Online Appendix to "The Dynamic Effects of Personal and Corporate Income Tax Changes in the United States: Comment"

by Carsten Jentsch and Kurt G. Lunsford

Supplemental Figures and Tables

This appendix provides supplemental figures and tables for "The Dynamic Effects of Personal and Corporate Income Tax Changes in the United States: Comment" by Carsten Jentsch and Kurt G. Lunsford.

Figures B.1 and B.2 display the baseline specification used to produce Figures 1 and 2 above, but with 95% confidence intervals from the residual-based moving block bootstrap.

Tables B.1 and B.2 display the results of the Monte Carlo simulations with no censoring, $\mathbb{E}(D_t) = 0$, and with 90% censoring, $\mathbb{E}(D_t) = 0.1$, respectively. For $T = 100$, proxy variables of all zero were drawn in 0.16% of the bootstrap replications. When this occurred, the IRFs were set to positive infinity. For all other sample sizes, it was never the case that the proxy variables of all zeros were drawn. Finally, there was one simulation where only one non-zero proxy variables was observed in the first 100 observations. This simulation was discarded.

Table B.3 displays the results of the Monte Carlo simulations with 60% censoring, $\mathbb{E}(D_t) = 0.4$, where the initial impulse of $Y_{1,t}$ is normalized to -1.

Table B.4 gives the autocorrelation functions for $\widehat{u}_t^{(j)}$, $|\widehat{u}_t^{(j)}|$ and $(\widehat{u}_t^{(j)})^2$, for $j = 1, \ldots, n$ where $n = 7$ in the baseline model. The ordering of the variables in this baseline model are the APITR, the ACITR, the log of the PITB, the log of the CITB, the log of government spending, the log of GDP divided population, and the log of government debt divided by the GDP deflator and population.

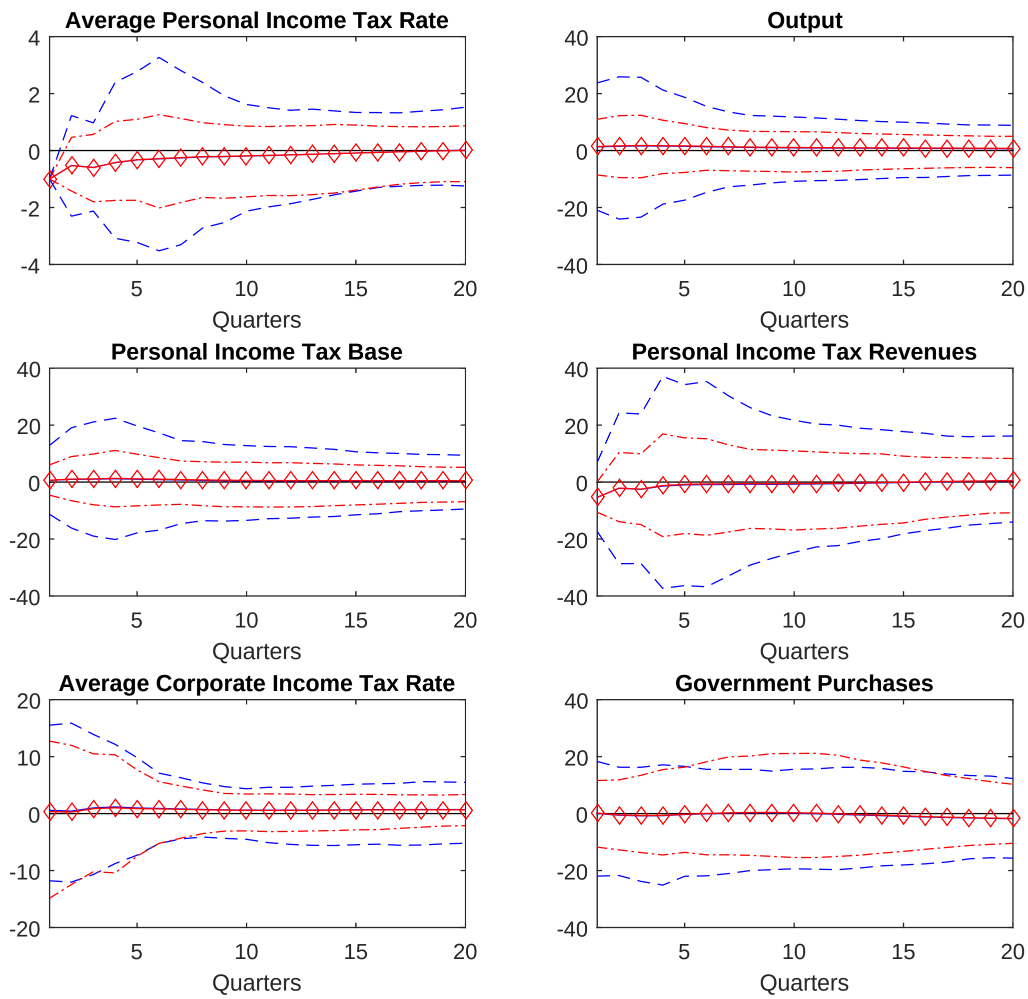

Figure B.1: IRFs of a 1% cut in the APITR. Blue lines show the model with the APITR ordered first, and red diamonds show the model with the ACITR ordered first. Dashed lines are 95% confidence intervals from the MBB.

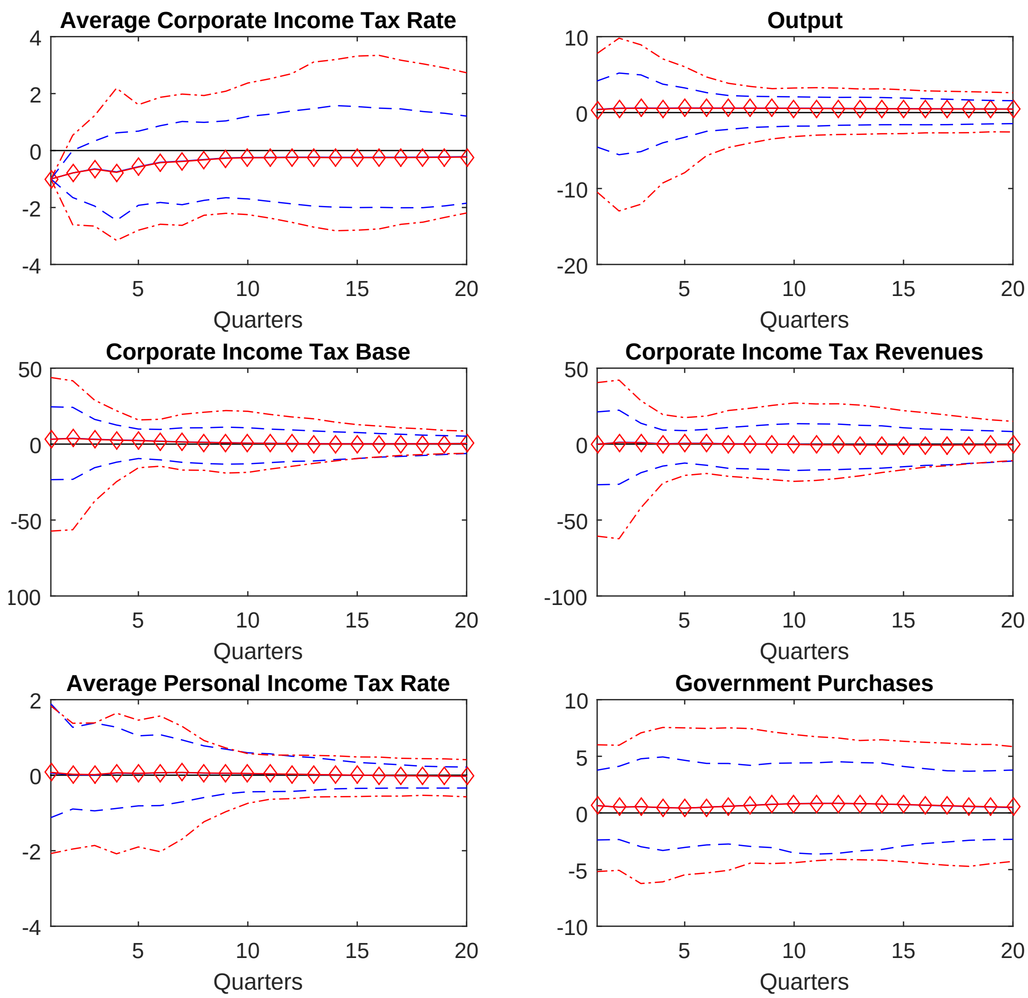

Figure B.2: IRFs of a 1% cut in the ACITR. Blue lines show the model with the APITR ordered first, and red diamonds show the model with the ACITR ordered first. Dashed lines are 95% confidence intervals from the MBB.

Table B.1: Coverage Rates of the 68% and 95% Confidence Intervals with No Censoring ($\mathbb{E}(D_t) = 1$).

Rademacher Wild Bootstrap, 68% Percentile Interval:

	$T = 100$		$T = 250$		$T = 500$		$T = 1000$	
t	$Y_{1,t}$	$Y_{2,t}$	$Y_{1,t}$	$Y_{2,t}$	$Y_{1,t}$	$Y_{2,t}$	$Y_{1,t}$	$Y_{2,t}$
0	0.11	0.12	0.08	0.08	0.06	0.04	0.05	0.03
1	0.62	0.35	0.61	0.32	0.60	0.32	0.62	0.33
2	0.70	0.43	0.65	0.42	0.60	0.42	0.64	0.44
3	0.71	0.49	0.67	0.47	0.65	0.46	0.67	0.47
4	0.71	0.53	0.68	0.50	0.67	0.48	0.69	0.48
5	0.75	0.51	0.71	0.52	0.70	0.49	0.71	0.50

Rademacher Wild Bootstrap, 95% Percentile Interval:

	$T = 100$		$T = 250$		$T = 500$		$T = 1000$	
t	$Y_{1,t}$	$Y_{2,t}$	$Y_{1,t}$	$Y_{2,t}$	$Y_{1,t}$	$Y_{2,t}$	$Y_{1,t}$	$Y_{2,t}$
0	0.28	0.29	0.17	0.17	0.13	0.11	0.10	0.09
1	0.91	0.61	0.92	0.58	0.91	0.59	0.91	0.58
2	0.97	0.77	0.94	0.74	0.93	0.73	0.92	0.73
3	0.95	0.84	0.95	0.80	0.94	0.78	0.93	0.80
4	0.98	0.87	0.96	0.84	0.95	0.80	0.94	0.82
5	0.99	0.84	0.98	0.85	0.96	0.82	0.96	0.81

Moving Block Bootstrap, 68% Percentile Interval:

	$T = 100$		$T = 250$		$T = 500$		$T = 1000$	
t	$Y_{1,t}$	$Y_{2,t}$	$Y_{1,t}$	$Y_{2,t}$	$Y_{1,t}$	$Y_{2,t}$	$Y_{1,t}$	$Y_{2,t}$
0	0.58	0.58	0.64	0.60	0.65	0.64	0.65	0.66
1	0.60	0.58	0.62	0.63	0.62	0.62	0.64	0.65
2	0.69	0.59	0.66	0.61	0.62	0.62	0.65	0.66
3	0.73	0.61	0.72	0.62	0.70	0.62	0.70	0.65
4	0.78	0.60	0.77	0.63	0.76	0.63	0.74	0.65
5	0.81	0.57	0.79	0.64	0.79	0.63	0.76	0.66

Moving Block Bootstrap, 95% Percentile Interval:

	$T = 100$		$T = 250$		$T = 500$		$T = 1000$	
t	$Y_{1,t}$	$Y_{2,t}$	$Y_{1,t}$	$Y_{2,t}$	$Y_{1,t}$	$Y_{2,t}$	$Y_{1,t}$	$Y_{2,t}$
0	0.89	0.90	0.90	0.91	0.93	0.94	0.94	0.94
1	0.89	0.90	0.92	0.90	0.92	0.93	0.93	0.94
2	0.96	0.91	0.94	0.92	0.93	0.93	0.93	0.94
3	0.97	0.92	0.97	0.92	0.97	0.93	0.95	0.93
4	0.98	0.91	0.98	0.93	0.98	0.93	0.97	0.94
5	0.99	0.90	0.98	0.92	0.97	0.93	0.98	0.94

Table B.2: Coverage Rates of the 68% and 95% Confidence Intervals with 90% Censoring ($\mathbb{E}(D_t) = 0.1$).

Rademacher Wild Bootstrap, 68% Percentile Interval:

	$T = 100$		$T = 250$		$T = 500$		$T = 1000$	
t	$Y_{1,t}$	$Y_{2,t}$	$Y_{1,t}$	$Y_{2,t}$	$Y_{1,t}$	$Y_{2,t}$	$Y_{1,t}$	$Y_{2,t}$
0	0.13	0.12	0.09	0.09	0.04	0.05	0.04	0.03
1	0.64	0.27	0.63	0.27	0.59	0.25	0.58	0.25
2	0.73	0.37	0.69	0.37	0.63	0.35	0.65	0.34
3	0.73	0.46	0.72	0.41	0.66	0.41	0.66	0.38
4	0.75	0.52	0.71	0.44	0.67	0.43	0.67	0.39
5	0.79	0.53	0.72	0.45	0.70	0.42	0.66	0.39

Rademacher Wild Bootstrap, 95% Percentile Interval:

	$T = 100$		$T = 250$		$T = 500$		$T = 1000$	
t	$Y_{1,t}$	$Y_{2,t}$	$Y_{1,t}$	$Y_{2,t}$	$Y_{1,t}$	$Y_{2,t}$	$Y_{1,t}$	$Y_{2,t}$
0	0.28	0.30	0.21	0.19	0.12	0.12	0.08	0.08
1	0.92	0.53	0.90	0.49	0.89	0.47	0.89	0.49
2	0.97	0.70	0.94	0.65	0.94	0.65	0.94	0.61
3	0.96	0.80	0.95	0.72	0.95	0.70	0.94	0.69
4	0.98	0.86	0.96	0.78	0.95	0.73	0.95	0.70
5	0.99	0.84	0.98	0.79	0.97	0.74	0.96	0.71

Moving Block Bootstrap, 68% Percentile Interval:

	$T = 100$		$T = 250$		$T = 500$		$T = 1000$	
t	$Y_{1,t}$	$Y_{2,t}$	$Y_{1,t}$	$Y_{2,t}$	$Y_{1,t}$	$Y_{2,t}$	$Y_{1,t}$	$Y_{2,t}$
0	0.59	0.62	0.61	0.63	0.65	0.67	0.65	0.65
1	0.65	0.62	0.66	0.61	0.65	0.66	0.64	0.65
2	0.78	0.63	0.72	0.64	0.67	0.66	0.66	0.66
3	0.82	0.67	0.79	0.64	0.75	0.67	0.74	0.64
4	0.83	0.68	0.83	0.64	0.80	0.66	0.79	0.64
5	0.84	0.67	0.84	0.64	0.82	0.65	0.79	0.65

Moving Block Bootstrap, 95% Percentile Interval:

	$T = 100$		$T = 250$		$T = 500$		$T = 1000$	
t	$Y_{1,t}$	$Y_{2,t}$	$Y_{1,t}$	$Y_{2,t}$	$Y_{1,t}$	$Y_{2,t}$	$Y_{1,t}$	$Y_{2,t}$
0	0.91	0.91	0.91	0.91	0.92	0.93	0.92	0.92
1	0.94	0.92	0.92	0.91	0.92	0.93	0.94	0.93
2	0.99	0.94	0.96	0.91	0.95	0.92	0.95	0.93
3	0.99	0.96	0.99	0.91	0.98	0.93	0.97	0.93
4	0.99	0.96	0.99	0.93	0.99	0.93	0.99	0.93
5	1.00	0.95	0.98	0.92	0.99	0.93	0.99	0.93

Table B.3: Coverage Rates of the 68% and 95% Confidence Intervals with 60% Censoring ($\mathbb{E}(D_t) = 0.4$) and the initial response of $Y_{1,t}$ normalized to -1.

Rademacher Wild Bootstrap, 68% Percentile Interval:

	$T = 100$		$T = 250$		$T = 500$		$T = 1000$	
t	$Y_{1,t}$	$Y_{2,t}$	$Y_{1,t}$	$Y_{2,t}$	$Y_{1,t}$	$Y_{2,t}$	$Y_{1,t}$	$Y_{2,t}$
0	1.00	0.13	1.00	0.05	1.00	0.06	1.00	0.04
1	0.67	0.35	0.66	0.32	0.63	0.32	0.65	0.33
2	0.70	0.49	0.66	0.47	0.63	0.46	0.64	0.48
3	0.71	0.55	0.69	0.54	0.67	0.52	0.66	0.51
4	0.73	0.60	0.70	0.57	0.69	0.53	0.70	0.53
5	0.76	0.58	0.72	0.56	0.72	0.54	0.72	0.55

Rademacher Wild Bootstrap, 95% Percentile Interval:

	$T = 100$		$T = 250$		$T = 500$		$T = 1000$	
t	$Y_{1,t}$	$Y_{2,t}$	$Y_{1,t}$	$Y_{2,t}$	$Y_{1,t}$	$Y_{2,t}$	$Y_{1,t}$	$Y_{2,t}$
0	1.00	0.30	1.00	0.16	1.00	0.13	1.00	0.09
1	0.94	0.62	0.96	0.59	0.94	0.58	0.94	0.58
2	0.98	0.84	0.95	0.79	0.94	0.79	0.93	0.80
3	0.96	0.90	0.95	0.87	0.94	0.85	0.94	0.85
4	0.98	0.90	0.96	0.88	0.96	0.87	0.95	0.86
5	0.99	0.89	0.98	0.89	0.97	0.87	0.96	0.87

Moving Block Bootstrap, 68% Percentile Interval:

	$T = 100$		$T = 250$		$T = 500$		$T = 1000$	
t	$Y_{1,t}$	$Y_{2,t}$	$Y_{1,t}$	$Y_{2,t}$	$Y_{1,t}$	$Y_{2,t}$	$Y_{1,t}$	$Y_{2,t}$
0	1.00	0.66	1.00	0.63	1.00	0.64	1.00	0.65
1	0.64	0.64	0.64	0.63	0.61	0.62	0.64	0.65
2	0.73	0.65	0.66	0.62	0.62	0.63	0.64	0.66
3	0.77	0.66	0.73	0.63	0.72	0.62	0.70	0.65
4	0.81	0.69	0.78	0.65	0.77	0.64	0.76	0.65
5	0.83	0.66	0.80	0.64	0.80	0.64	0.77	0.66

Moving Block Bootstrap, 95% Percentile Interval:

	$T = 100$		$T = 250$		$T = 500$		$T = 1000$	
t	$Y_{1,t}$	$Y_{2,t}$	$Y_{1,t}$	$Y_{2,t}$	$Y_{1,t}$	$Y_{2,t}$	$Y_{1,t}$	$Y_{2,t}$
0	1.00	0.93	1.00	0.92	1.00	0.93	1.00	0.94
1	0.91	0.92	0.93	0.92	0.92	0.93	0.93	0.94
2	0.97	0.93	0.95	0.92	0.94	0.93	0.93	0.94
3	0.98	0.95	0.97	0.93	0.97	0.93	0.95	0.94
4	0.98	0.94	0.98	0.93	0.98	0.94	0.97	0.94
5	0.99	0.93	0.98	0.93	0.97	0.94	0.98	0.94

Table B.4: Autocorrelations.

Autocorrelations of $u_t^{(j)}$:

h	$u_t^{(1)}$	$u_t^{(2)}$	$u_t^{(3)}$	$u_t^{(4)}$	$u_t^{(5)}$	$u_t^{(6)}$	$u_t^{(7)}$
0	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1	-0.01	0.02	0.01	0.00	-0.06	-0.01	-0.01
2	-0.01	-0.05	0.02	0.00	0.01	0.01	-0.08
3	0.02	-0.02	0.00	0.02	-0.03	0.02	-0.03
4	0.06	-0.02	-0.02	-0.16	0.16	-0.08	-0.04
5	-0.08	0.03	-0.16	-0.07	-0.01	-0.08	-0.03
6	-0.02	0.02	0.04	0.02	0.13	0.03	-0.02

Autocorrelations of $|u_t^{(j)}|$:

h	$\|u_t^{(1)}\|$	$\|u_t^{(2)}\|$	$\|u_t^{(3)}\|$	$\|u_t^{(4)}\|$	$\|u_t^{(5)}\|$	$\|u_t^{(6)}\|$	$\|u_t^{(7)}\|$
0	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1	0.26	0.29	0.11	0.06	0.07	0.12	0.30
2	0.06	0.13	0.00	0.00	0.04	0.19	0.08
3	-0.06	0.00	-0.02	0.01	-0.06	0.13	0.09
4	-0.06	0.04	0.20	0.12	0.08	0.12	0.09
5	0.02	-0.03	-0.01	-0.02	-0.10	0.07	0.01
6	0.03	-0.06	0.03	0.14	0.08	0.04	0.09

Autocorrelations of $(u_t^{(j)})^2$:

h	$(u_t^{(1)})^2$	$(u_t^{(2)})^2$	$(u_t^{(3)})^2$	$(u_t^{(4)})^2$	$(u_t^{(5)})^2$	$(u_t^{(6)})^2$	$(u_t^{(7)})^2$
0	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1	0.19	0.22	0.09	0.05	0.05	0.08	0.18
2	0.01	0.10	0.02	-0.04	0.00	0.10	0.03
3	-0.04	-0.01	0.03	-0.03	-0.05	0.04	0.07
4	-0.05	0.00	0.15	0.10	0.09	0.06	0.09
5	-0.02	-0.01	-0.02	-0.01	-0.10	0.03	-0.02
6	-0.02	-0.02	-0.01	0.10	0.01	0.05	0.00

Notes: h is the autocorrelation horizon: $\text{corr}(x_t, x_{t-h})$ for a given variable x_t. The 95% confidence interval is given by $(-0.13, 0.13)$.