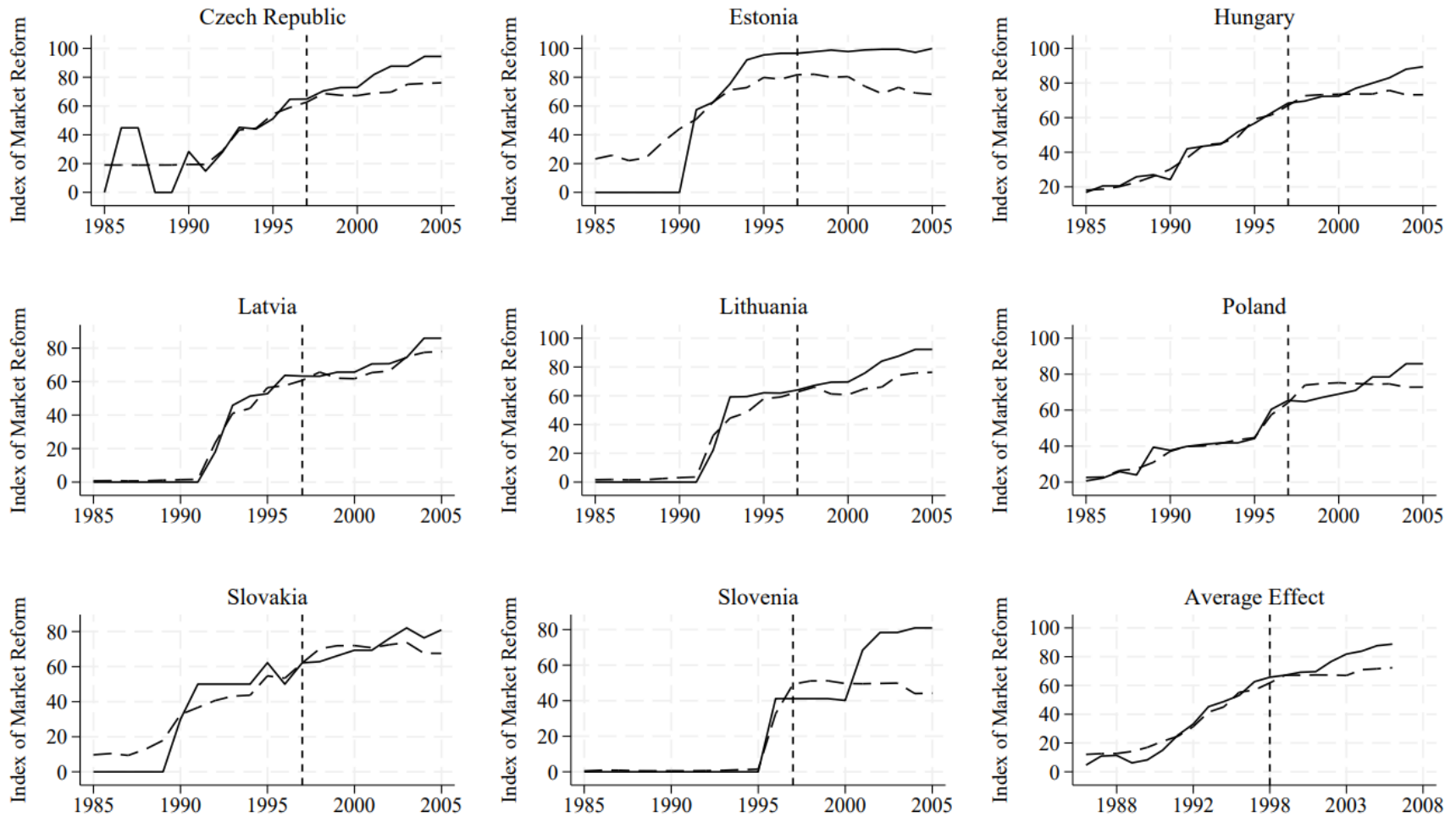


ONLINE APPENDIX¹

Economic Freedom and EU Accession: A Synthetic Control Analysis of the Eastern Enlargement

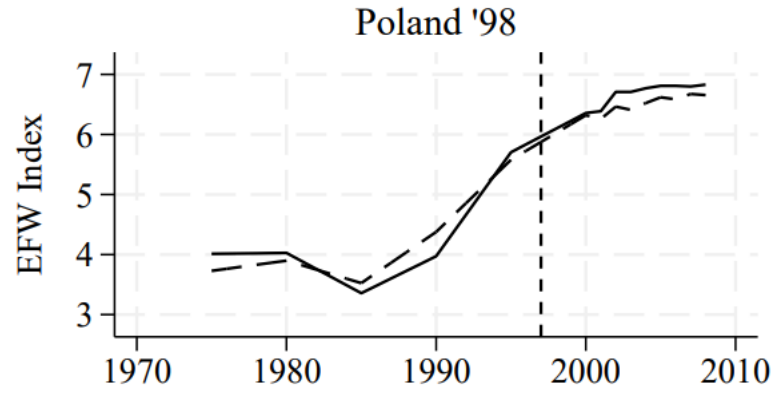
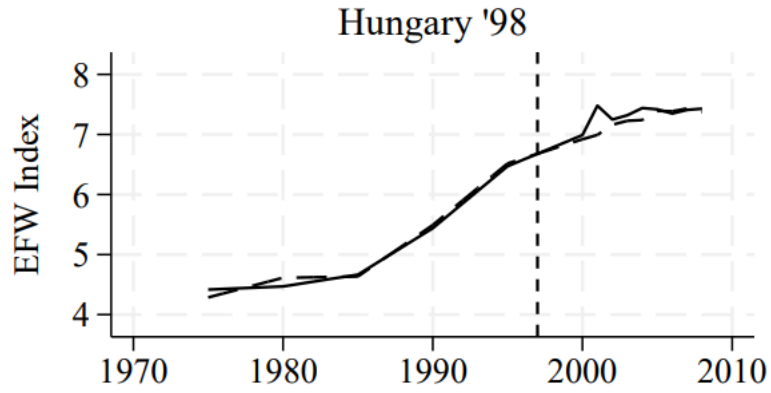
¹ Last updated December 26, 2023.

Individual Effects of EU Harmonization — Index of Market Reform²

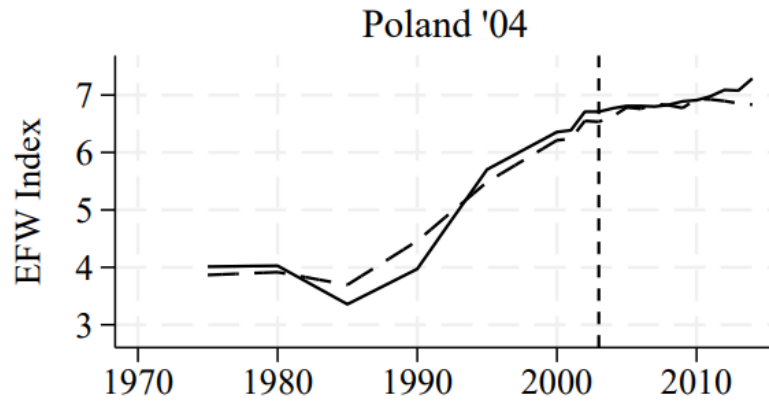
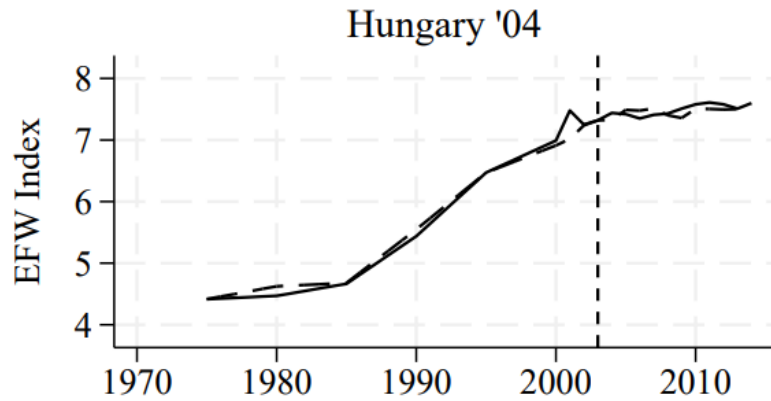


² Solid lines represent the treated countries, and the dashed lines represent their synthetic controls. The average effect from the paper is also included. Only for Slovenia was there any statistical significance as discussed in the paper.

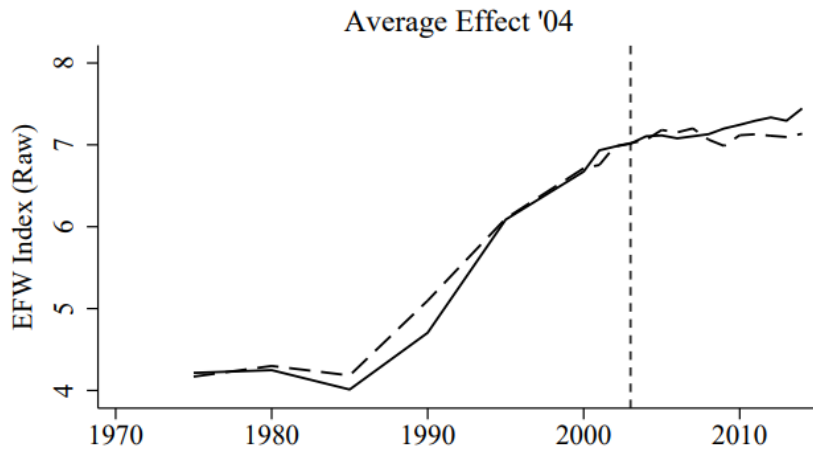
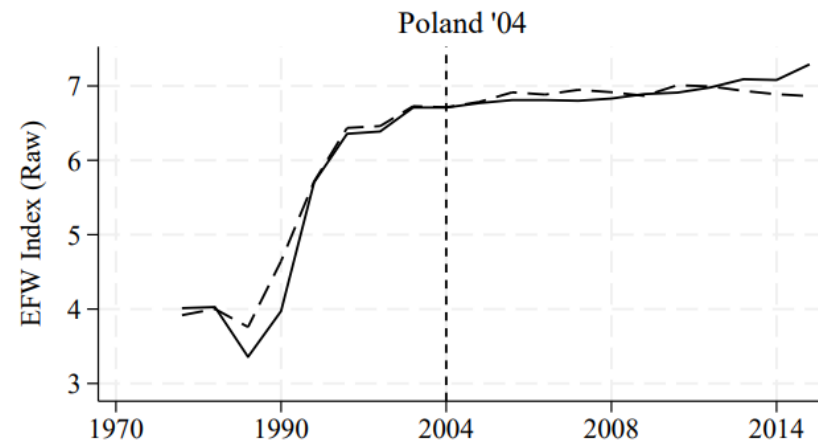
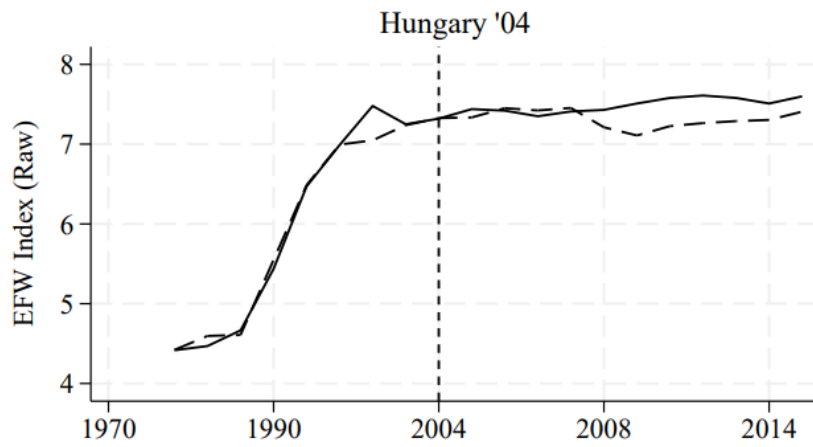
Individual Effects of EU Harmonization — EFW Index



Individual Effects of EU Accession — EFW Index

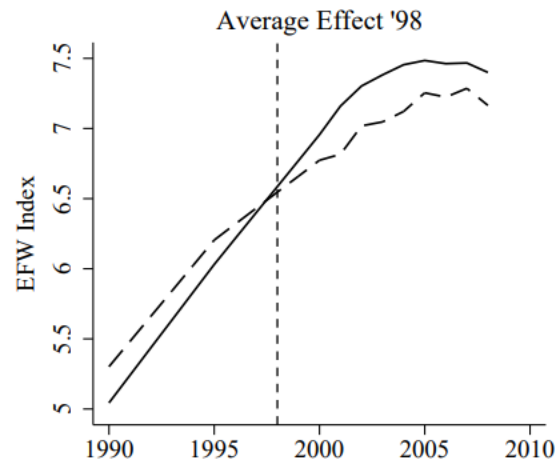
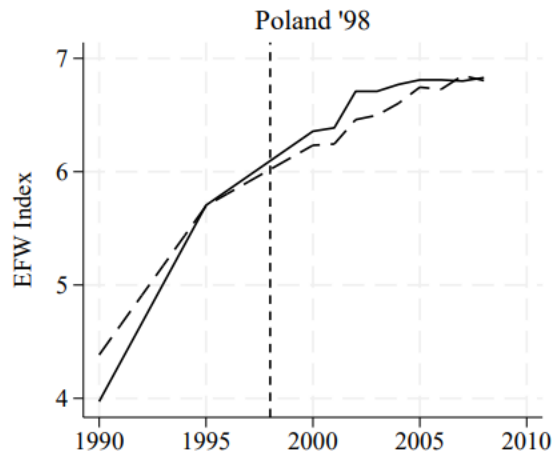
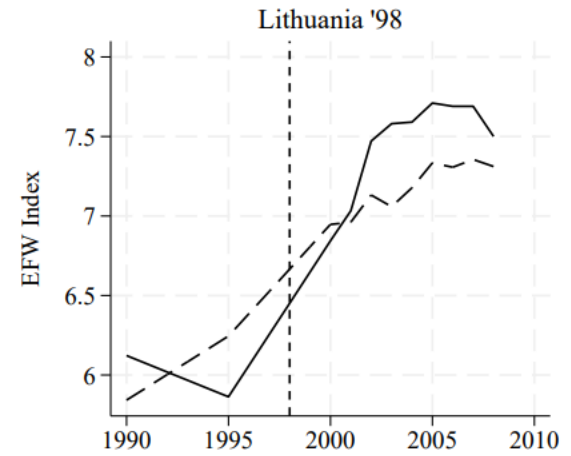
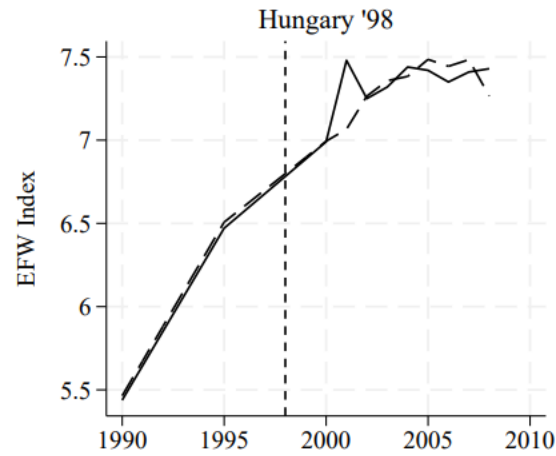
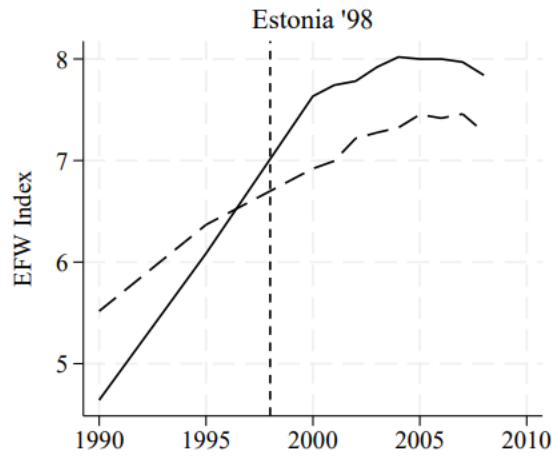


Individual Effects of EU Accession — Raw EFW Index (Not Interpolated)³



³ Using the raw (not interpolated index) shows no treatment effect. Only for Hungary is there visual evidence of a sustained, and delayed, treatment effect. However, this showed no statistical significance relative to the placebos and was small in magnitude (about 15 percent of a standard deviation on average).

Individual Effects of EU Harmonization w/ Additional Countries — EFW Index⁴



⁴ This set of synthetic controls examines four countries, adding two (Estonia and Lithuania) previously unincorporated in the main draft of the paper, using a shorter pre-treatment period starting in 1990. The average effect is also included and shows no statistical significance. The results for Hungary and Poland hold as before. Like with the Index of Market Reform, Estonia's poor pre-treatment fit makes any interpretation impossible. The effects for Lithuania are insignificant, unsurprising given its own poor pre-treatment fit.

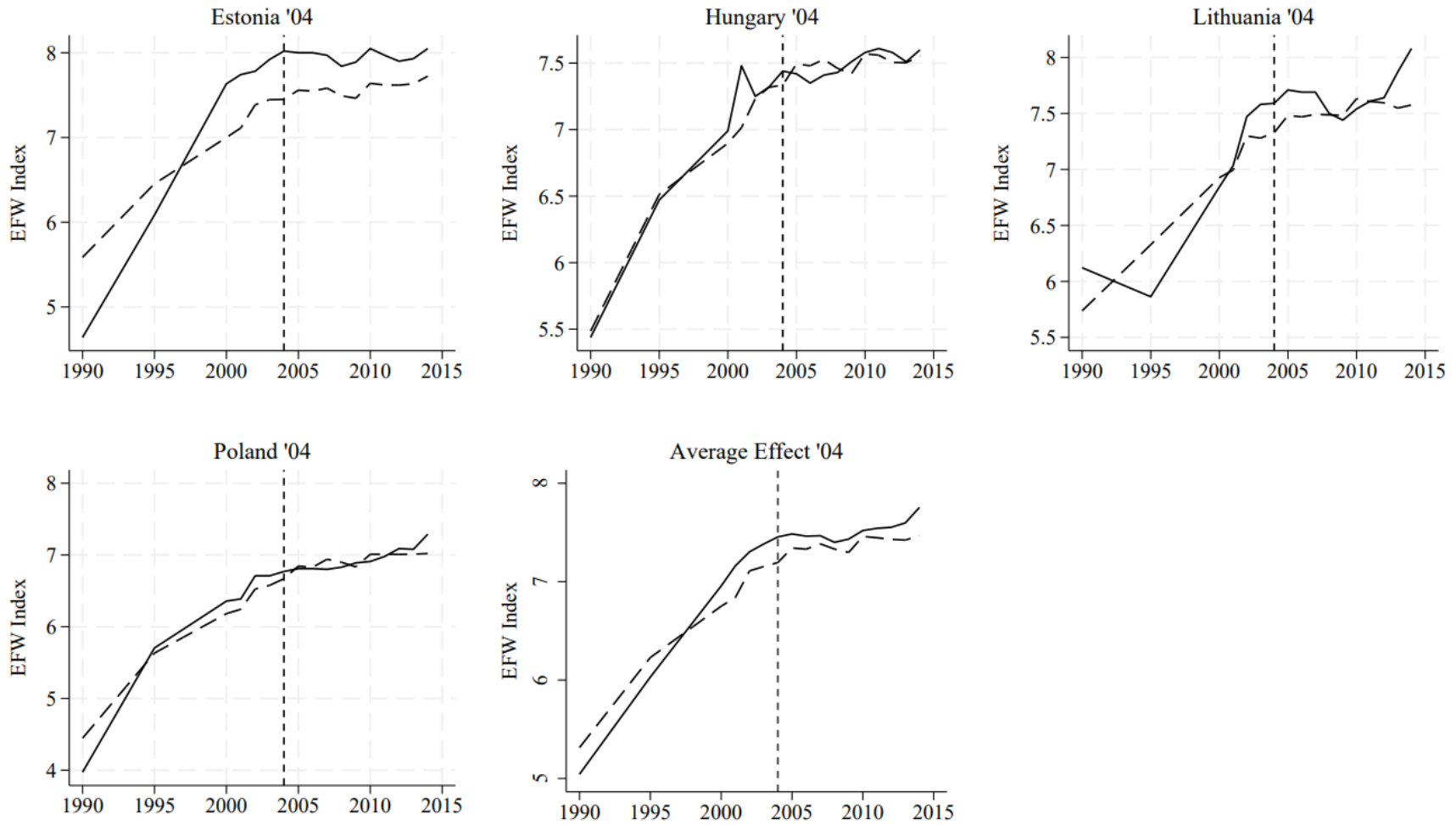
Donor Weights EU Harmonization w/ Additional Countries — EFW Index

Country	Synthetic Estonia	Synthetic Hungary	Synthetic Lithuania	Synthetic Poland
Argentina	0	0.042	0	0.168
Bangladesh	0	0	0	0
Brazil	0	0	0	0
Chile	0	0	0	0
Colombia	0	0	0	0
Egypt	0	0	0	0
Hong Kong	0	0	0	0
Iceland	0.161	0.202	0	0
India	0	0	0	0
Indonesia	0	0	0	0
Israel	0.66	0.733	0.339	0.509
Malaysia	0	0	0	0
Mexico	0	0	0	0
Morocco	0	0	0	0
Norway	0	0.018	0.013	0
Philippines	0	0	0	0
Russia	0.021	0	0.01	0.323
Switzerland	0	0	0	0
Thailand	0	0	0	0
Tunisia	0	0	0	0
Uruguay	0.158	0.006	0.638	0

Indicator Balance EU Harmonization w/ Additional Countries — EFW Index

	Estonia	Synthetic		Hungary	Synthetic
Democracy	0.773	0.792	Democracy	0.843	0.798
Civil Liberty	0.922	0.864	Civil Liberty	0.951	0.864
Human Capital	2.963	2.985	Human Capital	2.858	3.075
GDP per Capita	12642.010	23828.890	GDP per Capita	15157.300	26431.770
Investment	0.178	0.291	Investment	0.165	0.302
Gini	32.138	32.828	Gini	26.338	32.007
Oil	0.060	0.104	Oil	0.215	0.143
EFW (1990)	4.641	5.517	EFW (1990)	5.438	5.464
EFW (1995)	6.085	6.368	EFW (1995)	6.471	6.507
	Lithuania	Synthetic		Poland	Synthetic
Democracy	0.821	0.818	Democracy	0.837	0.669
Civil Liberty	0.918	0.897	Civil Liberty	0.955	0.789
Human Capital	2.703	2.678	Human Capital	2.845	2.985
GDP per Capita	11572.440	16894.510	GDP per Capita	11515.720	21171.990
Investment	0.115	0.232	Investment	0.166	0.281
Gini	29.763	36.534	Gini	26.638	34.380
Oil	0.112	0.116	Oil	0.011	1.798
EFW (1990)	6.122	5.842	EFW (1990)	3.972	4.383
EFW (1995)	5.863	6.245	EFW (1995)	5.704	5.699

Individual Effects of EU Accession w/ Additional Countries — EFW Index⁵



⁵ This set of synthetic controls examines four countries, adding two (Estonia and Lithuania) previously unincluded in the main draft of the paper, using a shorter pre-treatment period starting in 1990. The average effect is also included, showing no treatment effect. To the extent that there is a difference between the treated countries and its average synthetic, it is small (about 14 percent of a standard deviation on average) and consistent with the small differences pre-treatment. The individual effects for Hungary, Poland, and Lithuania show no treatment effect. Once again, an interpretation cannot be made for Estonia given its poor pre-treatment fit and lack of a credible counterfactual.

Donor Weights EU Accession w/ Additional Countries — EFW Index

Country	Synthetic Estonia	Synthetic Hungary	Synthetic Lithuania	Synthetic Poland
Argentina	0	0.043	0	0.082
Bangladesh	0	0	0	0
Brazil	0	0	0.286	0
Chile	0.002	0.271	0	0
Colombia	0	0	0	0
Egypt	0	0	0	0
Hong Kong	0	0	0.209	0
Iceland	0.022	0.005	0	0
India	0	0	0	0
Indonesia	0	0	0	0
Israel	0.84	0.674	0.478	0.594
Malaysia	0	0	0	0
Mexico	0	0	0	0
Morocco	0	0	0	0
Norway	0	0	0	0
Philippines	0	0	0	0
Russia	0	0	0	0.324
Switzerland	0.137	0	0.027	0
Thailand	0	0	0	0
Tunisia	0	0	0	0
Uruguay	0	0.006	0	0

Indicator Balance EU Accession w/ Additional Countries — EFW Index

	Estonia	Synthetic		Hungary	Synthetic
Democracy	0.813	0.789	Democracy	0.847	0.795
Civil Liberty	0.933	0.855	Civil Liberty	0.950	0.868
Human Capital	3.103	3.278	Human Capital	2.912	3.074
GDP per Capita	14501.060	32021.280	GDP per Capita	16406.440	22958.800
Investment	0.198	0.310	Investment	0.183	0.280
Gini	33.371	33.080	Gini	26.693	38.702
Oil	0.065	0.001	Oil	0.195	0.099
EFW (1990)	4.641	5.586	EFW (1990)	5.438	5.486
EFW (1995)	6.085	6.454	EFW (1995)	6.471	6.504
EFW (2003)	7.921	7.446	EFW (2003)	7.320	7.313
	Lithuania	Synthetic		Poland	Synthetic
Democracy	0.824	0.712	Democracy	0.856	0.659
Civil Liberty	0.924	0.857	Civil Liberty	0.954	0.783
Human Capital	2.797	2.768	Human Capital	2.923	3.112
GDP per Capita	12268.750	23823.510	GDP per Capita	13246.080	22834.850
Investment	0.129	0.268	Investment	0.173	0.270
Gini	30.793	40.365	Gini	27.664	34.812
Oil	0.177	0.246	Oil	0.018	2.317
EFW (1990)	6.122	5.738	EFW (1990)	3.972	4.446
EFW (1995)	5.863	6.328	EFW (1995)	5.704	5.633
EFW (2003)	7.581	7.280	EFW (2003)	6.709	6.576