Do Policies and Institutions Matter for Pre-Tax Income Inequality? Cross-Country Evidence

Online Appendix - Additional Tables

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A Data

Table A.1: Countries and Time Periods

Country	Period	Observations	Source for MTR data
Australia	1980-2016	37	PSS, TE
Austria	1980-2016	37	JLV, TE
Belgium	1981-2016	36	JLV, OECD
Brazil	2001-2015	15	da Nóbrega (2014)
Canada	1980-2010	31	PSS
Chile	2004-2015	12	Flores et al. (2019)
China	1980-2015	36	RVW, TE
Croatia	1995-2005/2010-2016	18	WTI, TE
Czech Republic	1993-2016	24	WTI, OECD
Denmark	1980-2016	37	PSS, OECD
Estonia	1995-2016	22	WTI, OECD
Finland	1980-2010	31	PSS
France	1980-2016	37	Piketty (2014), TE
Germany	1980-2010	31	PSS
Greece	1981-2016	36	WTI, OECD
Hungary	1991-2016	26	WTI, OECD
Iceland	1990-2016	27	Karlsson (2014), TE
India	1981-2015	34	RVW, TE
Ireland	1980-2016	37	PSS, TE
Italy	1980-2016	37	PSS, TE

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Table A.1, continued

Country	Periods	Observations	Source for MTR data
Ivory Coast	1988/1993/1998/2002	4	WTI
Japan	1980-2010	31	PSS
Luxembourg	1985-2016	32	WTI, OECD
Malaysia	2002/2004/2007/2009/2012/2014	6	WTI, TE
Netherlands	1980-2016	37	PSS, OECD
New Zealand	1980-2016	37	PSS, OECD
Norway	1980-2016	37	PSS, OECD
Poland	1995-2016	22	WTI, OECD
Portugal	1980-2016	37	PSS, OECD
Romania	1992-2016	25	WTI, TE
Russia	1991-2015	25	WTI, Novokmet et al. (2018)
Serbia	1995-2016	22	WTI, TE
Singapore	1981-1991/1993-2014	33	WTI, TE
Slovenia	1994-2016	23	WTI, OECD
South Africa	1990-2012	23	Alvaredo and Atkinson (2010), TE
South Korea	1980-1985/1995-2016	28	JLV, TE
Spain	1980-2016	37	PSS, OECD
Sweden	1980-2016	37	PSS, OECD
Switzerland	1980-2016	37	PSS, OECD
Thailand	2001-2016	16	WTI, TE
United Kingdom	1980-2016	37	PSS, OECD
Uruguay	2009-2012	4	Provided by Gabriel Burdin
USA	1980-2016	37	Saez and Zucman (2019)

Notes: PSS refers to Piketty et al. (2014), JLV refers to Londoño-Vélez (2014), RVW refers to Roine et al. (2009), WTI refers to the *World Tax Indicators* (ICEPP, 2010), OECD refers to the official OECD statistics, and TE refers to *Trading Economics*.

B Additional tables

Table B.1: Equation (1) estimated by FGLS

	Top1	Top10	Bot90	Top1/Top10
Openness to trade	-0.424**	0.197	0.364	-0.0285***
	(0.166)	(0.134)	(0.293)	(0.00574)
Government expenditure	-0.728***	0.0414	0.613***	-0.0332***
	(0.102)	(0.0799)	(0.162)	(0.00401)
Financial development	0.356***	0.0226	-0.320**	0.0216***
	(0.0881)	(0.0661)	(0.137)	(0.00356)
Top income MTR	-0.491***	-0.167***	0.668***	-0.0165***
	(0.0705)	(0.0508)	(0.105)	(0.00288)
Observations	1228	1228	1228	1228

Notes: All regressions are estimated by FGLS allowing for heteroskedasticity across country and panel-specific serial correlation, and include country and time fixed effects and control for GDP per capita and population. Each column is a separate regression (the column title is the dep. variable). For details on the variables and the estimation sample, see Section 2. Standard errors (in parentheses) are clustered at the country level. *: $p < 0.10$, **: $p < 0.05$, ***: $p < 0.01$.

Table B.2: Equation (1) estimated by Arellano-Bond

	Top1	Top10	Bot90	Top1/Top10
Lagged dep. variable	0.640***	0.635***	0.680***	0.623***
	(0.110)	(0.0632)	(0.0896)	(0.0923)
Openness to trade	-0.0548	0.0299	0.0848	-0.0203
	(0.851)	(0.591)	(0.942)	(0.0489)
Government expenditure	-0.667	0.508	0.551	-0.0459**
	(0.425)	(0.395)	(0.739)	(0.0210)
Financial development	0.701	0.860**	-0.914	0.0256
	(0.582)	(0.391)	(0.746)	(0.0268)
Top income MTR	-0.604	0.332	0.376	-0.0332
	(0.461)	(0.215)	(0.500)	(0.0214)
Observations	1173	1173	1173	1173

Notes: All regressions are estimated using Arellano-Bond instrumental variables methods with two lags of the dependent variables, and include country and time fixed effects and control for GDP per capita and population. Each column is a separate regression (the column title is the dep. variable). For details on the variables and the estimation sample, see Section 2. Robust standard errors (in parentheses) are reported. *: $p < 0.10$, **: $p < 0.05$, ***: $p < 0.01$.

Table B.3: Equation (1) estimated in First Differences

	ΔTop 1	ΔTop 10	ΔBot 90	ΔTop 1/Top10
ΔOpenness to trade	0.556**	0.709**	-1.265***	0.00382
	(0.235)	(0.313)	(0.368)	(0.0133)
ΔGovernment expenditure	-0.631***	0.117	0.513*	-0.0301***
	(0.187)	(0.139)	(0.287)	(0.00722)
ΔFinancial development	0.399*	0.152	-0.551**	0.0165*
	(0.199)	(0.129)	(0.271)	(0.00852)
ΔTop income MTR	-0.415**	0.107	0.308**	-0.0209**
	(0.162)	(0.0982)	(0.142)	(0.00851)
Observations	1173	1173	1173	1173
Adjusted R^2	0.114	0.044	0.082	0.110

Notes: All regressions are estimated by OLS after taking first differences and include country-specific trends and time fixed effects and control for GDP per capita and population. Each column is a separate regression (the column title is the dep. variable). For details on the variables and the estimation sample, see Section 2. Standard errors (in parentheses) are clustered at the country level. *: $p < 0.10$, **: $p < 0.05$, ***: $p < 0.01$.

Table B.4: Equation (1) with Region-Time Fixed Effects

	Top1	Top10	Bot90	Top1/Top10
Openness to trade	-1.060	0.425	0.635	-0.0562**
	(0.642)	(0.483)	(1.050)	(0.0214)
Government expenditure	-0.846***	0.483	0.363	-0.0432***
	(0.260)	(0.338)	(0.431)	(0.0120)
Financial development	0.752*	-0.0623	-0.689	0.0380***
	(0.389)	(0.434)	(0.733)	(0.0133)
Top income MTR	-1.009***	-0.787***	1.796***	-0.0296**
	(0.317)	(0.157)	(0.337)	(0.0129)
Observations	1228	1228	1228	1228
Adjusted R^2	0.912	0.917	0.932	0.854

Notes: All regressions are estimated by OLS and include country and region-time fixed effects and control for GDP per capita and population. Each column is a separate regression (the column title is the dep. variable). For details on the variables and the estimation sample, see Section 2. Standard errors (in parentheses) are clustered at the country level. *: $p < 0.10$, **: $p < 0.05$, ***: $p < 0.01$.

Table B.5: Equation (1) Controlling for GDP Per Capita Squared

	Top1	Top10	Bot90	Top1/Top10
Openness to trade	-1.034	0.421	0.613	-0.0546**
	(0.679)	(0.476)	(1.090)	(0.0231)
Government expenditure	-0.879***	0.488	0.391	-0.0452***
	(0.285)	(0.352)	(0.466)	(0.0128)
Financial development	0.790**	-0.0684	-0.722	0.0404***
	(0.378)	(0.417)	(0.695)	(0.0132)
Top income MTR	-1.024***	-0.785***	1.808***	-0.0305**
	(0.335)	(0.153)	(0.352)	(0.0136)
Observations	1228	1228	1228	1228
Adjusted R^2	0.913	0.917	0.932	0.855

Notes: All regressions are estimated by OLS and include country and time fixed effects and control for GDP per capita, GDP per capita squared, and population. Each column is a separate regression (the column title is the dep. variable). For details on the variables and the estimation sample, see Section 2. Standard errors (in parentheses) are clustered at the country level. *: $p < 0.10$, **: $p < 0.05$, ***: $p < 0.01$.

Table B.6: Equation (1) Controlling for Democracy

	Top1	Top10	Bot90	Top1/Top10
Openness to trade	-0.731	0.622	0.109	-0.0465**
	(0.662)	(0.535)	(1.093)	(0.0229)
Government expenditure	-0.934***	0.708*	0.226	-0.0477***
	(0.304)	(0.362)	(0.450)	(0.0140)
Financial development	0.786**	-0.0962	-0.690	0.0394***
	(0.380)	(0.350)	(0.628)	(0.0137)
Top income MTR	-0.962***	-0.516**	1.477***	-0.0326**
	(0.344)	(0.199)	(0.362)	(0.0149)
Democracy	-0.0100	2.255**	-2.245**	-0.0536
	(0.893)	(0.936)	(0.911)	(0.0370)
Observations	999	999	999	999
Adjusted R^2	0.902	0.908	0.924	0.852

Notes: All regressions are estimated by OLS and include country and time fixed effects and control for GDP per capita and population. Each column is a separate regression (the column title is the dep. variable). For details on the variables and the estimation sample, see Section 2. The democracy indicator is taken from Acemoglu et al. (2019). Standard errors (in parentheses) are clustered at the country level. *: $p < 0.10$, **: $p < 0.05$, ***: $p < 0.01$.

Table B.7: Equation (1) With Alternative GDP Measure

	Top1	Top10	Bot90	Top1/Top10
Openness to trade	-1.061*	0.212	0.849	-0.0514**
	(0.579)	(0.406)	(0.901)	(0.0207)
Government expenditure	-0.963***	0.447	0.515	-0.0443***
	(0.254)	(0.370)	(0.482)	(0.0109)
Financial development	0.826**	0.0415	-0.868	0.0383***
	(0.377)	(0.395)	(0.684)	(0.0126)
Top income MTR	-0.900***	-0.623***	1.523***	-0.0282**
	(0.273)	(0.189)	(0.299)	(0.0118)
Observations	1228	1228	1228	1228
Adjusted R^2	0.909	0.895	0.921	0.859

Notes: All regressions are estimated by OLS and include country and time fixed effects and control for GDP per capita and population. Each column is a separate regression (the column title is the dep. variable). For details on the variables and the estimation sample, see Section 2. The alternative GDP per capita measure is taken from the Maddison Project Database and it is more suitable for cross-country growth (rather than income) comparisons. Standard errors (in parentheses) are clustered at the country level. *: $p < 0.10$, **: $p < 0.05$, ***: $p < 0.01$.

Table B.8: Equation (1) With Alternative Fin. Dev. Measurement (1)

	Top1	Top10	Bot90	Top1/Top10
Openness to trade	-0.490	0.677	-0.187	-0.0379*
	(0.570)	(0.558)	(1.018)	(0.0197)
Government expenditure	-0.929***	0.588	0.341	-0.0460***
	(0.239)	(0.397)	(0.492)	(0.0105)
Financial development	0.327	-0.00908	-0.318	0.0165*
	(0.211)	(0.238)	(0.350)	(0.00899)
Top income MTR	-0.590***	-0.519*	1.109***	-0.0177
	(0.213)	(0.281)	(0.316)	(0.0109)
Observations	1141	1141	1141	1141
Adjusted R^2	0.920	0.902	0.931	0.867

Notes: All regressions are estimated by OLS and include country and time fixed effects and control for GDP per capita and population. Each column is a separate regression (the column title is the dep. variable). For details on the variables and the estimation sample, see Section 2. The alternative financial development measure is taken from Chinn and Ito (2006). Standard errors (in parentheses) are clustered at the country level. *: $p < 0.10$, **: $p < 0.05$, ***: $p < 0.01$.

Table B.9: Equation (1) With Alternative Fin. Dev. Measurement (2)

	Top1	Top10	Bot90	Top1/Top10
Openness to trade	-1.452**	0.340	1.112	-0.0728***
	(0.635)	(0.468)	(1.003)	(0.0226)
Government expenditure	-1.221***	0.543	0.678	-0.0576***
	(0.338)	(0.421)	(0.577)	(0.0144)
Financial development	0.605	-0.146	-0.458	0.0263
	(0.379)	(0.254)	(0.489)	(0.0177)
Top income MTR	-0.682**	-0.453	1.135***	-0.0248
	(0.281)	(0.292)	(0.282)	(0.0152)
Observations	1046	1046	1046	1046
Adjusted R^2	0.920	0.909	0.933	0.864

Notes: All regressions are estimated by OLS and include country and time fixed effects and control for GDP per capita and population. Each column is a separate regression (the column title is the dep. variable). For details on the variables and the estimation sample, see Section 2. The alternative financial development measure is stock market capitalization plus total deposits over GDP and is taken from the World Development Indicators. Standard errors (in parentheses) are clustered at the country level. *: $p < 0.10$, **: $p < 0.05$, ***: $p < 0.01$.

Table B.10: Equation (1) for Period 1992-2016

	Top1	Top10	Bot90	Top1/Top10
Openness to trade	-0.998	0.494	0.505	-0.0526**
	(0.678)	(0.467)	(1.066)	(0.0218)
Government expenditure	-1.088***	0.505	0.583	-0.0536***
	(0.395)	(0.379)	(0.610)	(0.0159)
Financial development	0.713	-0.0279	-0.685	0.0348**
	(0.479)	(0.345)	(0.750)	(0.0164)
Top income MTR	-1.075***	-0.537*	1.613***	-0.0364**
	(0.347)	(0.275)	(0.400)	(0.0157)
Observations	925	925	925	925
Adjusted R^2	0.920	0.917	0.931	0.879

Notes: All regressions are estimated by OLS and include country and time fixed effects and control for GDP per capita and population. Each column is a separate regression (the column title is the dep. variable). For details on the variables and the estimation sample, see Section 2. Standard errors (in parentheses) are clustered at the country level. *: $p < 0.10$, **: $p < 0.05$, ***: $p < 0.01$.

Table B.11: Equation (1) Dropping Countries with less than 10 Obs.

	Top1	Top10	Bot90	Top1/Top10
Openness to trade	-1.124*	0.166	0.958	-0.0525**
	(0.567)	(0.409)	(0.887)	(0.0202)
Government expenditure	-0.998***	0.455	0.542	-0.0459***
	(0.262)	(0.361)	(0.473)	(0.0112)
Financial development	0.823**	0.0474	-0.870	0.0382***
	(0.383)	(0.408)	(0.702)	(0.0127)
Top income MTR	-0.904***	-0.617***	1.521***	-0.0284**
	(0.270)	(0.189)	(0.299)	(0.0116)
Observations	1214	1214	1214	1214
Adjusted R^2	0.909	0.892	0.920	0.859

Notes: All regressions are estimated by OLS and include country and time fixed effects and control for GDP per capita and population. Each column is a separate regression (the column title is the dep. variable). For details on the variables and the estimation sample, see Section 2. Standard errors (in parentheses) are clustered at the country level. *: $p < 0.10$, **: $p < 0.05$, ***: $p < 0.01$.

Table B.12: Pairwise Correlations: V-Dem Variables

	Client.	Hered.	Corr. (1)	Corr. (2)	Gr.: Arist.	Gr.: Agr. el.	Gr.: Pol. el.	Gr.: Bus. el.	Ex.: SES	Ex.: Gender	Ex.: Pol.	Ex.: Urb.
Client.	1.00											
Hered.	0.30***	1.00										
Corr. (1)	0.89***	0.28***	1.00									
Corr. (2)	0.90***	0.26***	0.98***	1.00								
Gr.: Arist.	0.07*	0.33***	0.06	0.04	1.00							
Gr.: Agr. el.	0.01	0.09**	0.06*	0.03	0.14***	1.00						
Gr.: Pol. el.	0.01	-0.19***	0.02	0.00	0.10***	0.07*	1.00					
Gr.: Bus. el.	-0.03	0.05	-0.14***	-0.14***	0.22***	0.16***	0.08**	1.00				
Ex.: SES	0.72***	0.32***	0.70***	0.69***	0.21***	0.04	-0.08**	-0.05	1.00			
Ex.: Gender	0.67***	0.14***	0.55***	0.55***	0.16***	0.08**	-0.02	0.10**	0.79***	1.00		
Ex.: Pol.	0.82***	0.32***	0.75***	0.73***	0.15***	0.04	-0.01	-0.12***	0.83***	0.78***	1.00	
Ex.: Urb.	0.69***	0.17***	0.66***	0.66***	0.13***	0.04	-0.11***	-0.16***	0.87***	0.82***	0.81***	1.00

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

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