Supplemental Information File: Conditional Status Quo Bias and Top Income Shares: How U.S. Political Institutions Have Benefited the Rich

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Stationarity Tests

Table 1: Stationarity Tests for All Variables

	Test		
Variable	KPSS	Dickey-Fuller	Conclusion
Top 1% Share, Including Capital Gains	1.40^{***}	-0.04	Integrated
Senate Median to Filibuster Pivot Distance	0.41^{***}	-1.36	Integrated
Maximum Preference Distance	0.25^{***}	-2.64^{*}	Integrated
Congressional Policy Product	1.02^{***}	-1.85	Integrated
House Party Polarization	1.28^{***}	-0.38	Integrated
Democratic Senate	0.25^{***}	-3.4^{**}	Ambiguous
Democratic House	0.85^{***}	-2.95^{**}	Ambiguous
Capital Gains Rate	0.60^{***}	-1.41	Integrated
Top Marginal Tax Rate	0.67^{***}	-0.28	Integrated
Financial Deregulation	1.53^{***}	1.00	Integrated
Prime Rate	1.03^{***}	-1.34	Integrated
Finance and Insurance, %GDP	1.14^{***}	-0.80	Integrated
Union Membership Rate	1.02^{***}	-0.04	Integrated
Real GDP per capita	1.27^{***}	1.32	Integrated

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$
Significant KPSS test indicates non-stationary series. Non-significant Dickey-Fuller indicates unit root.

Cointegration Tests

Table 2, below, uses an Augmented Engel-Granger test to evaluate the time series properties of the residuals from the models reported in Table 1 of the paper. The strong evidence of stationarity indicates the series are cointegrated. This result is consistent with our theoretical expectations and supports our decision to estimate single equation Error Correction Models.

Table 2: Stationarity Tests of Residuals from ECM Models in Table 1 of Paper

	Test		
Variable	KPSS	Dickey-Fuller	Conclusion
Model 1	0.02	-12.9^{***}	Stationary
Model 2	0.02	-12.7^{***}	Stationary
Model 3	0.01	-12.2^{***}	Stationary
Model 4	0.01	-13.1^{***}	Stationary
Model 5	0.02	-11.1^{***}	Stationary

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$
Significant KPSS test indicates non-stationary series. Non-significant Dickey-Fuller indicates unit root.

Differentiating Between Senate Preference Distribution and Senate Norms

Table 3: Models of Top Income Shares Including Cloture Motions

	(1)	(2)
Top 1% Share, Including Capital Gains$_{t-1}$	-0.18^{***}	-0.18^{***}
	(0.05)	(0.05)
Δ Senate Median to Filibuster Pivot Distance$_t$	7.70^{*}	4.00
	(3.96)	(6.19)
Senate Median to Filibuster Pivot Distance$_{t-1}$	8.72^{***}	9.63^{**}
	(2.92)	(4.50)
Δ Maximum Preference Distance$_t$	-0.11	-0.11
	(0.91)	(0.91)
Maximum Preference Distance$_{t-1}$	0.24	0.24
	(0.73)	(0.73)
Δ Congressional Policy Product$_t$	0.01	0.01
	(0.02)	(0.02)
Congressional Policy Product$_{t-1}$	-0.04^{***}	-0.04^{***}
	(0.01)	(0.01)
Δ House Party Polarization$_t$	10.11	10.11
	(7.35)	(7.35)
House Party Polarization$_{t-1}$	2.26	2.26
	(5.26)	(5.26)
Filibuster Distance*Top Share$_{t-1}$	1.81^{**}	1.81^{**}
	(0.77)	(0.77)
Maximum Distance*Top Share$_{t-1}$	0.39	0.39
	(0.28)	(0.28)
Congressional Policy Product*Top Share$_{t-1}$	-0.01^{**}	-0.01^{**}
	(0.00)	(0.00)
House Party Polarization*Top Share$_{t-1}$	-3.03^{***}	-3.03^{***}
	(0.93)	(0.93)
Δ Cloture Motions Filed$_t$	-0.01	
	(0.02)	
Cloture Motions Filed$_{t-1}$	0.00	
	(0.01)	
Δ Cloture Motions Filed, Orthogonalized$_t$		-0.01
		(0.02)
Cloture Motions Filed, Orthogonalized$_{t-1}$		0.00
		(0.01)
Constant	0.16	0.26
	(0.48)	(0.16)
Observations	67	67
R^2	0.55	0.55

Prais-Winsten estimates with standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

The measure we elected to focus on in relation to the filibuster is based on preference divergence—the distance between the Senate median and filibuster pivot. But this measure fails to capture shifts in norms that may have contributed to the rise of fili-

busters in the Senate. While we do include a measure of policy output that would in part capture the effects of filibusters beyond preference divergence, a more direct way to examine the effect of norms versus preference divergence as a predictor of income inequality is to include measures of filibuster activity. While measuring filibuster activity is not as straightforward as one might initially assume (Koger 2010), the number of cloture motions filed is a fairly reasonable proxy.

In Table 3 we report two models that attempt to more directly assess norms versus preference divergence. We re-estimate Model 1 from the table reported in the paper, but add two different measures of filibuster activity. In the first model we add the number of cloture motions filed. In this model, there is no effect for cloture motions while the results reported in the paper remain essentially unchanged. Due to potential concerns regarding collinearity between Senate polarization and cloture motions (r=0.62) we also regressed cloture motions on filibuster pivot distance and captured the residuals in order to create a version of the cloture motions variable that is uncorrelated with the filibuster pivot distance. This variable is used in Model 2 here. Again, no substantial change in the results reported in the paper are revealed. Overall, these results point to preference divergence in the Senate as a key status quo bias explanation of U.S. income inequality.

Alternative Specifications and Estimation Techniques

In Table 4 we report three models to which we made reference in the text of the paper. In the first model, re-estimate model 2 from the paper, but control for the ideological position of the House and Senate as opposed to party control. The measure we use here is the Common Space DW-NOMINATE score for the median member of each chamber (Carroll, Lewis, Lo, McCarty, Poole & Rosenthal 2011). The results here are substantively identical to the results reported in the analogous model in the paper. The second model re-estimates model 1 from the paper while controlling for party of the president. The party of president is statistically insignifcant and the results for the key theoretical variables

Table 4: Alternative Models: Ideology of Congress, Party of President, and No Correction for Autocorrelation

	Ideology in Congress	Party of President	No Autocorrelation Correction
Top 1% Share, Including Capital Gains$_{t-1}$	-0.18^{***}	-0.17^{***}	-0.24^{***}
	(0.05)	(0.05)	(0.07)
Δ Senate Median to Filibuster Pivot Distance$_t$	6.29	6.03	8.40^{*}
	(3.82)	(3.67)	(4.26)
Senate Median to Filibuster Pivot Distance$_{t-1}$	7.66^{**}	7.27^{**}	8.02^{**}
	(2.99)	(3.02)	(3.88)
Δ Maximum Preference Distance$_t$	-0.40	0.79	-0.26
	(0.98)	(1.06)	(1.06)
Maximum Preference Distance$_{t-1}$	-0.07	0.31	-0.58
	(0.89)	(0.79)	(0.95)
Δ Congressional Policy Product$_t$	0.01	0.01	-0.00
	(0.02)	(0.02)	(0.02)
Congressional Policy Product$_{t-1}$	-0.03^{**}	-0.04^{***}	-0.04^{***}
	(0.01)	(0.01)	(0.01)
Δ House Party Polarization$_t$	7.24	9.70	3.89
	(6.53)	(6.02)	(6.83)
House Party Polarization$_{t-1}$	4.07	3.35	6.59^{*}
	(2.99)	(2.55)	(3.37)
Filibuster Distance*Top Share$_{t-1}$	1.23	1.68^{**}	1.42
	(0.97)	(0.77)	(1.00)
Maximum Distance*Top Share$_{t-1}$	0.36	0.39	-0.02
	(0.28)	(0.26)	(0.34)
Congressional Policy Product*Top Share$_{t-1}$	-0.01^{**}	-0.01^{**}	-0.01
	(0.00)	(0.00)	(0.00)
House Party Polarization*Top Share$_{t-1}$	-2.41^{**}	-2.75^{***}	-2.38^{*}
	(1.13)	(0.95)	(1.21)
Δ Senate Median Ideal Point$_t$	3.67		
	(2.78)		
Senate Median Ideal Point$_{t-1}$	1.79		
	(2.00)		
Δ House Median Ideal Point$_t$	-2.44		
	(2.72)		
House Median Ideal Point$_{t-1}$	-1.39		
	(2.27)		
Δ Democratic President$_t$		0.69	
		(0.44)	
Democratic President$_{t-1}$		0.03	
		(0.25)	
Constant	0.24	0.20	0.33
	(0.21)	(0.22)	(0.20)
Observations	67	67	67
R^2	0.56	0.57	0.40

Standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

remain unchanged. The third model re-estimates model 1 from the paper but without a correction for autocorrelation. Here, the results are quite similar but two variables that are statistically significant with the correction for autocorrelation are not significant without such a correction. In these cases, the estimates are in the same direction and of similar magnitude.

Potential Indirect Effects via Congressional Policy Product

Table 5: Analyzing Potential Indirect Effects via Congressional Policy Product

	(1)
Congressional Policy Product$_{t-1}$	-0.21^{***}
	(0.07)
Δ Senate Median to Filibuster Pivot Distance$_t$	11.76
	(29.77)
Senate Median to Filibuster Pivot Distance$_{t-1}$	29.97
	(20.64)
Δ House Party Polarization$_t$	-18.43
	(48.47)
House Party Polarization$_{t-1}$	-45.18^{***}
	(16.97)
Δ Maximum Preference Distance$_t$	-8.14
	(7.41)
Maximum Preference Distance$_{t-1}$	8.44
	(5.59)
Constant	-0.28
	(0.93)
Observations	67
R^2	0.20

Standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

In Table 5 we address the possibility that the variables related to status quo bias have an indirect effect on top income shares by reducing Congressional Policy Product. We assess this question by seeking to determine whether Congressional Policy Product is affected by filibuster pivot distance, maximum preference distance, or House polarization. The concern is that, if these variables have an effect on Congressional Policy Product, their effects may be understated in models that include Congressional Policy Product (such as those reported in the paper). The results lead to the conclusion that House

polarization has additional effects on top income shares via its effect on Congressional Policy Product. However, this does not change the core conclusions of the paper regarding conditional status quo bias.

Exploring Issues of Collinearity between Key Explanatory Variables

Table 6: Correlations Between Key Variables

	Polarization	Filibuster Pivot Distance	Congressional Policy Product	Maximum Distance
Polarization	1.00			
Filibuster Pivot Distance	0.73	1.00		
Congressional Policy Product	−0.46	−0.33	1.00	
Maximum Distance	0.55	0.33	−0.06	1.00

There is good reason to suspect that filibuster pivot distance, maximum preference distance, congressional policy product, and general ideological polarization are highly correlated. This raises the question of whether the measures we describe as indicators of status quo bias are truly any different than general polarization, which has already been incorporated into the U.S. income inequality literature (McCarty, Poole & Rosenthal 2006).

In fact, there are some moderate to strong correlations among these four variables as seen in Table 6. But observed correlations are not sufficiently strong to conclude that the status quo bias measures are simply other indicators of polarization. There are, nonetheless, some moderate to strong correlations present here. Because of this we estimated four very simple models that examine each of these four variables in isolation, one at a time. The results of this analysis are reported in Table 7.

These models add additional support to the core conclusions reached in the paper. Of the three status quo bias variables and general polarization, the two variables that matter most consistently for distributional outcomes are filibuster pivot distance and congressional policy product. The interaction of both these variables with existing levels of inequality are also basically consistent with the fuller specifications reported in the

Table 7: Examining Four Key Explanatory Factors in Isolation

	(1)	(2)	(3)	(4)
Top 1% Share, Including Capital Gains$_{t-1}$	-0.12^{**}	-0.03	-0.12^{**}	-0.16^{**}
	(0.06)	(0.05)	(0.06)	(0.06)
Δ Senate Median to Filibuster Pivot Distance$_t$	12.95^{***}			
	(4.06)			
Senate Median to Filibuster Pivot Distance$_{t-1}$	6.80^{**}			
	(2.60)			
Filibuster Distance*Top Share$_{t-1}$	0.66			
	(0.53)			
Δ Maximum Preference Distance$_t$		0.78		
		(1.17)		
Maximum Preference Distance$_{t-1}$		1.16		
		(0.74)		
Maximum Distance*Top Share$_{t-1}$		0.16		
		(0.30)		
Δ Congressional Policy Product$_t$			-0.00	
			(0.02)	
Congressional Policy Product$_{t-1}$			-0.03^{**}	
			(0.01)	
Congressional Policy Product*Top Share$_{t-1}$			-0.01^{**}	
			(0.00)	
Δ House Party Polarization$_t$				4.12
				(7.01)
House Party Polarization$_{t-1}$				7.39^{***}
				(2.25)
House Party Polarization*Top Share$_{t-1}$				-0.03
				(0.50)
Constant	-0.03	0.06	-0.08	0.08
	(0.15)	(0.16)	(0.16)	(0.19)
Observations	67	67	67	67
R^2	0.21	0.04	0.15	0.19

OLS coefficients with standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

paper. Just as in the original analysis, maximum preference distance has no effect, even excluding polarization and filibuster pivot distance, the two variables most strongly correlated with preference distance, from the model. These results drive home the point that we must look beyond general polarization to fully understand shifts in inequality. More specific measures of polarization that account for the institutional structure of U.S. government, particularly the important role of the Senate, greatly enhance our understanding of income inequality over time.

References

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