

# Supplemental Appendix

## “The Wealth Inequality of Nations”

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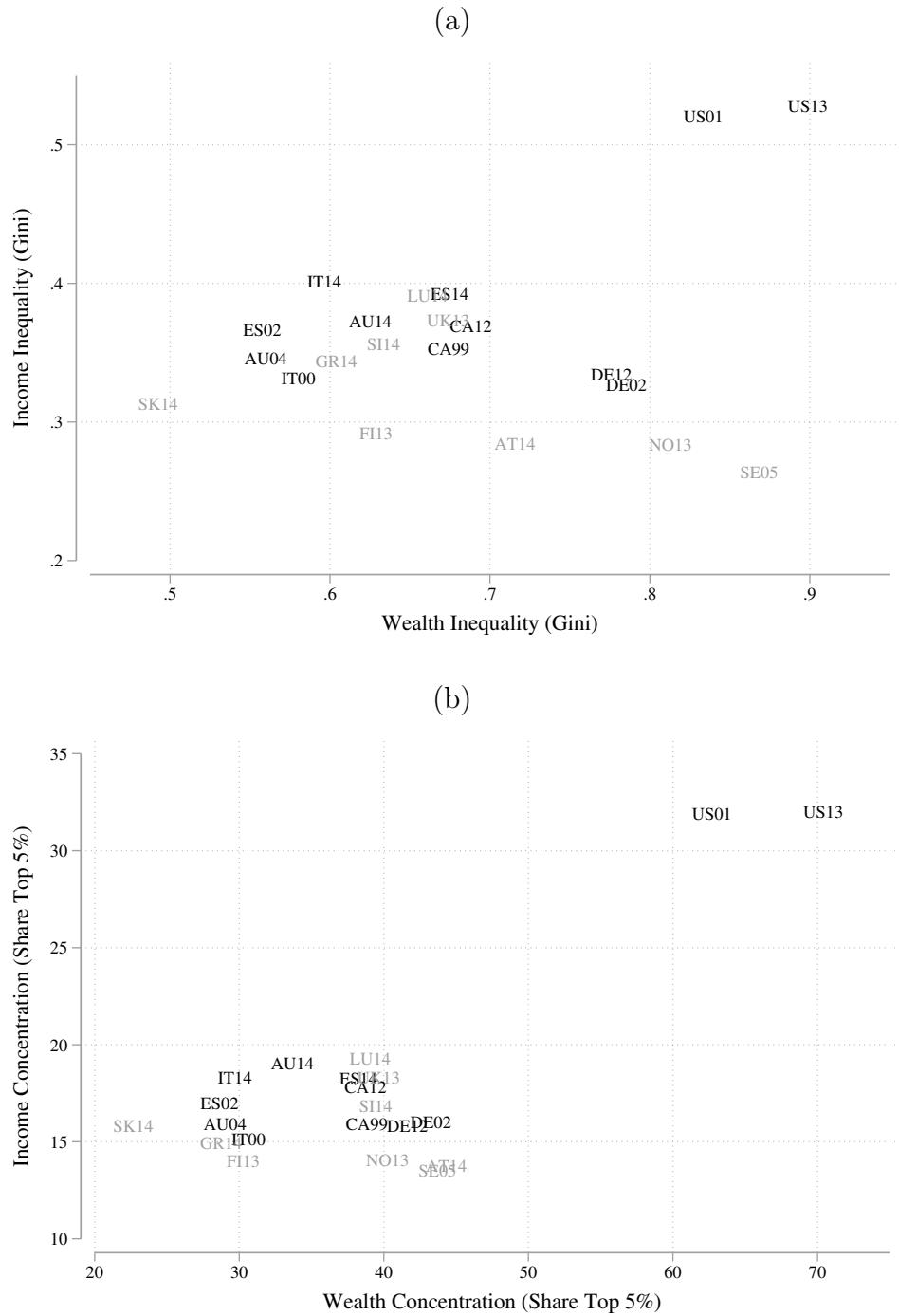
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## APPENDIX S.1 PRE- RECESSION WEALTH

For a handful of countries, LWS includes wealth measures taken before the Great Recession of 2008/2009. Figure S.1 includes and highlights these countries and allows an assessment of the extent of change in wealth and income inequality (Figure S.1a) as well as wealth and income concentration (Figure S.1b) between a pre-recession and post-recession measurement point. In most countries, inequality and concentration in income and wealth remain relatively stable or increase somewhat over this period. Larger increases in wealth inequality and concentration can be observed for Australia, Spain, and the United States. However, Figure S.1 also reveals that our overall assessment of international differences in wealth inequality and concentration – and, in particular, its non-correlation with international differences in income inequality and concentration – is substantively the same whether we draw on pre- or post-recession measures of wealth.

Similarly, Table S.1 reports the results of an alternative decomposition analysis that takes the pre-recession (2001) U.S. wealth structure and distribution as the reference to simulate wealth inequality and concentration in other countries. The resulting findings of the decomposition analysis hardly change. That is, imposing the pre-recession U.S. wealth portfolio and within-component inequality on other countries has approximately the same effect as imposing the post-recession U.S. wealth structure (as reported in our main analyses). This point is further emphasized by the fact that imposing pre-recession U.S. estimates on the post-recession U.S. also produces quite limited changes in overall wealth inequality and concentration. In sum, the stability analyses reported here suggest that our main findings are not simply a reflection of a unique post-recessionary period.

Figure S.1: Wealth Inequality and Concentration: Pre- and Post-Recession



Notes: Based on LWS data. Countries for which LWS provides pre-recession measure wealth measures are highlighted in black (those with only post-recession measures are in gray) and the measurement years are included in the marker label

Table S.1: Decomposition using U.S. Pre-Recession Wealth

(a) Decomposition

	Observed	Gini Coefficient						Top Share (5%)	
		(1)		(2)		(3)			
		Shares = US01 Counterfact. (change)	Comp. Ginis = US01 Counterfact. (change)	Comp. Ginis = US01 Counterfact. (change)	Gini corr. = US01 Counterfact. (change)	Shares = US01 Counterfact. (change)	Shares = US01 Counterfact. (change)		
United States 2001	0.784							58.1	
Australia	0.605	0.585 (-3.3%)	0.719 (18.9%)	0.636 (5.1%)	0.604 (-0.1%)	32.7	34.541 (5.5%)	49.460 (51.1%)	
Austria	0.704	0.649 (-7.8%)	0.740 (5.1%)	0.724 (2.7%)	44.0	41.574 (-5.6%)	49.811 (13.1%)	46.040 (4.5%)	
Canada	0.633	0.658 (3.9%)	0.719 (13.6%)	0.662 (4.6%)	35.6	39.819 (11.8%)	47.995 (34.8%)	38.651 (8.6%)	
Finland	0.586	0.605 (3.3%)	0.706 (20.5%)	0.614 (4.7%)	29.4	36.475 (24.1%)	46.016 (56.5%)	31.032 (5.6%)	
Germany	0.711	0.710 (-0.2%)	0.715 (0.5%)	0.740 (4.1%)	39.2	45.229 (15.4%)	46.733 (19.2%)	41.609 (6.2%)	
Greece	0.590	0.581 (-1.5%)	0.708 (20.1%)	0.618 (4.8%)	28.0	29.836 (6.4%)	44.367 (58.3%)	30.570 (9.1%)	
Italy	0.590	0.585 (-0.9%)	0.728 (23.4%)	0.615 (4.2%)	29.4	32.567 (10.8%)	47.777 (62.5%)	31.834 (8.3%)	
Luxembourg	0.649	0.654 (0.7%)	0.736 (13.4%)	0.657 (1.3%)	38.5	44.686 (15.9%)	48.906 (26.9%)	38.180 (-1.0%)	
Slovak Republic	0.483	0.501 (3.6%)	0.701 (45.0%)	0.520 (7.5%)	22.5	27.751 (23.2%)	44.703 (98.5%)	25.031 (11.2%)	
Slovenia	0.622	0.612 (-1.6%)	0.737 (18.5%)	0.643 (3.4%)	38.8	40.140 (3.5%)	50.167 (29.3%)	40.070 (3.3%)	
Spain	0.654	0.671 (2.5%)	0.726 (11.0%)	0.683 (4.4%)	37.2	43.497 (16.8%)	49.196 (32.2%)	39.144 (5.2%)	
United Kingdom	0.648	0.643 (-0.7%)	0.751 (16.0%)	0.666 (2.7%)	38.3	40.064 (4.7%)	53.976 (41.0%)	39.078 (2.1%)	
United States 2013	0.822	0.826 (0.6%)	0.784 (-4.6%)	0.818 (-0.5%)	63.5	63.936 (0.7%)	58.358 (-8.1%)	62.821 (-1.1%)	

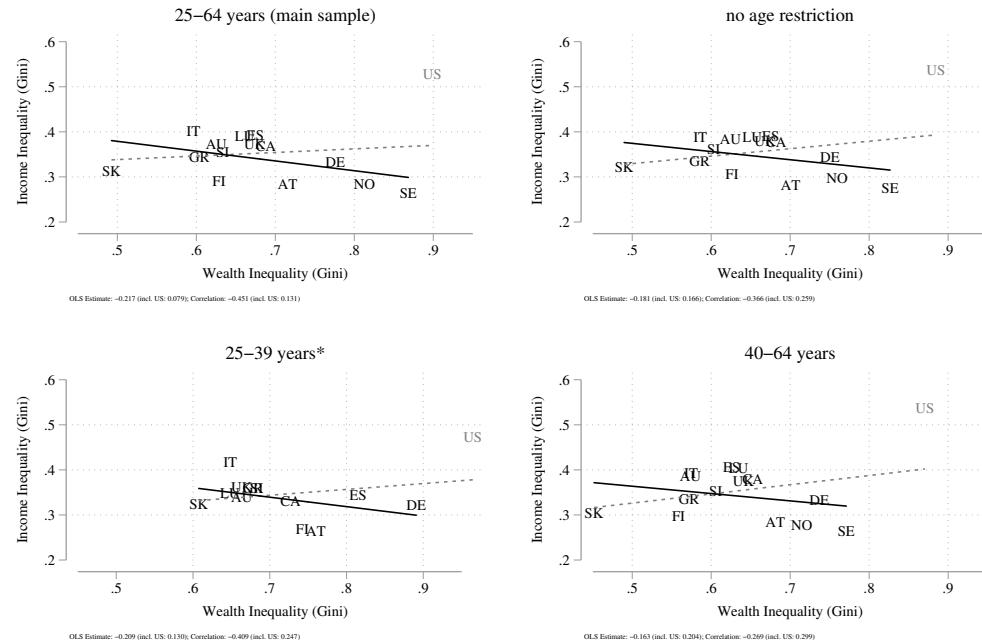
(b) Decomposition: Within-Component Inequality/Concentration

	Observed	Gini Coefficient						Top Share (5%)	
		(1)		(2)		(3)			
		Housing Equity Counterfact. (change)	Financial Assets Counterfact. (change)	Non-Housing Counterfact. (change)	Other debts Counterfact. (change)	Other debts Counterfact. (change)	Housing Equity Counterfact. (change)		
United States 2001	0.784							58.1	
Australia	0.605	0.660 (9.1%)	0.614 (1.5%)	0.655 (8.3%)	0.604 (-0.1%)	32.733	41.102 (25.6%)	34.879 (6.6%)	
Austria	0.704	0.729 (3.6%)	0.728 (3.3%)	0.693 (-1.7%)	0.704 (-0.1%)	44.041	48.815 (10.8%)	46.732 (6.1%)	
Canada	0.633	0.686 (8.4%)	0.642 (1.4%)	0.655 (3.5%)	0.634 (0.2%)	35.605	42.700 (19.9%)	37.275 (4.7%)	
Finland	0.586	0.685 (16.8%)	0.601 (2.6%)	0.595 (1.5%)	0.583 (-0.5%)	23.397	42.079 (43.1%)	32.980 (9.1%)	
Germany	0.711	0.712 (0.0%)	0.730 (2.7%)	0.698 (-1.8%)	0.709 (-0.4%)	39.195	45.272 (15.5%)	42.774 (9.1%)	
Greece	0.590	0.695 (17.9%)	0.592 (0.4%)	0.602 (2.1%)	0.588 (-0.2%)	28.031	41.193 (47.0%)	28.536 (1.8%)	
Italy	0.590	0.690 (17.0%)	0.599 (1.5%)	0.619 (4.9%)	0.590 (-0.0%)	29.405	41.927 (42.6%)	30.966 (5.3%)	
Luxembourg	0.649	0.721 (11.2%)	0.659 (1.5%)	0.655 (0.9%)	0.648 (-0.2%)	38.548	46.220 (19.9%)	40.615 (5.4%)	
Slovak Republic	0.483	0.684 <sub>t</sub> (41.6%)	0.492 (1.8%)	0.492 (1.9%)	0.482 (-0.2%)	22.517	41.287 (83.4%)	24.012 (6.6%)	
Slovenia	0.622	0.746 (20.1%)	0.624 (0.3%)	0.610 (-1.9%)	0.621 (-0.1%)	38.798	51.305 (32.2%)	39.264 (1.2%)	
Spain	0.654	0.715 (9.4%)	0.663 (1.4%)	0.657 (0.4%)	0.652 (-0.2%)	37.225	46.637 (25.3%)	39.037 (4.9%)	
United Kingdom	0.648	0.683 (5.4%)	0.660 (1.8%)	0.704 (8.7%)	0.648 (-0.0%)	38.271	44.342 (15.9%)	40.884 (6.8%)	
United States 2013	0.822	0.797 (-3.0%)	0.815 (-0.8%)	0.815 (-0.7%)	0.821 (-0.0%)	63.517	61.561 (-3.1%)	61.863 (-2.6%)	
								61.917 (-2.5%)	

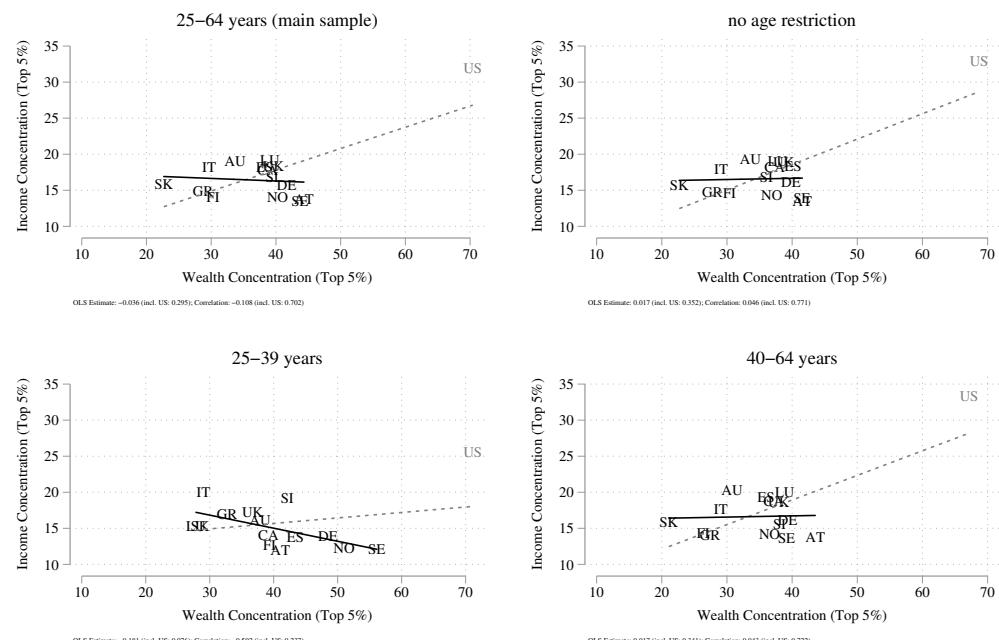
## APPENDIX S.2 AGE GROUPS

Figure S.2: Wealth Inequality and Concentration: Different Age Groups

(a) Inequality



(b) Concentration



Notes: Based on LWS data. Analytic samples are drawn with different restrictions on the age of the household head (25-64, 25-39, 40-64, none). S.4

\*We point out that the Gini coefficient estimates for the age group 25-39 in Sweden and Norway are implausibly high (1.26 and 1.23, respectively) and excluded from Figure S.2a. Gini coefficients of above 1 can arise for distributions with a substantial share of negative values. Indeed, additional analyses reveal that the two countries have the highest share of households with negative net worth in this age group among all countries included here. Restricting the estimation to only positive net worth values brings the Gini coefficient estimates back into the standard range (see also stability of findings based on the top share measure; Figure S.2b). Of course, aside from challenging the interpretation of estimated Gini coefficients among younger Swedes and Norwegians, this pattern also points towards a substantively interesting shift in the wealth distribution across age groups in Sweden and Norway (further assessed in Pfeffer and Waitkus 2021).

Table S.2: Decomposition: No age restrictions

(a) Decomposition

## (b) Decomposition: Within-Component Inequality/Concentration

		Gini Coefficient			Top Share (5%)				
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
		Housing Equity	Financial Assets	Non-Housing	Other debts	Housing Equity	Financial Assets	Non-Housing	Other debts
Observed Counterfact.		(change)	Counterfact.	(change)	Counterfact.	(change)	Counterfact.	(change)	Counterfact. (change)
United States	0.822					63.3			
Australia	0.605	0.704	(16.2%)	0.620	(2.3%)	0.654	(8.0%)	0.605	(-0.1%)
Austria	0.690	0.756	(9.5%)	0.716	(3.7%)	0.688	(-0.3%)	0.689	(-0.1%)
Canada	0.633	0.719	(13.7%)	0.646	(2.1%)	0.658	(4.0%)	0.634	(0.2%)
Finland	0.591	0.735	(24.4%)	0.610	(3.2%)	0.599	(1.4%)	0.589	(-0.3%)
Germany	0.706	0.756	(7.1%)	0.729	(3.3%)	0.698	(-1.1%)	0.704	(-0.2%)
Greece	0.573	0.748	(30.5%)	0.577	(0.7%)	0.584	(1.8%)	0.572	(-0.2%)
Italy	0.581	0.735	(26.5%)	0.593	(2.0%)	0.610	(5.0%)	0.581	(-0.0%)
Luxembourg	0.641	0.767	(19.6%)	0.655	(2.2%)	0.649	(1.1%)	0.640	(-0.1%)
Slovak Republic	0.482	0.736	(52.8%)	0.491	(1.9%)	0.491	(1.9%)	0.481	(-0.2%)
Slovenia	0.593	0.778	(31.1%)	0.596	(0.5%)	0.590	(-0.5%)	0.593	(-0.0%)
Spain	0.659	0.767	(16.4%)	0.670	(1.7%)	0.663	(0.5%)	0.658	(-0.2%)
United Kingdom	0.646	0.722	(11.7%)	0.664	(2.8%)	0.703	(8.8%)	0.646	(-0.0%)

Table S.3: Decomposition: Age 25-39

## (a) Decomposition

	Gini Coefficient						Top Share (5%)					
	(1)		(2)		(3)		(4)		(5)		(6)	
	Shares = US13	Comp. gini = Counterfact. (change)	Shares = US13	Comp. gini = Counterfact. (change)	Gini corr. = US13	Shares = US13	Observed	Counterfact. (change)	Shares = US13	Comp. concen. = Counterfact. (change)	Shares = US13	Alignm. factor = Counterfact. (change)
United States	0.768						55.0					
Australia	0.619	0.550 (-11.1%)	0.752 (21.6%)	0.656 (6.0%)	0.734 (1.6%)	0.734 (1.6%)	35.7	33.2 (-7.0%)	53.1 (48.9%)	36.1 (1.1%)		
Austria	0.722	0.610 (-15.6%)	0.795 (10.1%)	0.734 (1.6%)	0.734 (1.6%)	0.734 (1.6%)	39.7	39.2 (-1.4%)	52.8 (32.9%)	40.6 (2.2%)		
Canada	0.626	0.608 (-2.8%)	0.751 (20.1%)	0.652 (4.2%)	0.652 (4.2%)	0.652 (4.2%)	34.0	35.2 (3.7%)	47.9 (41.0%)	36.7 (8.0%)		
Finland	0.634	0.612 (-3.5%)	0.761 (19.9%)	0.663 (4.5%)	0.663 (4.5%)	0.663 (4.5%)	35.7	39.3 (10.4%)	49.8 (39.6%)	35.4 (-0.7%)		
Germany	0.763	0.733 (-1.3%)	0.763 (0.0%)	0.788 (3.3%)	0.788 (3.3%)	0.788 (3.3%)	43.1	48.7 (13.0%)	46.7 (8.4%)	46.7 (8.3%)		
Greece	0.658	0.586 (-10.9%)	0.811 (23.3%)	0.665 (1.1%)	0.665 (1.1%)	0.665 (1.1%)	31.5	29.2 (-7.2%)	49.3 (56.4%)	32.8 (4.1%)		
Italy	0.641	0.591 (-7.7%)	0.803 (25.4%)	0.650 (1.5%)	0.650 (1.5%)	0.650 (1.5%)	28.5	29.7 (4.0%)	49.3 (72.8%)	31.3 (9.5%)		
Luxembourg	0.626	0.533 (-14.9%)	0.775 (23.8%)	0.657 (4.9%)	0.657 (4.9%)	0.657 (4.9%)	28.0	28.2 (0.8%)	47.9 (71.1%)	29.2 (4.4%)		
Slovak Republic	0.597	0.567 (-4.9%)	0.805 (34.9%)	0.614 (2.9%)	0.614 (2.9%)	0.614 (2.9%)	27.8	31.1 (11.9%)	50.5 (81.9%)	29.2 (4.9%)		
Slovenia	0.667	0.582 (-12.9%)	0.795 (19.1%)	0.684 (2.5%)	0.684 (2.5%)	0.684 (2.5%)	41.2	38.8 (-5.8%)	53.0 (28.7%)	42.8 (3.9%)		
Spain	0.774	0.691 (-10.7%)	0.771 (-0.4%)	0.801 (3.5%)	0.801 (3.5%)	0.801 (3.5%)	41.8	41.6 (-0.6%)	50.8 (21.4%)	43.8 (4.6%)		
United Kingdom	0.604	0.551 (-8.8%)	0.758 (25.4%)	0.633 (4.7%)	0.633 (4.7%)	0.633 (4.7%)	33.7	31.3 (-7.1%)	52.2 (54.9%)	34.6 (2.7%)		

## (b) Decomposition: Within-Component Inequality/Concentration

	Gini Coefficient						Top Share (5%)					
	(1)		(2)		(3)		(4)		(5)		(6)	
	Shares = US13	Comp. gini = Counterfact. (change)	Shares = US13	Comp. gini = Counterfact. (change)	Gini corr. = US13	Shares = US13	Observed	Counterfact. (change)	Shares = US13	Comp. concen. = Counterfact. (change)	Shares = US13	Alignm. factor = Counterfact. (change)
United States	0.768						55.0					
Australia	0.619	0.550 (-11.1%)	0.752 (21.6%)	0.656 (6.0%)	0.734 (1.6%)	0.734 (1.6%)	35.7	33.2 (-7.0%)	53.1 (48.9%)	36.1 (1.1%)		
Austria	0.722	0.610 (-15.6%)	0.795 (10.1%)	0.734 (1.6%)	0.734 (1.6%)	0.734 (1.6%)	39.7	39.2 (-1.4%)	52.8 (32.9%)	40.6 (2.2%)		
Canada	0.626	0.608 (-2.8%)	0.751 (20.1%)	0.652 (4.2%)	0.652 (4.2%)	0.652 (4.2%)	34.0	35.2 (3.7%)	47.9 (41.0%)	36.7 (8.0%)		
Finland	0.634	0.612 (-3.5%)	0.761 (19.9%)	0.663 (4.5%)	0.663 (4.5%)	0.663 (4.5%)	35.7	39.3 (10.4%)	49.8 (39.6%)	35.4 (-0.7%)		
Germany	0.763	0.733 (-1.3%)	0.763 (0.0%)	0.788 (3.3%)	0.788 (3.3%)	0.788 (3.3%)	43.1	48.7 (13.0%)	46.7 (8.4%)	46.7 (8.3%)		
Greece	0.658	0.586 (-10.9%)	0.811 (23.3%)	0.665 (1.1%)	0.665 (1.1%)	0.665 (1.1%)	31.5	29.2 (-7.2%)	49.3 (56.4%)	32.8 (4.1%)		
Italy	0.641	0.591 (-7.7%)	0.803 (25.4%)	0.650 (1.5%)	0.650 (1.5%)	0.650 (1.5%)	28.5	29.7 (4.0%)	49.3 (72.8%)	31.3 (9.5%)		
Luxembourg	0.626	0.533 (-14.9%)	0.775 (23.8%)	0.657 (4.9%)	0.657 (4.9%)	0.657 (4.9%)	28.0	28.2 (0.8%)	47.9 (71.1%)	29.2 (4.4%)		
Slovak Republic	0.597	0.567 (-4.9%)	0.805 (34.9%)	0.614 (2.9%)	0.614 (2.9%)	0.614 (2.9%)	27.8	31.1 (11.9%)	50.5 (81.9%)	29.2 (4.9%)		
Slovenia	0.667	0.582 (-12.9%)	0.795 (19.1%)	0.684 (2.5%)	0.684 (2.5%)	0.684 (2.5%)	41.2	38.8 (-5.8%)	53.0 (28.7%)	42.8 (3.9%)		
Spain	0.774	0.691 (-10.7%)	0.771 (-0.4%)	0.801 (3.5%)	0.801 (3.5%)	0.801 (3.5%)	41.8	41.6 (-0.6%)	50.8 (21.4%)	43.8 (4.6%)		
United Kingdom	0.604	0.551 (-8.8%)	0.758 (25.4%)	0.633 (4.7%)	0.633 (4.7%)	0.633 (4.7%)	33.7	31.3 (-7.1%)	52.2 (54.9%)	34.6 (2.7%)		

Table S.4: Decomposition: Age 40-64

(a) Decomposition

	Observed	Gini Coefficient						Top Share (5%)							
		(1)		(2)		(3)		Shares = USI3 Counterfact. (change)	Gini corr. = USI3 Counterfact. (change)	Shares = USI3 Counterfact. (change)	Comp. concen. = Counterfact. (change)	Shares = USI3 Counterfact. (change)	Comp. concen. = Counterfact. (change)	Alignm. factor = Counterfact. (change)	
		Shares = USI3 Counterfact. (change)	Gini corr. = USI3 Counterfact. (change)	Shares = USI3 Counterfact. (change)	Gini corr. = USI3 Counterfact. (change)	Shares = USI3 Counterfact. (change)	Gini corr. = USI3 Counterfact. (change)								
S.8	United States	0.816						62.0							
Australia	0.560	0.547 (-2.3%)	0.743 (32.7%)	0.598 (6.7%)	30.2	32.4 (7.5%)	51.8 (71.8%)						31.7 (51%)		
Austria	0.674	0.634 (-6.0%)	0.763 (13.2%)	0.706 (4.7%)	43.4	41.7 (-3.9%)	53.1 (22.3%)						45.6 (51%)		
Canada	0.610	0.642 (5.2%)	0.747 (22.4%)	0.647 (6.0%)	34.6	39.2 (13.3%)	51.2 (48.0%)						37.4 (8.3%)		
Finland	0.537	0.577 (7.6%)	0.738 (37.5%)	0.568 (5.9%)	26.4	34.4 (30.3%)	48.0 (81.7%)						27.9 (5.8%)		
Germany	0.680	0.693 (1.8%)	0.743 (9.3%)	0.718 (5.6%)	37.3	44.6 (19.6%)	49.5 (32.8%)						39.2 (5.2%)		
Greece	0.560	0.565 (0.9%)	0.740 (32.2%)	0.595 (6.3%)	26.8	28.5 (6.5%)	46.8 (74.7%)						28.9 (7.9%)		
Italy	0.569	0.568 (-0.2%)	0.757 (33.2%)	0.601 (5.8%)	28.8	32.2 (11.9%)	50.8 (76.4%)						31.1 (8.0%)		
Luxembourg	0.627	0.661 (5.4%)	0.777 (23.9%)	0.637 (1.6%)	38.6	45.7 (18.5%)	51.7 (34.0%)						37.9 (-1.7%)		
Slovak Republic	0.443	0.470 (6.2%)	0.728 (64.4%)	0.487 (9.9%)	21.0	26.0 (23.7%)	46.5 (120.9%)						23.5 (11.7%)		
Slovenia	0.595	0.615 (3.3%)	0.769 (29.2%)	0.620 (4.2%)	37.5	41.0 (9.3%)	52.6 (40.3%)						39.2 (4.4%)		
Spain	0.607	0.652 (7.3%)	0.757 (24.6%)	0.641 (5.5%)	35.2	43.5 (23.7%)	52.3 (48.5%)						36.6 (4.1%)		
United Kingdom	0.622	0.621 (-0.2%)	0.781 (25.5%)	0.647 (4.0%)	37.0	39.1 (5.7%)	57.4 (55.1%)						38.0 (2.6%)		

(b) Decomposition: Within-Component Inequality/Concentration

	Observed	Gini Coefficient						Top Share (5%)								
		(1)		(2)		(3)		Housing Equity Counterfact. (change)	Financial Assets Counterfact. (change)	Non-Housing Counterfact. (change)	Other debts Counterfact. (change)	Housing Equity Counterfact. (change)	Financial Assets Counterfact. (change)	Non-Housing Counterfact. (change)	Other debts Counterfact. (change)	
		Housing Equity Counterfact. (change)	Financial Assets Counterfact. (change)	Non-Housing Counterfact. (change)	Other debts Counterfact. (change)	Observed	Counterfact.									
S.8	United States	0.816						62.0								
Australia	0.560	0.681 (21.5%)	0.575 (2.6%)	0.609 (8.7%)	0.560 (-0.0%)	30.2	42.2 (40.0%)								36.4 (20.7%)	30.1 (-0.2%)
Austria	0.674	0.745 (10.5%)	0.698 (3.5%)	0.669 (-0.8%)	0.674 (-0.1%)	43.4	50.1 (15.4%)								43.7 (0.7%)	43.2 (-0.4%)
Canada	0.610	0.706 (15.8%)	0.623 (2.1%)	0.636 (4.3%)	0.611 (0.2%)	34.6	43.8 (26.6%)								37.2 (7.5%)	34.8 (0.6%)
Finland	0.537	0.710 (32.4%)	0.554 (3.3%)	0.549 (2.3%)	0.534 (-0.5%)	26.4	42.9 (62.5%)								29.7 (12.3%)	28.6 (8.2%)
Germany	0.680	0.732 (7.6%)	0.702 (3.2%)	0.672 (-1.3%)	0.679 (-0.3%)	37.3	46.6 (24.8%)								41.4 (11.0%)	36.4 (-2.5%)
Greece	0.560	0.725 (29.4%)	0.563 (0.6%)	0.573 (2.4%)	0.559 (-0.2%)	26.8	43.3 (61.9%)								27.5 (2.8%)	29.6 (10.4%)
Italy	0.569	0.714 (25.5%)	0.579 (1.9%)	0.602 (5.8%)	0.569 (-0.0%)	28.8	43.7 (51.5%)								30.8 (7.0%)	34.0 (17.9%)
Luxembourg	0.627	0.759 (21.1%)	0.638 (1.9%)	0.634 (1.1%)	0.626 (-0.1%)	38.6	48.4 (25.5%)								41.1 (6.5%)	39.5 (2.4%)
Slovak Republic	0.443	0.708 (59.8%)	0.452 (2.1%)	0.455 (2.8%)	0.442 (-0.2%)	21.0	42.4 (101.5%)								22.5 (6.8%)	23.8 (13.3%)
Slovenia	0.595	0.770 (29.4%)	0.598 (0.5%)	0.592 (-0.6%)	0.595 (-0.0%)	37.5	51.8 (38.1%)								38.1 (1.6%)	37.7 (0.5%)
Spain	0.607	0.742 (22.1%)	0.619 (1.9%)	0.612 (0.8%)	0.606 (-0.2%)	35.2	48.4 (37.6%)								37.7 (7.1%)	36.7 (4.2%)
United Kingdom	0.622	0.705 (13.3%)	0.640 (2.8%)	0.681 (9.4%)	0.622 (-0.0%)	37.0	46.0 (24.2%)								40.8 (10.3%)	44.6 (20.6%)

## APPENDIX S.3 DATA QUALITY

We are not aware of any studies that have formally validated wealth estimates from LWS against other data sources,<sup>1</sup> a reflection of the early stage at which comparative wealth research finds itself (Killewald et al. 2017). Here, we pursue different approaches to critically interrogate the validity of our main estimates and comparative conclusions. First, we provide a direct comparison of our estimates to those derived from other data sources. Second, we spell out our expectations on the potential role of measurement error at the top for our cross-national comparison. Third, we simulate how large measurement error in top wealth in the United States would have to be to influence our conclusion about its exceptional level of wealth inequality.

### External Validation

The Household Finance and Consumption Survey (HFCS), collected by the European Central Bank, measures households' net worth in European countries. LWS draws on HFCS surveys for some countries where no other fitting wealth data are available, namely Austria, Greece, Luxembourg, Slovakia, and Slovenia. In these countries, a comparison between LWS and HFCS-based estimates amounts to an assessment of how much the harmonization work done by LWS impacts estimates of wealth inequality and concentration (see Figure S.3a and S.3b; unfilled red diamonds). In contrast, for others countries in our sample, HFCS data exist but LWS draws on different national data sources, allowing us to assess to what degree estimates of wealth inequality and concentration depend on the survey used (see Figure S.3a and S.3b; filled red diamonds).<sup>2</sup> In S.3a and S.3b we observe that estimates of wealth inequality vary across data sources but that deviations are quite minor for Gini coefficients and negligible for top share measures (with the exception of wealth concentration in Germany, which is

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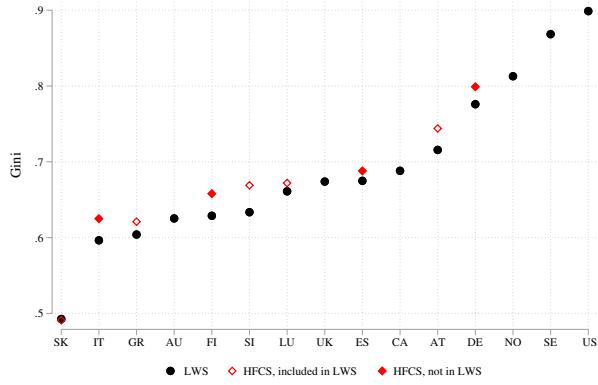
<sup>1</sup>We have confirmed this assessment in personal communication with LWS staff.

<sup>2</sup>For a few of these countries, there are minor differences in survey years between the LWS-included survey and the HFCS survey (2012 vs. 2014 in Germany and 2013 vs. 2014 for Finland).

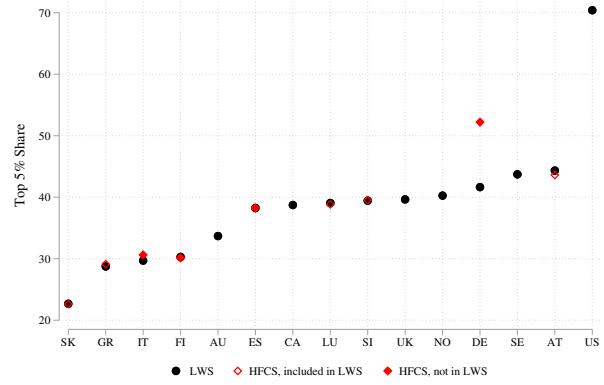
estimated to be substantially higher in the HFCS data). Also, the deviations resulting from the use of entirely different surveys does not appear, on average, to introduce larger deviations than those introduced by harmonization efforts. Overall, we interpret these patterns to lend considerable credibility to LWS-based estimates of international differences in wealth inequality.

Figure S.3: External Validation

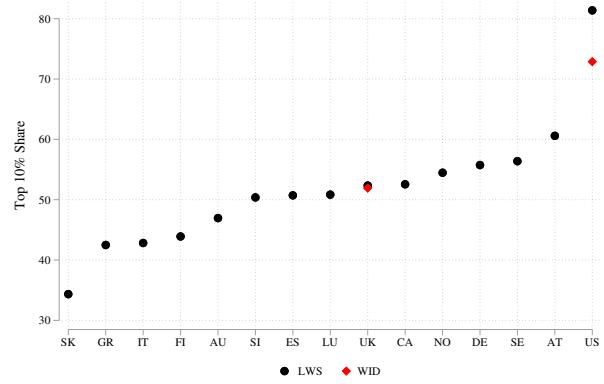
(a) Comparison to HFCS: Gini Coefficient



(b) Comparison to HFCS: Top 5% Share



(c) Comparison to DINA: Top 10% Share



Notes: Based on our main LWS sample, the Household Finance and Consumer Survey (wave II), and the World Inequality Database (WID.world; accessed November 2020). For HFCS, we also restrict the sample to the working-age population and equilibrate wealth measures. For WID, we cannot impose the same sample constraints or measurement transformations and we also have to rely on a measure of the wealth share held by the top 10% (to see how estimating this measure for LWS provides a similar but not identical ranking of countries compared to the top 5% share, compare the x-axis of Figure b to Figure c)

What if we were to compare our estimates to those derived not merely from different data sources but from entirely different measurement approaches? A recent innovation in

wealth measurement comes from Distributional National Accounts, DINA (Saez and Zucman 2016; Piketty et al. 2018). This approach approximates wealth distributions from the wealth measured in national aggregate statistics through a variety of complex data imputations, chiefly the conversion of streams of asset income into underlying asset values (“income capitalization”). DINA wealth data differ in a variety of ways from survey-based measures (Fesseau et al. 2013; Saez and Zucman 2020), such as the unit of analysis (taxpayers), the included asset components (restricted to return-yielding assets), and, perhaps most importantly, in their focus on the very top of the wealth distribution (where asset income exists). In Figure 3c, we draw on DINA estimates of top wealth concentration as supplied by the World Inequality Database (WID, Alvaredo et al. 2017). Among the countries included in our sample, such estimates are only available for the U.S. and UK, illustrating that this approach to wealth measurement is still in its infancy. Nevertheless, the estimates of wealth concentration (share held by the top 10 percent, as available in WID) are broadly comparable between the DINA and LWS. The relative ranking of the U.S. remains unaltered based on DINA data while the UK moves, by a few countries, into the upper half of the ranking. Notably, compared to survey estimates, DINA estimates are lower in the U.S.<sup>3</sup> and higher in the UK, again providing no indication that survey-based measures may consistently over- or under-estimate wealth concentration.

## **Undercoverage of Top Wealth: Expectations and Simulations**

Skeptics may still worry that none of the measurement approaches discussed above adequately capture the concentration of wealth at the very top: The very wealthy may simply be better at evading any type of data collection effort compared to those with less wealth. That may be true, but the question for our comparative study is whether the potential undercoverage of wealth at the top of the distribution may also bias our comparative conclusions. For the international wealth inequality ranking to be substantially altered, the evasion

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<sup>3</sup>See Saez and Zucman (2020) for a comparative assessment of DINA estimates to those produced by the Survey of Consumer Finances (SCF).

efforts of the wealthy would need to differ strongly across countries, which we consider possible though not very likely. More importantly, we expect the non-correlation between wealth inequality/concentration and income inequality/concentration that we document to be stable against potential concerns about undercoverage of the top. To the extent that selective coverage of top wealth is positively correlated to that of top income — which strikes us as a quite reasonable assumption (see also Keister 2014) — the conclusion about the independence of income and wealth inequality drawn here should be conservative. That is, countries that are more likely to miss the income rich (or income poor, for that matter) should also be more likely to miss the very wealthy (or asset poor), thereby pushing any particular nation in the same direction in regards to its level of income and wealth inequality. As a consequence, if anything, we would expect undercoverage of the top to induce (rather than suppress) a positive correlation between measures of income and wealth inequality.

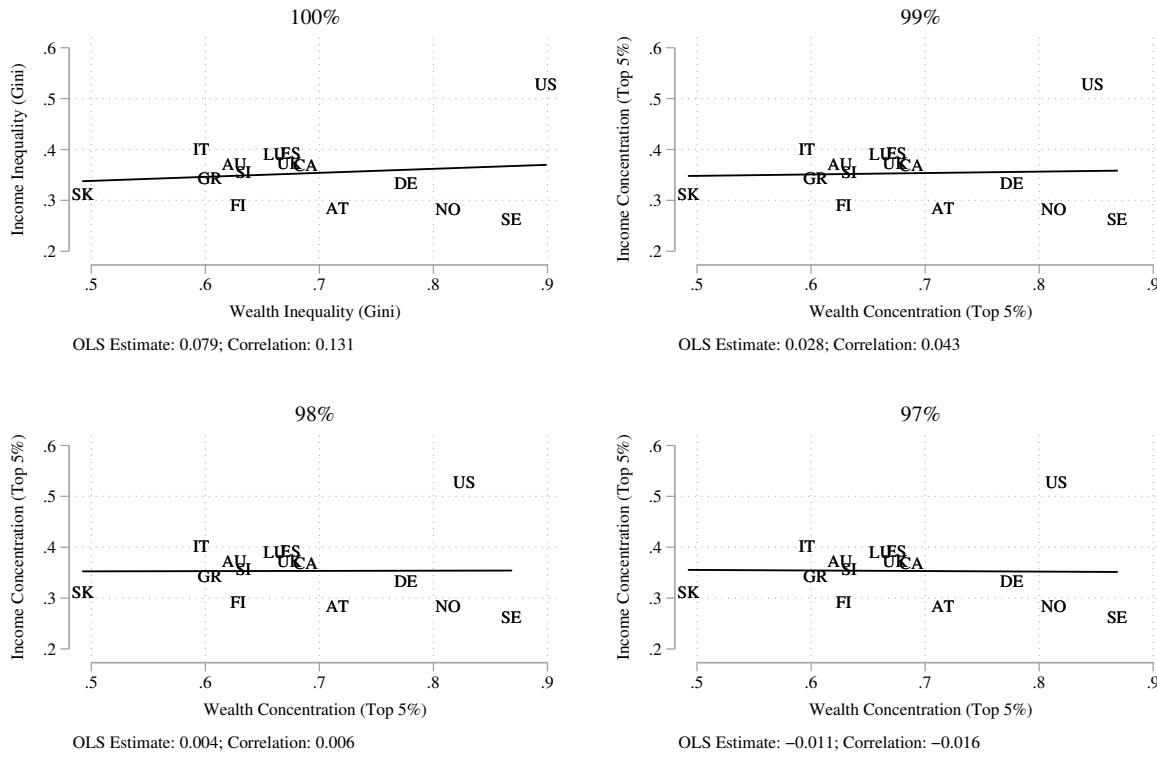
Another related question may be raised about our finding of exceptionally high wealth inequality in the United States. What if U.S. exceptionalism was less about wealth inequality than about its ability to sample the very wealthy?<sup>4</sup> The providers of the U.S. wealth data included here, the Survey of Consumer Finances (SCF), indeed exert a great deal of effort to effectively oversample the wealthy (see Kennickell 2017; Pfeffer et al. 2016). Although we want to be clear that we see no reason to assume that the U.S. outperforms other countries in this way, Figure S.4 provides the results of an overly conservative simulation analysis. This analysis tests the drastic assumption that only the U.S. – and no other country – adequately captures the top of the wealth distribution. In this hypothetical world, a “fair” comparison between the U.S. and other countries should dispose of the very top of the U.S. wealth distribution. In Figure S.4, we therefore successively dispose of the top one percent, top two percent, and top three percent of the wealth distribution (i.e. we censor at the 99th, 98th,

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<sup>4</sup>A similar critique could be levied against the Swedish and Norwegian estimates: Is wealth concentration so high in these countries because they alone are able to capture the wealthy correctly thanks to access to register data? Given our expectations about measurement error correlation between income and wealth offered above, the comparatively low estimate of income inequality and concentration for these countries again complicates this argument.

and 97th percentile, respectively) and re-estimate the level of overall wealth inequality (we do not re-estimate wealth concentration under these drastic scenarios). In these scenarios, U.S. wealth inequality successively drops by a total of almost .10 Gini points. But even the censoring of the top three percent in the U.S. and no other country would still leave the U.S. as the country with the second highest level of wealth inequality in our sample of countries, only outdone by Sweden.

Figure S.4: Simulation: Top-Censoring U.S. Wealth Data



Notes: Based on LWS; simulated based on the U.S. wealth distribution censored at the 99th, 98th, and 97th percentile, respectively.

## APPENDIX S.4 RETIREMENT WEALTH

Retirement savings and pensions are excluded from our analyses, as they are from most research on wealth. Complete “augmented net worth” measures, which include both private retirement savings and current-value estimates of employer-based and public pensions, are not available for a cross-national comparison. However, data on private retirement savings and some occupational pensions are available for a handful of countries included in our analyses. Table S.5 provides estimates of wealth inequality and concentration when “voluntary retirement savings” and “occupational pensions” are added to our measures of wealth inequality. The Gini coefficient is virtually unaffected by the inclusion of voluntary retirement savings, while occupational pensions only reduce the wealth Gini coefficient for Finland to an appreciable degree (similarly, wealth concentration measures are only appreciably reduced in Canada and Finland once we include occupational pension wealth). While it would be helpful to be able to draw on these indicators for more countries, we also acknowledge that even these indicators do not include what in many countries is by far the largest component of pension wealth, namely (estimates of current values of) public pensions.

Table S.5: Wealth Inequality and Retirement Wealth

	Net Worth	Augmented Net Worth		
		w/ volunt. savings	w/ occup. pensions	w/ both
<b>Gini Coefficient</b>				
	(1)	(2)	(3)	(4)
CAN	0.688	0.675	0.652	0.645
FIN	0.629	0.627	0.542	0.542
GRE	0.604	0.604	--	--
ITA	0.596	0.602	0.604	0.61
LUX	0.661	0.659	--	--
SK	0.493	0.492	--	--
SI	0.633	0.633	--	--
ES	0.675	0.675	0.675	0.674
UK	0.674	0.674	0.648	0.648
US	0.899	0.875	--	--
<b>Concentration</b>				
	(5)	(6)	(7)	(8)
CAN	38.7	36.6	32.1	31.3
FIN	30.3	30.1	23.3	23.3
GRE	28.7	28.7	--	--
ITA	29.7	29.8	30.1	30.3
LUX	39.1	38.7	--	--
SK	22.7	22.7	--	--
SI	39.4	39.4	--	--
ES	38.3	38.2	38.2	38.1
UK	39.6	39.7	34.8	34.8
US	70.4	65.6	--	--

## APPENDIX S.5 HOUSING EQUITY COMPONENTS

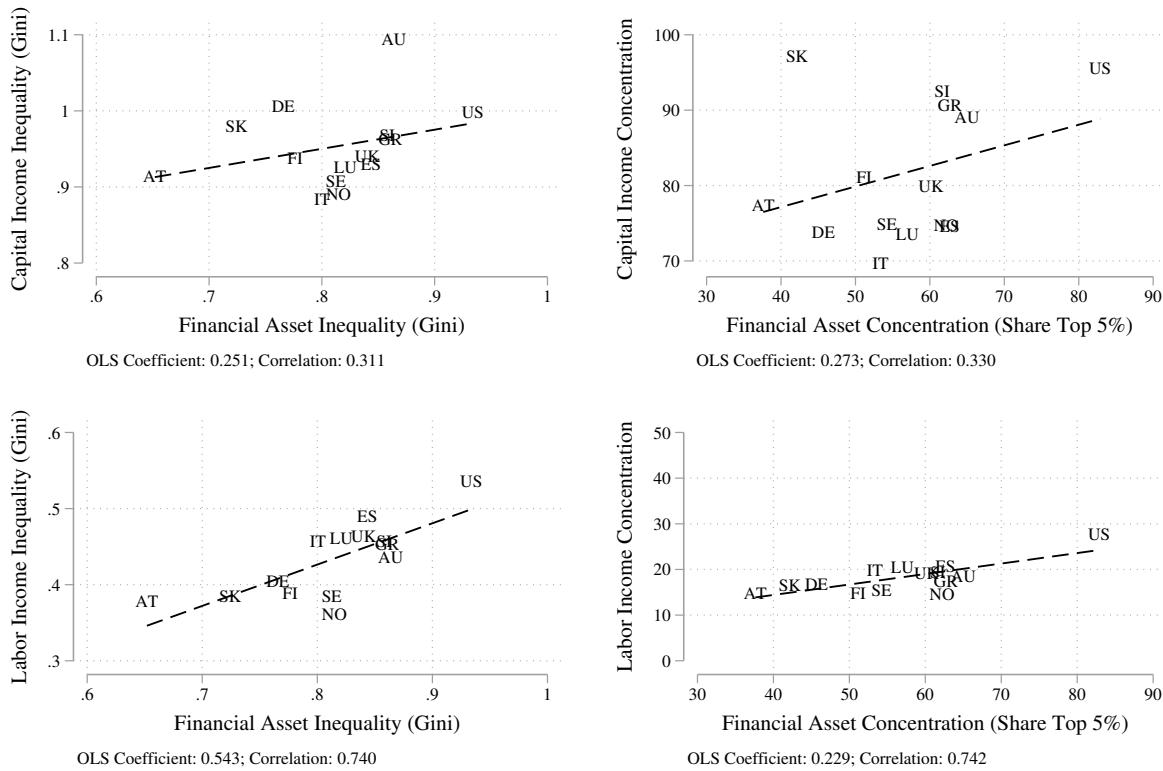
As described in the main text, we believe that delineating the separate contribution of the distribution of home values and the distribution of mortgage debt is daunting as the two are interactively determined. Additive decompositions of their relative contribution should therefore be interpreted with great caution. Table S.6 nevertheless provides such analysis. The findings, if one were to believe the linear decomposition results in this context, suggest that the distribution of owner-occupied home values is the major driver of housing wealth inequality and, together with the value of real estate, of housing wealth concentration. Again, this finding does not rule out a crucial role of financialization, as its effects on the wealth distribution may be channeled through the housing market rather than merely emerge through its direct link to households' increased participation in financial markets.

Table S.6: Decomposition: Within-Component Inequality/Concentration for Housing Equity Components

	Observed	Gini Coefficient						Top Share (5%)						
		(1) Home Value		(2) Home Mortgages		(3) Real Est. Value		(4) Real Est. Mortgages		(5) Home Value		(6) Home Mortgages		
		Simulated	(change)	Simulated	(change)	Simulated	(change)	Simulated	(change)	Simulated	(change)	Simulated	(change)	
USA	0.687							37.0						
Australia	0.564	0.624	(10.6%)	0.564	(-0.0%)	0.578	(2.4%)	0.569	(0.9%)	24.3	28.7	(18.8%)	24.5	(0.9%)
Austria	0.656	0.683	(4.2%)	0.645	(-1.6%)	0.655	(-0.1%)	0.656	(-0.0%)	31.9	37.0	(16.1%)	31.1	(-2.4%)
Canada	0.555	0.633	(14.1%)	0.558	(0.6%)	0.561	(1.1%)	0.556	(0.1%)	24.6	30.6	(24.0%)	25.1	(1.9%)
Finland	0.491	0.592	(20.6%)	0.496	(0.9%)	0.511	(4.2%)	0.491	(0.0%)	19.6	26.6	(35.0%)	20.2	(3.2%)
Germany	0.680	0.686	(0.9%)	0.669	(-1.6%)	0.682	(0.4%)	0.680	(0.1%)	30.8	34.9	(13.1%)	30.4	(-1.2%)
Greece	0.570	0.638	(12.0%)	0.561	(-1.4%)	0.604	(6.0%)	0.570	(0.0%)	26.0	30.9	(18.7%)	25.6	(-1.5%)
Italy	0.578	0.651	(12.6%)	0.570	(-1.4%)	0.583	(1.0%)	0.578	(-0.0%)	24.4	31.2	(28.1%)	30.9	(-2.1%)
Luxembourg	0.575	0.652	(13.5%)	0.571	(-0.7%)	0.583	(1.5%)	0.575	(0.1%)	30.3	36.7	(21.4%)	30.1	(-0.6%)
Slovakia	0.457	0.627	(37.2%)	0.449	(-1.8%)	0.460	(0.6%)	0.457	(-0.0%)	19.9	31.0	(55.5%)	19.1	(-4.3%)
Slovenia	0.518	0.618	(19.2%)	0.510	(-1.5%)	0.532	(2.7%)	0.518	(-0.0%)	22.6	29.1	(28.8%)	21.9	(-3.1%)
Spain	0.511	0.597	(16.8%)	0.507	(-0.8%)	0.536	(4.7%)	0.513	(0.2%)	23.6	28.9	(22.6%)	23.6	(0.1%)
United Kingdom	0.588	0.647	(10.0%)	0.592	(0.6%)	0.590	(0.2%)	0.588	(0.0%)	27.4	32.1	(17.2%)	27.9	(1.9%)
													28.1	(24.5%)
													27.5	(0.2%)

## APPENDIX S.6 INCOME COMPONENTS

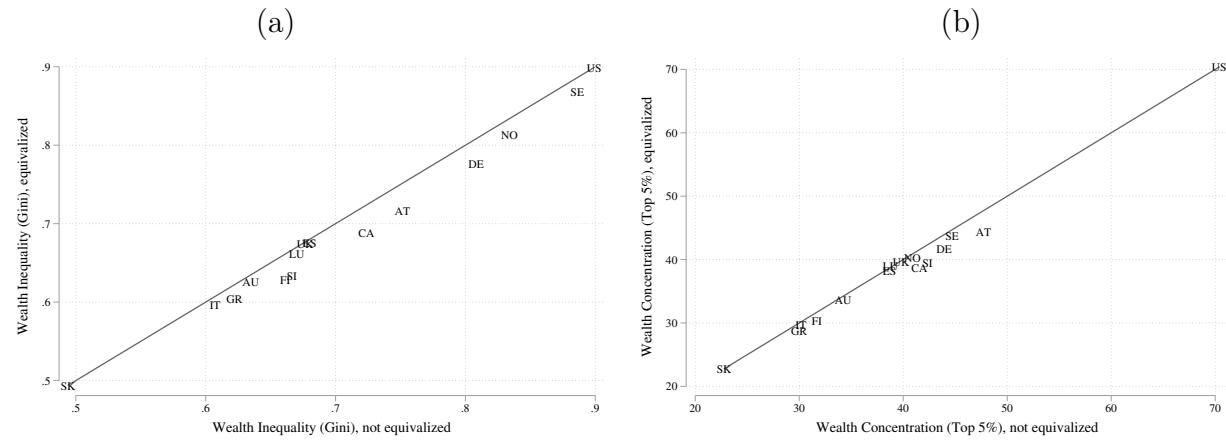
Figure S.5: Financial Wealth and Income Component Inequality/Concentration



Notes: Based on data from LWS. Inequality in income and financial wealth is measured using the Gini coefficient. Concentration is measured as the income / financial wealth share held by the top five percent of the income / financial wealth distribution.

## APPENDIX S.7 HOUSEHOLD-SIZE ADJUSTMENTS

Figure S.6: Wealth Inequality and Concentration: Equivalized vs. Non-Equivalized Wealth



Notes: Based on LWS Data. Equivalized wealth =  $\frac{\text{household net worth}}{\sqrt{hsize}}$ . The solid line represents  $x = y$ .

## APPENDIX S.8 REFERENCE COUNTRY

Table S.7: Decomposition: Slovakia as reference country

(a) Decomposition

	Gini Coefficient						Top Share (5%)		
	(1) Shares = SK Observed		(2) Comp. Gini-SK Simulated		(3) Gini corr. = SK Observed		(4) Shares = SK Simulated		(5) Comp. concent. = SK Simulated
	Simulated (change)	Simulated (change)	Simulated (change)	Simulated (change)	Observed	Observed	(change)	(change)	(change)
Slovakia	0.483	0.598 (-1.2%)	0.524 (-13.4%)	0.557 (-7.9%)	32.7	29.4 (+10.3%)	27.0	(-17.6%)	28.8 (-12.1%)
Australia	0.605	0.685 (-2.8%)	0.554 (-21.4%)	0.655 (-7.0%)	44.0	38.0 (-13.7%)	29.3	(-33.5%)	40.7 (+7.5%)
Austria	0.704	0.630 (-0.4%)	0.544 (-14.0%)	0.584 (-7.7%)	35.6	31.9 (-10.4%)	28.8	(-19.1%)	32.9 (-7.6%)
Canada	0.633	0.593 (1.1%)	0.506 (-13.6%)	0.554 (-5.5%)	29.4	28.7 (-2.3%)	25.3	(-13.8%)	26.8 (-8.9%)
Finland	0.586	0.738 (3.7%)	0.512 (-28.0%)	0.671 (-5.6%)	39.2	40.3 (2.9%)	24.9	(-36.6%)	36.6 (+6.6%)
Germany	0.711	0.591 (0.2%)	0.486 (-17.6%)	0.584 (-1.0%)	28.0	28.2 (0.6%)	21.7	(-22.7%)	28.1 (0.4%)
Greece	0.590	0.591 (-1.3%)	0.521 (-11.7%)	0.565 (-4.2%)	29.4	27.4 (-6.7%)	25.7	(-12.5%)	28.3 (-3.8%)
Italy	0.590	0.582 (-1.3%)	0.521 (-11.7%)	0.609 (-6.2%)	38.5	39.2 (1.7%)	24.5	(-36.3%)	34.5 (-10.5%)
Luxembourg	0.649	0.651 (0.3%)	0.509 (-21.6%)	0.582 (-6.4%)	38.8	29.7 (-23.6%)	29.3	(-24.4%)	34.9 (-9.9%)
Slovenia	0.622	0.566 (-9.0%)	0.546 (-12.2%)	0.613 (-6.2%)	37.2	34.9 (-6.2%)	26.2	(-29.7%)	33.7 (-9.4%)
Spain	0.654	0.648 (-1.0%)	0.521 (-20.3%)	0.563 (-10.0%)	38.3	34.5 (-10.0%)	31.3	(-18.3%)	33.1 (-13.6%)
United Kingdom	0.648	0.650 (0.3%)	0.566 (-12.6%)	0.674 (-18.0%)	63.5	54.3 (-14.6%)	36.2	(-43.0%)	50.2 (-21.0%)
USA	0.822	0.807 (-1.8%)	0.628 (-23.6%)						

(b) Decomposition: Within-Component Inequality/Concentration

	Gini Coefficient						Top Share (5%)		
	(1) Housing Equity Observed		(2) Financial Assets Simulated		(3) Non-Housing Assets Simulated		(4) Other debts Observed		(5) Housing Equity Simulated
	Simulated (change)	Simulated (change)	Simulated (change)	Simulated (change)	Simulated (change)	Observed	(change)	(change)	(change)
Slovakia	0.483	0.509 (-15.9%)	0.578 (-4.4%)	0.645 (6.6%)	0.607 (0.3%)	32.7	26.9 (-17.8%)	28.6 (+12.7%)	36.5 (11.7%)
Australia	0.605	0.581 (-17.5%)	0.711 (0.9%)	0.671 (-4.8%)	0.704 (0.0%)	44.0	35.6 (-19.2%)	44.4 (0.7%)	37.5 (+15.0%)
Austria	0.704	0.547 (-13.5%)	0.618 (-2.3%)	0.637 (0.7%)	0.640 (1.1%)	35.6	30.4 (-14.5%)	33.6 (-5.6%)	34.9 (-2.0%)
Canada	0.633	0.580 (-13.3%)	0.706 (0.8%)	0.689 (-3.2%)	0.587 (0.1%)	29.4	25.8 (-12.1%)	28.5 (-3.2%)	31.2 (+1.2%)
Finland	0.586	0.540 (-24.1%)	0.584 (-1.0%)	0.594 (0.7%)	0.590 (0.0%)	39.2	29.1 (-25.8%)	38.8 (-1.0%)	35.2 (-10.3%)
Germany	0.590	0.488 (-17.3%)	0.513 (-13.1%)	0.604 (-2.4%)	0.590 (0.0%)	28.0	21.3 (-24.2%)	27.3 (-2.6%)	29.2 (4.1%)
Greece	0.590	0.519 (-20.0%)	0.638 (-1.6%)	0.649 (-0.1%)	0.649 (0.1%)	29.4	25.5 (-13.1%)	28.7 (-2.5%)	30.3 (3.1%)
Italy	0.649	0.585 (-5.3%)	0.617 (-0.8%)	0.587 (-5.5%)	0.622 (0.0%)	38.5	26.7 (-30.7%)	37.0 (-4.0%)	37.8 (-1.9%)
Luxembourg	0.622	0.638 (-2.4%)	0.645 (-3.0%)	0.654 (-1.3%)	0.654 (0.1%)	38.8	36.8 (-5.1%)	38.2 (-1.5%)	31.9 (-17.9%)
Slovenia	0.654	0.545 (-16.6%)	0.628 (-3.0%)	0.684 (5.6%)	0.638 (0.1%)	37.2	30.3 (-18.5%)	34.6 (-7.0%)	35.6 (-4.4%)
Spain	0.648	0.549 (-15.3%)	0.762 (-7.3%)	0.762 (-3.5%)	0.828 (0.8%)	38.3	31.7 (-17.1%)	35.5 (-7.4%)	40.5 (5.9%)
United Kingdom	0.822	0.710 (-13.9%)				63.5	53.5 (-15.8%)	52.4 (-17.6%)	56.6 (-10.8%)
USA									

## REFERENCES

- Alvaredo, Facundo, Lucas Chancel, Thomas Piketty, Emmanuel Saez, and Gabriel Zucman. 2017. “Global inequality dynamics: New findings from WID.world.” *American Economic Review* 107:404–09.
- Fesseau, Maryse, Florence Wolff, and Maria Liviana Mattonetti. 2013. “A cross-country comparison of household income, consumption and wealth between micro sources and national accounts aggregates.” Technical Report 52, Paris.
- Keister, Lisa A. 2014. “The One Percent.” *Annual Review of Sociology* 40:347–367.
- Kennickell, Arthur B. 2017. “Getting to the top: Reaching wealthy respondents in the SCF.” *Statistical Journal of the IAOS* 33:113–123.
- Killewald, Alexandra, Fabian T. Pfeffer, and Jared N. Schachner. 2017. “Wealth Inequality and Accumulation.” *Annual Review of Sociology* 42:379–404.
- Pfeffer, Fabian and Nora Waitkus. 2021. “Comparing Child Wealth Inequality Across Countries.” *RSF: Russell Sage Foundation Journal of the Social Sciences* 7:28–49.
- Pfeffer, Fabian T., Robert F. Schoeni, Arthur B. Kennickell, and Patricia Andreski. 2016. “Measuring Wealth and Wealth Inequality: Comparing Two U.S. Surveys.” *Journal of Economic and Social Measurement* 41:103–120.
- Piketty, Thomas, Emmanuel Saez, and Gabriel Zucman. 2018. “Distributional National Accounts: Methods and Estimates for the United States.” *The Quarterly Journal of Economics* 133:553–609.
- Saez, Emmanuel and Gabriel Zucman. 2016. “Wealth Inequality in the United States since 1913: Evidence from Capitalized Income Tax Data.” *The Quarterly Journal of Economics* 131:519–578.
- Saez, Emmanuel and Gabriel Zucman. 2020. “The Rise of Income and Wealth Inequality in America: Evidence from Distributional Macroeconomic Accounts.” Technical Report w27922, National Bureau of Economic Research, Cambridge, MA.