Title

HÉCTOR BAHAMONDE *1 and NAME LASTNAME $^{\dagger 2}$

 $^1{\rm Assistant~Professor,~O'Higgins~University~(Chile)}$ $^2{\rm Position,~Institution}$

July 29, 2020

${\bf Abstract}$

This is the abstract.

Keywords— time series, IPE, IR

Work in progress. Please don't cite.

We both thank Tsung-wu Ho.

^{*}hector.bahamonde@uoh.cl; www.HectorBahamonde.com.

[†]hector.bahamonde@uoh.cl; http://www.hectorbahamonde.com.

I. Intro

I. Presenting the GVAR Methodology

Here goes the "theory" part of the GVAR

II. Guns and Steel

Table 1: Bivariate Gobal Granger Causality Tests of the World Political Economy, 1871-1913

	Granger Relationship	F-Test	P-Value	DF	Adjusted R-sq	Lags
Austria-Hungary	$steel \rightarrow guns$	2.834	0.017	8,31	0.273	1
	$\mathrm{guns} \to \mathrm{steel}$	1.393	0.238	8,31	0.075	1
Belgium	$steel \rightarrow guns$	4.216	0.001	10,28	0.458	2
	$\mathrm{guns} \to \mathrm{steel}$	2.759	0.017	10,28	0.316	
France	$steel \rightarrow guns$	1.35	0.257	8,31	0.067	1
	$\mathrm{guns} \to \mathrm{steel}$	1.907	0.095	8,31	0.157	1
Germany	$steel \rightarrow guns$	3.827	0.003	8,31	0.367	1
	$\mathrm{guns} \to \mathrm{steel}$	2.694	0.022	8,31	0.258	
Italy	$steel \rightarrow guns$	3.61	0.004	10,28	0.407	2
	$\mathrm{guns} \to \mathrm{steel}$	5.039	0	10,28	0.515	
Russia	$steel \rightarrow guns$	10.499	0	16,19	0.813	5
	$\mathrm{guns} \to \mathrm{steel}$	2.423	0.034	16,19	0.394	
Spain	$steel \rightarrow guns$	1.749	0.126	8,31	0.133	1
	$\mathrm{guns} \to \mathrm{steel}$	1.454	0.214	8,31	0.085	1
United Kingdom	$steel \rightarrow guns$	2.674	0.023	8,31	0.256	1
	$\mathrm{guns} \to \mathrm{steel}$	1.29	0.284	8,31	0.056	1
United States	$steel \rightarrow guns$	2.254	0.044	10,28	0.248	2
	$\mathrm{guns} \to \mathrm{steel}$	5.528	0	10,28	0.544	

 Table 2: Bivariate Gobal Granger Causality Tests of the World Political Economy, 1955-2014

	Granger Relationship	F-Test	P-Value	DF	Adjusted R-sq	Lags
Argentina	$steel \rightarrow guns$	1.072	0.402	9,45	0.012	1
	$guns \rightarrow steel$ $steel \rightarrow guns$	6.222 0.996	0.466	9,45 11,42	0.465 -0.001	
Australia	guns → steel	3.564	0.001	11,42	0.347	2
Austria	$steel \rightarrow guns$	0.694	0.736	11,42	-0.068	2
riustria	$guns \rightarrow steel$	2.526	0.015	11,42	0.24	
Belgium	$steel \rightarrow guns$ $guns \rightarrow steel$	4.525 1.012	$0 \\ 0.459$	13,39 13,39	0.468 0.003	3
	steel → guns	0.19	0.455	11,42	-0.202	_
Brazil	$guns \rightarrow steel$	5.779	0	11,42	0.498	2
Bulgaria	$steel \rightarrow guns$	0.606	0.813	11,42	-0.089	2
	$guns \rightarrow steel$ $steel \rightarrow guns$	3.202	0.003	11,42	0.314	_
Canada	$steel \rightarrow guns$ $guns \rightarrow steel$	1.531 3.517	0.137	11,42 11,42	0.099 0.343	2
C1 11	steel → guns	0.294	0.973	9,45	-0.133	٠,
Chile	$guns \rightarrow steel$	5.678	0	9,45	0.438	1
China	$steel \rightarrow guns$	0.13	0.999	9,45	-0.17	1
	$guns \rightarrow steel$ $steel \rightarrow guns$	25.707 3.422	0.001	9,45 17,33	0.805 0.452	
Colombia	$guns \rightarrow steel$	1.719	0.001	17,33	0.196	5
Et	$steel \rightarrow guns$	0.19	0.994	9,45	-0.156	1
Egypt	$guns \rightarrow steel$	2.639	0.015	9,45	0.215	1
Finland	$steel \rightarrow guns$	1.504	0.154	17,33	0.146	5
	guns → steel	2.994 1.456	0.003	17,33	0.404	
France	$steel \rightarrow guns$ $guns \rightarrow steel$	2.438	0.194	9,45 9,45	0.071 0.193	1
G	steel → guns	1.35	0.232	11,42	0.068	
Greece	$guns \rightarrow steel$	1.917	0.064	11,42	0.16	2
Hungary	$steel \rightarrow guns$	3.568	0.001	11,42	0.348	2
- 3.0	$guns \rightarrow steel$ $steel \rightarrow guns$	4.868 0.45	0.9	11,42 9,45	-0.101	
India	$guns \rightarrow steel$	7.349	0.9	9,45	0.514	1
T1	steel → guns	1.405	0.201	13,39	0.092	-
Israel	$guns \rightarrow steel$	1.291	0.259	13,39	0.068	3
Italy	$steel \rightarrow guns$	0.386	0.936	9,45	-0.114	1
-	$guns \rightarrow steel$ $steel \rightarrow guns$	1.142 2.783	0.355	9,45 17,33	0.023	
Japan	guns → steel	2.074	0.036	17,33	0.267	5
T	$steel \rightarrow guns$	5.861	0	17,33	0.623	5
Luxembourg	$guns \rightarrow steel$	1.483	0.162	17,33	0.141	9
Mexico	steel → guns	2.421	0.014	17,33	0.326	5
	$guns \rightarrow steel$ $steel \rightarrow guns$	4.269	0	17,33 13,39	0.526 0.431	
Netherlands	guns → steel	1.771	0.084	13,39	0.162	3
North Korea	$steel \rightarrow guns$	3.9	0.001	11,42	0.376	2
North Korea	$guns \rightarrow steel$	5.135	0	11,42	0.462	2
Norway	$steel \rightarrow guns$	0.786	0.684	15,36	-0.067	4
	$guns \rightarrow steel$ $steel \rightarrow guns$	1.26 0.597	0.276 0.792	15,36 9,45	0.071 -0.072	
Poland	guns → steel	1.487	0.132	9,45	0.075	1
Dontes and	$steel \rightarrow guns$	0.678	0.724	9,45	-0.057	1
Portugal	$guns \rightarrow steel$	1.59	0.147	9,45	0.089	1
Romania	steel → guns	0.753	0.659	9,45	-0.043	1
	$guns \rightarrow steel$ $steel \rightarrow guns$	2.089	0.051	9,45	0.154 0.246	
Russia	guns → steel	1.032	0.43	9,45	0.005	1
C. al Action	$steel \rightarrow guns$	0.323	0.963	9,45	-0.127	1
South.Africa	$guns \rightarrow steel$	1.282	0.273	9,45	0.045	1
South Korea	$steel \rightarrow guns$	0.306	0.969	9,45	-0.131	1
Spain Taiwan	$guns \rightarrow steel$ $steel \rightarrow guns$	7.079 3.799	0.001	9,45	0.503 0.412	
	$guns \rightarrow steel$	1.347	0.229	13,39	0.08	3
	steel → guns	2.099	0.05	9,45	0.155	1
Taiwaii	$guns \rightarrow steel$	2.644	0.015	9,45	0.215	1
Turkey	steel → guns	1.617	0.139	9,45	0.093	1
-	guns → steel	10.103 10.371	0	9,45 9,45	0.603	
United Kingdom	$steel \rightarrow guns$ $guns \rightarrow steel$	0.994	0.459	9,45	-0.001	1
TI-:4-3 Ct. t	steel → guns	1.527	0.168	9,45	0.081	-
United States	$guns \rightarrow steel$	2.986	0.007	9,45	0.249	1

 .Word count:	86

III. Appendix

I. Info that goes into the Appendix