	(0.088)	(0.096)	(0.107)
d.y (t-5)	0.012	0.028	0.061	0.022	-0.046	-0.079	-0.114	-0.136	-0.098	-0.138
	(0.017)	(0.036)	(0.056)	(0.060)	(0.078)	(0.091)	(0.100)	(0.095)	(0.101)	(0.114)
d.y (t-6)	0.015	0.025	-0.042	-0.113	-0.152*	-0.207**	-0.218**	-0.188**	-0.206*	-0.168*
	(0.032)	(0.044)	(0.049)	(0.071)	(0.085)	(0.093)	(0.084)	(0.091)	(0.104)	(0.098)
d.Human capital (t-1)	0.035	0.100	0.120	0.120	0.209	0.367	0.527	0.684*	0.824*	0.949*
	(0.051)	(0.093)	(0.146)	(0.213)	(0.258)	(0.291)	(0.336)	(0.400)	(0.435)	(0.462)
d.Human capital (t-2)	-0.057	-0.153	-0.204	-0.236	-0.353	-0.539*	-0.728**	-0.914**	-1.084**	-1.236**
	(0.051)	(0.092)	(0.141)	(0.204)	(0.250)	(0.288)	(0.337)	(0.399)	(0.429)	(0.454)
d.employment (t-1)	0.085**	-0.000	-0.106	-0.094	-0.101	-0.178	-0.328	-0.316	-0.246	-0.141
	(0.039)	(0.066)	(0.075)	(0.112)	(0.148)	(0.166)	(0.207)	(0.231)	(0.218)	(0.227)
d.employment (t-1)	-0.154***	-0.247***	-0.248***	-0.293**	-0.387**	-0.504***	-0.456**	-0.384**	-0.335*	-0.507**
	(0.029)	(0.059)	(0.089)	(0.125)	(0.145)	(0.173)	(0.188)	(0.180)	(0.189)	(0.204)
d.capital (t-1)	0.183	0.109	0.147	0.118	-0.138	-0.009	-0.086	-0.309	-0.273	-0.311
	(0.111)	(0.134)	(0.201)	(0.254)	(0.287)	(0.286)	(0.285)	(0.293)	(0.335)	(0.413)
d.capital (t-2)	-0.270**	-0.356***	-0.566***	-0.703***	-0.588**	-0.753***	-0.724**	-0.557	-0.628	-0.602
	(0.125)	(0.121)	(0.194)	(0.207)	(0.262)	(0.267)	(0.352)	(0.436)	(0.465)	(0.462)
KOF index (t-1)	0.003***	0.004**	0.005***	0.007***	0.006**	0.005*	0.006*	0.007*	0.008*	0.007*
	(0.001)	(0.001)	(0.002)	(0.002)	(0.003)	(0.003)	(0.003)	(0.004)	(0.004)	(0.004)
KOF index (t-2)	-0.002***	-0.003**	-0.005***	-0.006***	-0.005**	-0.005**	-0.006*	-0.007**	-0.008**	-0.009**
	(0.001)	(0.001)	(0.002)	(0.002)	(0.002)	(0.002)	(0.003)	(0.003)	(0.004)	(0.004)
Reform	0.004	0.007	0.008	0.008	0.015*	0.019**	0.017*	0.017**	0.019**	0.019**
	(0.003)	(0.004)	(0.005)	(0.007)	(0.008)	(0.009)	(0.009)	(0.008)	(0.008)	(0.008)
Constant	0.066***	0.168***	0.318***	0.000	0.000	0.000	0.704***	0.000	1.013***	1.174***
	(0.022)	(0.050)	(0.078)	(0.000)	(0.000)	(0.000)	(0.187)	(0.000)	(0.260)	(0.263)
Time F.E	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*
Country F.E	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*
Treatment Leads	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*
Treatment lags	5	5	5	5	5	5	5	5	5	5
R-squared	0.16	0.17	0.15	0.15	0.14	0.13	0.13	0.13	0.15	0.17
Observations	2785	2785	2701	2617	2533	2449	2365	2281	2197	2113

Notes: Estimations are based on equation (1). Spatial correlation consistent standard errors are shown in parentheses: *** $p<0.01$, ** $p<0.05$, * $p<0.1$

Table A7. The impact of liberalization reforms on GDP growth for advanced countries using the simple unweighted LP.

	(1) h=0	(2) h=1	(3) h=2	(4) h=3	(5) h=4	(6) h=5	(7) h=6	(8) h=7	(9) h=8	(10) h=9
d.y (t-1)	0.321***	0.363**	0.395*	0.361	0.380	0.371*	0.309	0.281	0.289	0.381
	(0.057)	(0.147)	(0.208)	(0.235)	(0.235)	(0.191)	(0.202)	(0.176)	(0.211)	(0.266)
d.y (t-2)	-0.103	-0.058	-0.047	0.061	0.138	0.164	0.164	0.164	0.282*	0.102
	(0.072)	(0.124)	(0.141)	(0.164)	(0.136)	(0.133)	(0.122)	(0.129)	(0.155)	(0.156)
d.y (t-3)	0.145***	0.161***	0.269***	0.316***	0.322***	0.279**	0.259*	0.364***	0.186*	0.070
	(0.044)	(0.058)	(0.085)	(0.106)	(0.113)	(0.120)	(0.127)	(0.131)	(0.105)	(0.137)
d.y (t-4)	-0.001	0.023	0.028	0.123*	0.111*	0.138	0.241**	0.075	0.003	-0.023
	(0.036)	(0.047)	(0.068)	(0.064)	(0.062)	(0.088)	(0.098)	(0.068)	(0.064)	(0.095)
d.y (t-5)	0.042	0.108*	0.219***	0.231**	0.243**	0.249*	0.090	0.025	-0.025	-0.123
	(0.050)	(0.055)	(0.072)	(0.090)	(0.114)	(0.125)	(0.092)	(0.090)	(0.096)	(0.104)
d.y (t-6)	0.055	0.162*	0.181*	0.212*	0.236**	0.076	-0.001	-0.041	-0.123	-0.147
	(0.041)	(0.084)	(0.102)	(0.109)	(0.097)	(0.089)	(0.130)	(0.131)	(0.115)	(0.106)
d.Human capital (t-1)	0.047	0.128	0.193	0.163	0.145	0.147	0.122	0.046	-0.059	-0.027
	(0.058)	(0.110)	(0.169)	(0.206)	(0.235)	(0.334)	(0.451)	(0.534)	(0.551)	(0.583)
d.Human capital (t-2)	-0.085	-0.223*	-0.352*	-0.387*	-0.436*	-0.518	-0.557	-0.537	-0.484	-0.552
	(0.060)	(0.118)	(0.184)	(0.226)	(0.248)	(0.345)	(0.463)	(0.559)	(0.594)	(0.632)
d.employment (t-1)	0.156*	0.141	0.263*	0.252	0.256	0.363	0.201	0.137	0.218	0.284
	(0.080)	(0.119)	(0.146)	(0.197)	(0.199)	(0.256)	(0.280)	(0.305)	(0.293)	(0.273)
d.employment (t-1)	-0.093*	0.019	0.039	0.077	0.197	0.019	0.026	0.140	0.126	0.009
	(0.047)	(0.080)	(0.109)	(0.147)	(0.225)	(0.229)	(0.255)	(0.236)	(0.213)	(0.252)
d.capital (t-1)	0.041	-0.480	-1.249*	-1.773**	-2.556***	-3.032***	-3.549***	-3.939***	-4.147***	-4.070***
	(0.357)	(0.603)	(0.674)	(0.787)	(0.920)	(1.011)	(0.904)	(0.759)	(0.746)	(0.932)
d.capital (t-2)	-0.506	-0.715	-0.765	-0.996	-0.898	-0.844	-0.431	0.015	0.419	0.791
	(0.355)	(0.637)	(0.744)	(0.869)	(0.993)	(1.088)	(1.031)	(0.879)	(0.831)	(0.911)
KOF index (t-1)	0.001	-0.001	-0.002	-0.003	-0.007**	-0.009**	-0.008**	-0.008**	-0.007**	-0.006
	(0.001)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.004)
KOF index (t-2)	-0.002	-0.001	-0.001	-0.002	0.001	0.002	0.002	0.002	0.003	0.002
	(0.001)	(0.002)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
Reform	0.002	0.004	0.003	-0.001	0.004	0.007	0.007	0.006	0.008	0.008
	(0.003)	(0.006)	(0.008)	(0.008)	(0.008)	(0.009)	(0.011)	(0.010)	(0.009)	(0.008)
Constant	0.194***	0.489***	0.822***	1.227***	0.000	1.893***	0.000	2.200***	2.332***	0.000
	(0.040)	(0.093)	(0.145)	(0.209)	(.)	(0.286)	(.)	(0.313)	(0.304)	(.)
Time F.E	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*
Country F.E	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*
Treatment Leads	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*
Treatment lags	5	5	5	5	5	5	5	5	5	5
R-squared	0.51	0.48	0.49	0.51	0.54	0.56	0.56	0.55	0.55	0.54
Observations	943	943	914	886	856	827	798	769	740	711

Notes: Estimations are based on equation (1). Spatial correlation consistent standard errors are shown in parentheses: *** $p<0.01$, ** $p<0.05$, * $p<0.1$

Table A8. The impact of liberalization reforms on GDP growth for emerging countries using the simple unweighted LP.

	(1) h=0	(2) h=1	(3) h=2	(4) h=3	(5) h=4	(6) h=5	(7) h=6	(8) h=7	(9) h=8	(10) h=9
d.y (t-1)	0.258^{***}	0.342^{***}	0.407^{***}	0.366^{***}	0.360^{***}	0.313^{***}	0.318^{***}	0.286^{*}	0.166	0.067
	(0.045)	(0.038)	(0.060)	(0.081)	(0.098)	(0.099)	(0.115)	(0.142)	(0.136)	(0.130)
d.y (t-2)	-0.005	0.079	0.040	0.032	0.013	0.028	-0.014	-0.093	-0.155	-0.191
	(0.038)	(0.052)	(0.072)	(0.087)	(0.080)	(0.097)	(0.112)	(0.100)	(0.106)	(0.122)
d.y (t-3)	0.102^{***}	0.074^{*}	0.086	0.080	0.081	0.023	-0.065	-0.130	-0.155	-0.169^{*}
	(0.023)	(0.040)	(0.055)	(0.065)	(0.079)	(0.086)	(0.079)	(0.090)	(0.100)	(0.085)
d.y (t-4)	-0.061^{*}	-0.062	-0.058	-0.030	-0.067	-0.140^{*}	-0.183^{**}	-0.200^{**}	-0.206^{**}	-0.160
	(0.032)	(0.038)	(0.044)	(0.056)	(0.069)	(0.072)	(0.079)	(0.091)	(0.087)	(0.101)
d.y (t-5)	0.008	0.025	0.053	0.002	-0.080	-0.129	-0.142	-0.153^{*}	-0.115	-0.118
	(0.021)	(0.055)	(0.071)	(0.074)	(0.079)	(0.089)	(0.099)	(0.085)	(0.090)	(0.100)
d.y (t-6)	0.012	0.014	-0.066	-0.158^{**}	-0.212^{**}	-0.251^{***}	-0.256^{***}	-0.220^{**}	-0.208^{**}	-0.193^{*}
	(0.038)	(0.048)	(0.054)	(0.068)	(0.079)	(0.090)	(0.074)	(0.083)	(0.096)	(0.103)
d.Human capital (t-1)	-0.041	-0.058	-0.157	-0.299	-0.351	-0.288	-0.204	-0.068	0.051	0.124
	(0.083)	(0.157)	(0.234)	(0.345)	(0.448)	(0.530)	(0.614)	(0.733)	(0.843)	(0.843)
d.Human capital (t-2)	0.014	-0.008	0.055	0.163	0.186	0.106	0.007	-0.146	-0.282	-0.372
	(0.082)	(0.153)	(0.223)	(0.327)	(0.424)	(0.506)	(0.593)	(0.712)	(0.824)	(0.826)
d.employment (t-1)	0.098^{**}	0.044	-0.041	0.017	0.061	0.067	-0.003	0.034	0.040	0.061
	(0.043)	(0.071)	(0.070)	(0.083)	(0.112)	(0.125)	(0.158)	(0.187)	(0.198)	(0.199)
d.employment (t-1)	-0.123^{***}	-0.212^{***}	-0.197^{**}	-0.192^{*}	-0.210^{*}	-0.258^{**}	-0.202	-0.197	-0.190	-0.256
	(0.029)	(0.063)	(0.072)	(0.111)	(0.116)	(0.124)	(0.136)	(0.140)	(0.141)	(0.177)
d.capital (t-1)	0.104	0.002	0.048	0.018	-0.221	-0.131	-0.086	-0.261	-0.135	-0.115
	(0.137)	(0.124)	(0.199)	(0.229)	(0.265)	(0.246)	(0.287)	(0.317)	(0.347)	(0.411)
d.capital (t-2)	-0.194	-0.227	-0.402^{*}	-0.489^{*}	-0.325	-0.393	-0.423	-0.259	-0.409	-0.468
	(0.154)	(0.144)	(0.225)	(0.241)	(0.295)	(0.305)	(0.381)	(0.457)	(0.472)	(0.454)
KOF index (t-1)	0.002^{**}	0.003	0.003	0.004	0.002	0.001	0.001	0.001	0.001	0.001
	(0.001)	(0.002)	(0.002)	(0.002)	(0.003)	(0.003)	(0.004)	(0.004)	(0.004)	(0.003)
KOF index (t-2)	-0.002^{***}	-0.004^{**}	-0.005^{***}	-0.007^{***}	-0.005^{***}	-0.005^{**}	-0.006^{**}	-0.006^{*}	-0.006^{*}	-0.007^{**}
	(0.001)	(0.001)	(0.002)	(0.002)	(0.002)	(0.002)	(0.003)	(0.003)	(0.003)	(0.003)
Reform	0.005	0.007	0.008	0.009	0.013	0.016	0.010	0.010	0.009	0.007
	(0.004)	(0.006)	(0.008)	(0.009)	(0.010)	(0.011)	(0.009)	(0.008)	(0.009)	(0.009)
Constant	0.000	0.000	0.483^{***}	0.708^{***}	0.000	0.948^{***}	0.000	0.000	0.000	1.334^{***}
	(.)	(.)	(0.108)	(0.139)	(.)	(0.179)	(.)	(.)	(.)	(0.187)
Time F.E	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*
Country F.E	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*
Treatment Leads	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*
Treatment lags	5	5	5	5	5	5	5	5	5	5
R-squared	0.19	0.18	0.19	0.20	0.20	0.21	0.22	0.22	0.23	0.25
Observations	1825	1825	1771	1717	1663	1609	1555	1501	1447	1393

Notes: Estimations are based on equation (1). Spatial correlation consistent standard errors are shown in parentheses: *** p<0.01, ** p<0.05, * p<0.1

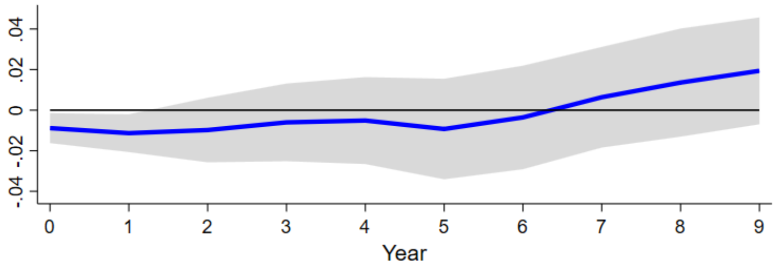
Table A9. The impact of liberalization reforms on GDP growth for low to lower middle-income countries using the simple unweighted LP.

	(1) h=0	(2) h=1	(3) h=2	(4) h=3	(5) h=4	(6) h=5	(7) h=6	(8) h=7	(9) h=8	(10) h=9
d.y (t-1)	0.177***	0.290***	0.408***	0.418***	0.412***	0.409***	0.404***	0.350**	0.240	0.188
	(0.053)	(0.058)	(0.071)	(0.092)	(0.113)	(0.122)	(0.142)	(0.160)	(0.148)	(0.144)
d.y (t-2)	0.059	0.183***	0.208***	0.202**	0.222*	0.248*	0.200	0.094	0.033	-0.042
	(0.039)	(0.061)	(0.062)	(0.096)	(0.113)	(0.133)	(0.161)	(0.143)	(0.128)	(0.149)
d.y (t-3)	0.135***	0.140***	0.153**	0.167*	0.173	0.100	-0.014	-0.083	-0.108	-0.094
	(0.043)	(0.045)	(0.068)	(0.084)	(0.106)	(0.117)	(0.098)	(0.086)	(0.101)	(0.083)
d.y (t-4)	-0.037	-0.038	-0.045	-0.021	-0.060	-0.135*	-0.187**	-0.191**	-0.164**	-0.187*
	(0.035)	(0.041)	(0.034)	(0.057)	(0.075)	(0.076)	(0.073)	(0.084)	(0.060)	(0.095)
d.y (t-5)	-0.012	-0.001	0.017	-0.032	-0.116	-0.161	-0.154	-0.135	-0.154	-0.123
	(0.032)	(0.054)	(0.078)	(0.101)	(0.109)	(0.103)	(0.117)	(0.082)	(0.094)	(0.110)
d.y (t-6)	0.006	0.003	-0.079	-0.176*	-0.223**	-0.249**	-0.247**	-0.256**	-0.217*	-0.224*
	(0.036)	(0.062)	(0.081)	(0.098)	(0.092)	(0.102)	(0.097)	(0.110)	(0.111)	(0.119)
d.Human capital (t-1)	-0.131	-0.295	-0.548*	-0.812*	-0.999*	-1.106*	-1.218*	-1.423	-1.700	-1.445
	(0.112)	(0.221)	(0.321)	(0.460)	(0.545)	(0.622)	(0.703)	(0.843)	(1.101)	(1.156)
d.Human capital (t-2)	0.097	0.219	0.426	0.642	0.786	0.867	0.954	1.132	1.380	1.108
	(0.112)	(0.217)	(0.312)	(0.445)	(0.529)	(0.609)	(0.685)	(0.813)	(1.059)	(1.113)
d.employment (t-1)	0.019	-0.097	-0.174*	-0.119	-0.121	-0.120	-0.198	-0.214	-0.247	-0.019
	(0.041)	(0.081)	(0.100)	(0.156)	(0.227)	(0.236)	(0.241)	(0.296)	(0.309)	(0.271)
d.employment (t-1)	-0.162***	-0.247***	-0.237*	-0.281	-0.326*	-0.399**	-0.409*	-0.401*	-0.157	-0.069
	(0.038)	(0.066)	(0.118)	(0.171)	(0.175)	(0.184)	(0.213)	(0.222)	(0.207)	(0.270)
d.capital (t-1)	0.073	0.023	-0.054	0.052	-0.084	-0.123	0.030	-0.021	-0.126	-0.373
	(0.084)	(0.128)	(0.139)	(0.134)	(0.186)	(0.216)	(0.259)	(0.324)	(0.321)	(0.393)
d.capital (t-2)	-0.106	-0.139	-0.167	-0.376**	-0.352*	-0.309	-0.449**	-0.440*	-0.462*	-0.273
	(0.090)	(0.167)	(0.191)	(0.168)	(0.178)	(0.192)	(0.204)	(0.249)	(0.251)	(0.341)
KOF index (t-1)	0.001	0.002	0.003	0.003	0.002	0.000	0.001	0.002	0.002	0.003
	(0.001)	(0.002)	(0.003)	(0.003)	(0.003)	(0.004)	(0.005)	(0.005)	(0.005)	(0.005)
KOF index (t-2)	-0.002*	-0.003*	-0.004**	-0.005**	-0.004**	-0.003	-0.003	-0.003	-0.004	-0.005
	(0.001)	(0.002)	(0.002)	(0.002)	(0.002)	(0.003)	(0.003)	(0.004)	(0.004)	(0.004)
Reform	-0.002	-0.002	-0.002	-0.008	-0.010	-0.007	-0.014	-0.020*	-0.026**	-0.031**
	(0.002)	(0.003)	(0.004)	(0.006)	(0.008)	(0.010)	(0.010)	(0.010)	(0.010)	(0.011)
Constant	0.096***	0.205***	0.000	0.691***	0.000	0.937***	0.000	0.000	0.000	0.000
	(0.028)	(0.056)	(.)	(0.153)	(.)	(0.168)	(.)	(.)	(.)	(.)
Time F.E	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*
Country F.E	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*
Treatment Leads	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*
Treatment lags	5	5	5	5	5	5	5	5	5	5
R-squared	0.21	0.26	0.30	0.33	0.34	0.36	0.38	0.40	0.42	0.44
Observations	936	936	908	880	852	824	796	768	740	712

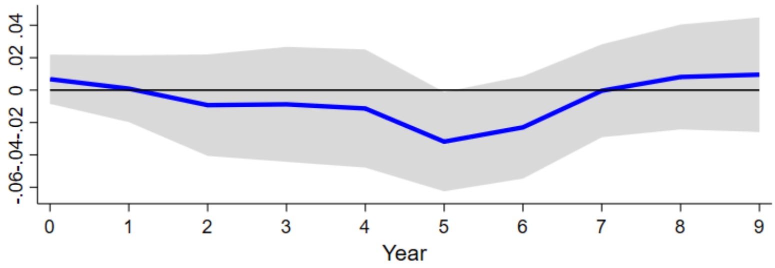
Notes: Estimations are based on equation (1). Spatial correlation consistent standard errors are shown in parentheses: *** p<0.01, ** p<0.05, * p<0.1

Figure A2. The impact of counter reforms on GDP growth

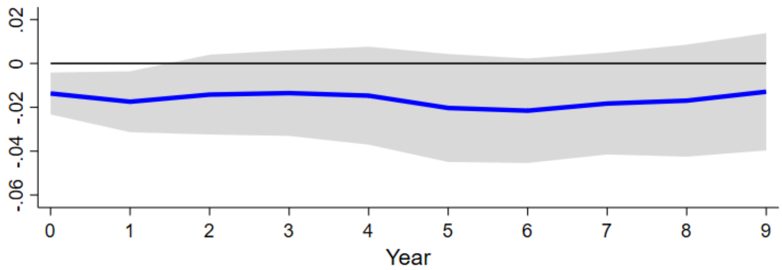
All countries



Advanced



Emerging



Low to lower middle-income countries

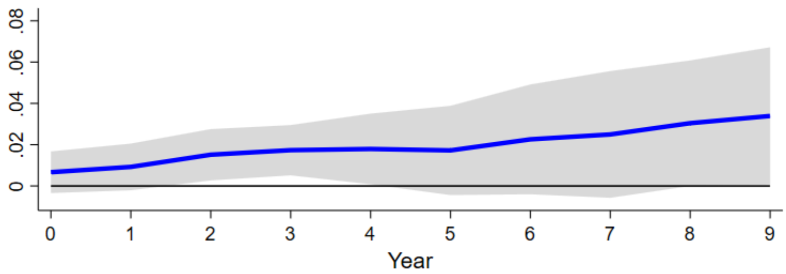


Table A10. The impact of counter reforms on GDP growth for all countries using the simple unweighted LP.

	(1) h=0	(2) h=1	(3) h=2	(4) h=3	(5) h=4	(6) h=5	(7) h=6	(8) h=7	(9) h=8	(10) h=9
d.y (t-1)	0.286***	0.386***	0.478***	0.465***	0.488***	0.433***	0.423***	0.391**	0.284*	0.199
	(0.035)	(0.033)	(0.053)	(0.081)	(0.106)	(0.105)	(0.119)	(0.148)	(0.162)	(0.143)
d.y (t-2)	-0.005	0.089*	0.093	0.134	0.127*	0.146	0.135	0.064	0.008	-0.029
	(0.036)	(0.051)	(0.073)	(0.087)	(0.071)	(0.087)	(0.097)	(0.091)	(0.093)	(0.107)
d.y (t-3)	0.115***	0.111***	0.152***	0.151***	0.158**	0.126*	0.059	0.012	-0.028	-0.064
	(0.021)	(0.035)	(0.047)	(0.047)	(0.062)	(0.065)	(0.067)	(0.079)	(0.089)	(0.082)
d.y (t-4)	-0.042*	-0.042	-0.039	-0.001	-0.026	-0.076	-0.095	-0.130	-0.156*	-0.119
	(0.025)	(0.034)	(0.029)	(0.044)	(0.052)	(0.065)	(0.078)	(0.086)	(0.092)	(0.104)
d.y (t-5)	0.015	0.034	0.050	-0.007	-0.086	-0.135	-0.172	-0.190*	-0.172	-0.215*
	(0.020)	(0.049)	(0.067)	(0.073)	(0.095)	(0.112)	(0.117)	(0.106)	(0.116)	(0.125)
d.y (t-6)	0.014	0.027	-0.039	-0.111	-0.149*	-0.202**	-0.220**	-0.205**	-0.241**	-0.207**
	(0.032)	(0.042)	(0.047)	(0.069)	(0.083)	(0.091)	(0.081)	(0.089)	(0.100)	(0.093)
d.Human capital (t-1)	0.024	0.092	0.122	0.137	0.248	0.431	0.601	0.781*	0.952*	1.071**
	(0.059)	(0.094)	(0.150)	(0.224)	(0.275)	(0.312)	(0.362)	(0.429)	(0.466)	(0.492)
d.Human capital (t-2)	-0.045	-0.144	-0.202	-0.245	-0.384	-0.591*	-0.789**	-0.998**	-1.200**	-1.346**
	(0.060)	(0.093)	(0.144)	(0.213)	(0.264)	(0.307)	(0.362)	(0.430)	(0.468)	(0.496)
d.employment (t-1)	0.075**	-0.017	-0.128*	-0.125	-0.144	-0.215	-0.356*	-0.335	-0.279	-0.178
	(0.035)	(0.058)	(0.069)	(0.109)	(0.142)	(0.167)	(0.205)	(0.226)	(0.208)	(0.216)
d.employment (t-1)	-0.145***	-0.237***	-0.245**	-0.289**	-0.378**	-0.489**	-0.440**	-0.381*	-0.329	-0.504**
	(0.030)	(0.058)	(0.090)	(0.132)	(0.157)	(0.192)	(0.206)	(0.195)	(0.202)	(0.212)
d.capital (t-1)	0.197*	0.152	0.184	0.140	-0.086	0.068	-0.021	-0.217	-0.145	-0.213
	(0.110)	(0.137)	(0.210)	(0.267)	(0.303)	(0.316)	(0.312)	(0.285)	(0.318)	(0.423)
d.capital (t-2)	-0.284**	-0.375***	-0.618***	-0.785***	-0.713**	-0.932***	-0.914**	-0.764	-0.898*	-0.849
	(0.118)	(0.118)	(0.200)	(0.214)	(0.272)	(0.275)	(0.354)	(0.450)	(0.491)	(0.510)
KOF index (t-1)	0.003***	0.004***	0.006***	0.007***	0.006**	0.006*	0.007*	0.007*	0.008	0.008*
	(0.001)	(0.001)	(0.002)	(0.002)	(0.003)	(0.003)	(0.004)	(0.004)	(0.005)	(0.004)
KOF index (t-2)	-0.002***	-0.003**	-0.005***	-0.007***	-0.006**	-0.005**	-0.006*	-0.007**	-0.008*	-0.009**
	(0.001)	(0.001)	(0.002)	(0.002)	(0.002)	(0.002)	(0.003)	(0.003)	(0.004)	(0.004)
Counter reform	-0.006*	-0.009*	-0.011*	-0.010	-0.006	-0.006	-0.010	-0.004	0.006	0.013
	(0.004)	(0.004)	(0.006)	(0.010)	(0.012)	(0.013)	(0.015)	(0.016)	(0.015)	(0.016)
Constant	0.084***	0.194***	0.000	0.000	0.541***	0.000	0.000	0.000	0.890***	0.000
	(0.022)	(0.049)	(.)	(.)	(0.139)	(.)	(.)	(.)	(0.227)	(.)
Time F.E	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*
Country F.E	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*
Treatment Leads	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*
Treatment lags	5	5	5	5	5	5	5	5	5	5
R-squared	0.21	0.17	0.16	0.15	0.14	0.13	0.13	0.12	0.13	0.14
Observations	2793	2793	2709	2625	2541	2457	2373	2289	2205	2121

Notes: Estimations are based on equation (1). Spatial correlation consistent standard errors are shown in parentheses: *** p<0.01, ** p<0.05, * p<0.1

Table A11. The impact of counter reforms on GDP growth for advanced countries using the simple unweighted LP.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	h=0	h=1	h=2	h=3	h=4	h=5	h=6	h=7	h=8	h=9
d.y (t-1)	0.319***	0.367**	0.390*	0.369	0.412*	0.409**	0.363*	0.310*	0.289	0.344
	(0.059)	(0.146)	(0.206)	(0.236)	(0.232)	(0.174)	(0.190)	(0.178)	(0.208)	(0.250)
d.y (t-2)	-0.105	-0.067	-0.039	0.083	0.157	0.190	0.183	0.171	0.250	0.078
	(0.074)	(0.128)	(0.152)	(0.171)	(0.146)	(0.132)	(0.128)	(0.126)	(0.164)	(0.179)
d.y (t-3)	0.145***	0.167***	0.276***	0.316***	0.330***	0.275*	0.265*	0.358**	0.192	0.040
	(0.045)	(0.060)	(0.089)	(0.110)	(0.113)	(0.138)	(0.136)	(0.158)	(0.146)	(0.147)
d.y (t-4)	-0.001	0.029	0.024	0.120*	0.104*	0.144	0.228**	0.084	0.011	-0.032
	(0.033)	(0.044)	(0.061)	(0.066)	(0.061)	(0.086)	(0.098)	(0.071)	(0.064)	(0.096)
d.y (t-5)	0.045	0.110**	0.228***	0.236**	0.253**	0.250*	0.114	0.039	-0.036	-0.138
	(0.047)	(0.052)	(0.073)	(0.093)	(0.119)	(0.132)	(0.094)	(0.074)	(0.081)	(0.100)
d.y (t-6)	0.049	0.154*	0.169	0.206*	0.222**	0.085	0.007	-0.055	-0.142	-0.177*
	(0.042)	(0.087)	(0.103)	(0.111)	(0.101)	(0.093)	(0.122)	(0.122)	(0.109)	(0.103)
d.Human capital (t-1)	0.050	0.132	0.196	0.157	0.133	0.137	0.108	0.022	-0.092	-0.043
	(0.059)	(0.111)	(0.170)	(0.206)	(0.231)	(0.331)	(0.444)	(0.518)	(0.540)	(0.580)
d.Human capital (t-2)	-0.090	-0.227*	-0.353*	-0.378	-0.418*	-0.501	-0.538	-0.513	-0.459	-0.551
	(0.061)	(0.120)	(0.185)	(0.225)	(0.245)	(0.344)	(0.457)	(0.544)	(0.586)	(0.634)
d.employment (t-1)	0.147*	0.118	0.254*	0.275	0.269	0.381	0.199	0.122	0.197	0.301
	(0.080)	(0.122)	(0.149)	(0.193)	(0.201)	(0.260)	(0.276)	(0.303)	(0.317)	(0.297)
d.employment (t-1)	-0.087*	0.032	0.070	0.099	0.223	0.031	0.035	0.149	0.173	0.068
	(0.048)	(0.076)	(0.104)	(0.148)	(0.222)	(0.221)	(0.246)	(0.234)	(0.204)	(0.251)
d.capital (t-1)	0.049	-0.475	-1.289*	-1.897**	-2.661***	-3.140***	-3.632***	-3.900***	-4.031***	-4.035***
	(0.346)	(0.573)	(0.637)	(0.749)	(0.860)	(0.897)	(0.803)	(0.756)	(0.786)	(0.922)
d.capital (t-2)	-0.510	-0.715	-0.707	-0.834	-0.767	-0.735	-0.377	-0.059	0.259	0.720
	(0.342)	(0.602)	(0.711)	(0.836)	(0.922)	(0.991)	(0.953)	(0.893)	(0.877)	(0.934)
KOF index (t-1)	0.001	-0.000	-0.001	-0.002	-0.005*	-0.008**	-0.008**	-0.008**	-0.007**	-0.005
	(0.001)	(0.002)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.004)
KOF index (t-2)	-0.002*	-0.002	-0.002	-0.003	-0.001	0.001	0.002	0.003	0.002	0.001
	(0.001)	(0.002)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
Counter reform	0.004	0.007	0.001	-0.009	-0.009	-0.011	-0.032*	-0.023	-0.000	0.008
	(0.005)	(0.009)	(0.013)	(0.019)	(0.022)	(0.022)	(0.019)	(0.019)	(0.017)	(0.020)
Constant	0.192***	0.508***	0.820***	1.170***	0.000	1.807***	0.000	2.245***	2.347***	2.423***
	(0.040)	(0.094)	(0.150)	(0.202)	(.)	(0.264)	(.)	(0.284)	(0.268)	(0.243)
Time F.E	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*
Country F.E	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*
Treatment Leads	*Y ES*	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*
Treatment lags	5	5	5	5	5	5	5	5	5	5
R-squared	0.51	0.48	0.50	0.52	0.55	0.57	0.56	0.55	0.55	0.55
Observations	947	947	918	889	860	831	802	773	744	715

Notes: Estimations are based on equation (1). Spatial correlation consistent standard errors are shown in parntheses: *** $p<0.01$, ** $p<0.05$, * $p<0.1$

Table A12. The impact of counter reforms on GDP growth for emerging countries using the simple unweighted LP.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	h=0	h=1	h=2	h=3	h=4	h=5	h=6	h=7	h=8	h=9
d.y (t-1)	0.260***	0.341***	0.412***	0.381***	0.374***	0.307***	0.315**	0.292*	0.169	0.071
	(0.040)	(0.033)	(0.055)	(0.081)	(0.103)	(0.097)	(0.115)	(0.143)	(0.140)	(0.143)
d.y (t-2)	0.004	0.093	0.080	0.089	0.065	0.084	0.049	-0.036	-0.101	-0.125
	(0.042)	(0.060)	(0.086)	(0.103)	(0.095)	(0.112)	(0.122)	(0.112)	(0.114)	(0.131)
d.y (t-3)	0.109***	0.086**	0.103*	0.092	0.093	0.037	-0.048	-0.111	-0.130	-0.147
	(0.023)	(0.041)	(0.059)	(0.070)	(0.085)	(0.091)	(0.083)	(0.094)	(0.104)	(0.091)
d.y (t-4)	-0.053*	-0.056	-0.048	-0.011	-0.047	-0.117	-0.158*	-0.175*	-0.186**	-0.145
	(0.030)	(0.037)	(0.048)	(0.061)	(0.071)	(0.072)	(0.082)	(0.089)	(0.087)	(0.096)
d.y (t-5)	0.011	0.030	0.040	-0.031	-0.130	-0.189*	-0.201*	-0.206**	-0.173*	-0.187*
	(0.029)	(0.068)	(0.082)	(0.085)	(0.091)	(0.104)	(0.104)	(0.088)	(0.093)	(0.103)
d.y (t-6)	0.015	0.019	-0.060	-0.153**	-0.205**	-0.241**	-0.248***	-0.224***	-0.225**	-0.210*
	(0.037)	(0.047)	(0.054)	(0.064)	(0.078)	(0.088)	(0.074)	(0.081)	(0.094)	(0.103)
d.Human capital (t-1)	-0.065	-0.098	-0.197	-0.329	-0.364	-0.281	-0.201	-0.047	0.095	0.146
	(0.096)	(0.166)	(0.256)	(0.374)	(0.485)	(0.569)	(0.662)	(0.777)	(0.879)	(0.868)
d.Human capital (t-2)	0.037	0.032	0.099	0.200	0.208	0.111	0.015	-0.154	-0.314	-0.383
	(0.094)	(0.162)	(0.245)	(0.355)	(0.462)	(0.548)	(0.645)	(0.763)	(0.870)	(0.864)
d.employment (t-1)	0.090**	0.038	-0.057	-0.029	0.004	0.018	-0.044	0.003	-0.000	0.010
	(0.040)	(0.068)	(0.081)	(0.101)	(0.127)	(0.141)	(0.166)	(0.188)	(0.186)	(0.179)
d.employment (t-1)	-0.108***	-0.189***	-0.180**	-0.176	-0.188	-0.235	-0.172	-0.178	-0.173	-0.240
	(0.029)	(0.060)	(0.077)	(0.124)	(0.135)	(0.142)	(0.150)	(0.151)	(0.145)	(0.177)
d.capital (t-1)	0.114	0.028	0.081	0.032	-0.192	-0.099	-0.071	-0.243	-0.078	-0.060
	(0.130)	(0.126)	(0.208)	(0.247)	(0.282)	(0.262)	(0.303)	(0.307)	(0.331)	(0.433)
d.capital (t-2)	-0.211	-0.258*	-0.489**	-0.604**	-0.467	-0.555*	-0.582	-0.409	-0.587	-0.647
	(0.141)	(0.134)	(0.229)	(0.245)	(0.304)	(0.308)	(0.394)	(0.487)	(0.506)	(0.501)
KOF index (t-1)	0.002**	0.003	0.004	0.004	0.002	0.001	0.001	0.001	0.001	0.001
	(0.001)	(0.002)	(0.002)	(0.003)	(0.003)	(0.003)	(0.004)	(0.004)	(0.004)	(0.003)
KOF index (t-2)	-0.002***	-0.004**	-0.005***	-0.007***	-0.005***	-0.005**	-0.005**	-0.006**	-0.006*	-0.007**
	(0.001)	(0.001)	(0.002)	(0.002)	(0.002)	(0.002)	(0.003)	(0.003)	(0.003)	(0.003)
Counter reform	-0.009**	-0.014**	-0.017**	-0.014	-0.014	-0.015	-0.020	-0.022	-0.018	-0.017
	(0.004)	(0.006)	(0.008)	(0.011)	(0.012)	(0.014)	(0.015)	(0.014)	(0.014)	(0.016)
Constant	0.116***	0.284***	0.467***	0.656***	0.000	0.000	0.000	1.134***	0.000	1.354***
	(0.031)	(0.069)	(0.106)	(0.136)	(.)	(.)	(.)	(0.175)	(.)	(0.177)
Time F.E	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*
Country F.E	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*
Treatment Leads	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*
Treatment lags	5	5	5	5	5	5	5	5	5	5
R-squared	0.19	0.18	0.20	0.20	0.21	0.21	0.22	0.23	0.24	0.25
Observations	1828	1828	1774	1720	1666	1612	1558	1504	1450	1396

Notes: Estimations are based on equation (1). Spatial correlation consistent standard errors are shown in parentheses: *** p<0.01, ** p<0.05, * p<0.1

Table A13. The impact of counter reforms on GDP growth for Low to lower middle-income countries using the simple unweighted LP.

	(1) h=0	(2) h=1	(3) h=2	(4) h=3	(5) h=4	(6) h=5	(7) h=6	(8) h=7	(9) h=8	(10) h=9
d.y (t-1)	0.187***	0.295***	0.417***	0.453***	0.452***	0.443***	0.450***	0.407**	0.304*	0.252*
	(0.050)	(0.059)	(0.072)	(0.092)	(0.113)	(0.115)	(0.142)	(0.157)	(0.148)	(0.140)
d.y (t-2)	0.062	0.173***	0.221***	0.234***	0.248***	0.272**	0.236*	0.136	0.059	0.012
	(0.042)	(0.059)	(0.056)	(0.083)	(0.086)	(0.105)	(0.124)	(0.108)	(0.094)	(0.115)
d.y (t-3)	0.138***	0.144***	0.151**	0.154*	0.152	0.079	-0.026	-0.090	-0.113	-0.093
	(0.043)	(0.043)	(0.059)	(0.077)	(0.102)	(0.110)	(0.092)	(0.081)	(0.092)	(0.076)
d.y (t-4)	-0.033	-0.040	-0.050	-0.027	-0.070	-0.141*	-0.187**	-0.188**	-0.155**	-0.178*
	(0.037)	(0.043)	(0.035)	(0.062)	(0.077)	(0.081)	(0.078)	(0.082)	(0.057)	(0.090)
d.y (t-5)	-0.012	-0.003	-0.007	-0.082	-0.174	-0.222*	-0.215*	-0.181*	-0.191*	-0.156
	(0.035)	(0.065)	(0.091)	(0.115)	(0.120)	(0.110)	(0.117)	(0.089)	(0.107)	(0.116)
d.y (t-6)	0.002	-0.002	-0.086	-0.184*	-0.229**	-0.256**	-0.236**	-0.247**	-0.207*	-0.208*
	(0.037)	(0.062)	(0.081)	(0.097)	(0.088)	(0.098)	(0.090)	(0.110)	(0.113)	(0.121)
d.Human capital (t-1)	-0.191	-0.387*	-0.675**	-0.993**	-1.251**	-1.401**	-1.560**	-1.815**	-2.077*	-1.865*
	(0.120)	(0.227)	(0.320)	(0.471)	(0.565)	(0.625)	(0.697)	(0.823)	(1.054)	(1.063)
d.Human capital (t-2)	0.153	0.307	0.549*	0.823*	1.036*	1.160*	1.295*	1.526*	1.756*	1.530
	(0.120)	(0.223)	(0.312)	(0.453)	(0.541)	(0.602)	(0.672)	(0.788)	(1.007)	(1.021)
d.employment (t-1)	-0.006	-0.123	-0.209	-0.205	-0.205	-0.180	-0.274	-0.319	-0.339	-0.136
	(0.046)	(0.091)	(0.125)	(0.177)	(0.245)	(0.265)	(0.274)	(0.343)	(0.361)	(0.291)
d.employment (t-1)	-0.145***	-0.231***	-0.247*	-0.287	-0.332*	-0.431**	-0.437*	-0.426	-0.189	-0.094
	(0.043)	(0.074)	(0.122)	(0.174)	(0.188)	(0.195)	(0.244)	(0.252)	(0.224)	(0.293)
d.capital (t-1)	0.064	0.041	-0.061	-0.016	-0.165	-0.198	-0.065	-0.132	-0.253	-0.495
	(0.087)	(0.135)	(0.151)	(0.137)	(0.193)	(0.234)	(0.302)	(0.349)	(0.337)	(0.403)
d.capital (t-2)	-0.115	-0.168	-0.216	-0.414**	-0.384**	-0.358*	-0.500**	-0.499**	-0.480**	-0.305
	(0.091)	(0.170)	(0.198)	(0.177)	(0.183)	(0.194)	(0.213)	(0.225)	(0.222)	(0.298)
KOF index (t-1)	0.002	0.002	0.003	0.003	0.002	0.001	0.002	0.003	0.003	0.003
	(0.001)	(0.002)	(0.003)	(0.004)	(0.004)	(0.004)	(0.005)	(0.005)	(0.005)	(0.005)
KOF index (t-2)	-0.002*	-0.003*	-0.005**	-0.006**	-0.005**	-0.003	-0.003	-0.004	-0.004	-0.005
	(0.001)	(0.002)	(0.002)	(0.002)	(0.002)	(0.003)	(0.003)	(0.003)	(0.003)	(0.004)
Counter reform	0.001	0.007	0.009	0.015*	0.017**	0.018*	0.017	0.023	0.025	0.030
	(0.003)	(0.006)	(0.007)	(0.008)	(0.007)	(0.010)	(0.013)	(0.016)	(0.019)	(0.018)
Constant	0.144***	0.326***	0.513***	0.688***	0.864***	0.000	1.008***	1.116***	0.000	1.309***
	(0.043)	(0.092)	(0.135)	(0.162)	(0.185)	(.)	(0.174)	(0.158)	(.)	(0.157)
Time F.E	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*
Country F.E	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*
Treatment Leads	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*	*YES*
Treatment lags	5	5	5	5	5	5	5	5	5	5
R-squared	0.21	0.26	0.30	0.32	0.34	0.35	0.37	0.39	0.40	0.42
Observations	938	938	910	882	854	826	798	770	742	714

Notes: Estimations are based on equation (1). Spatial correlation consistent standard errors are shown in parentheses: *** p<0.01, ** p<0.05, * p<0.1