

Appendix For:

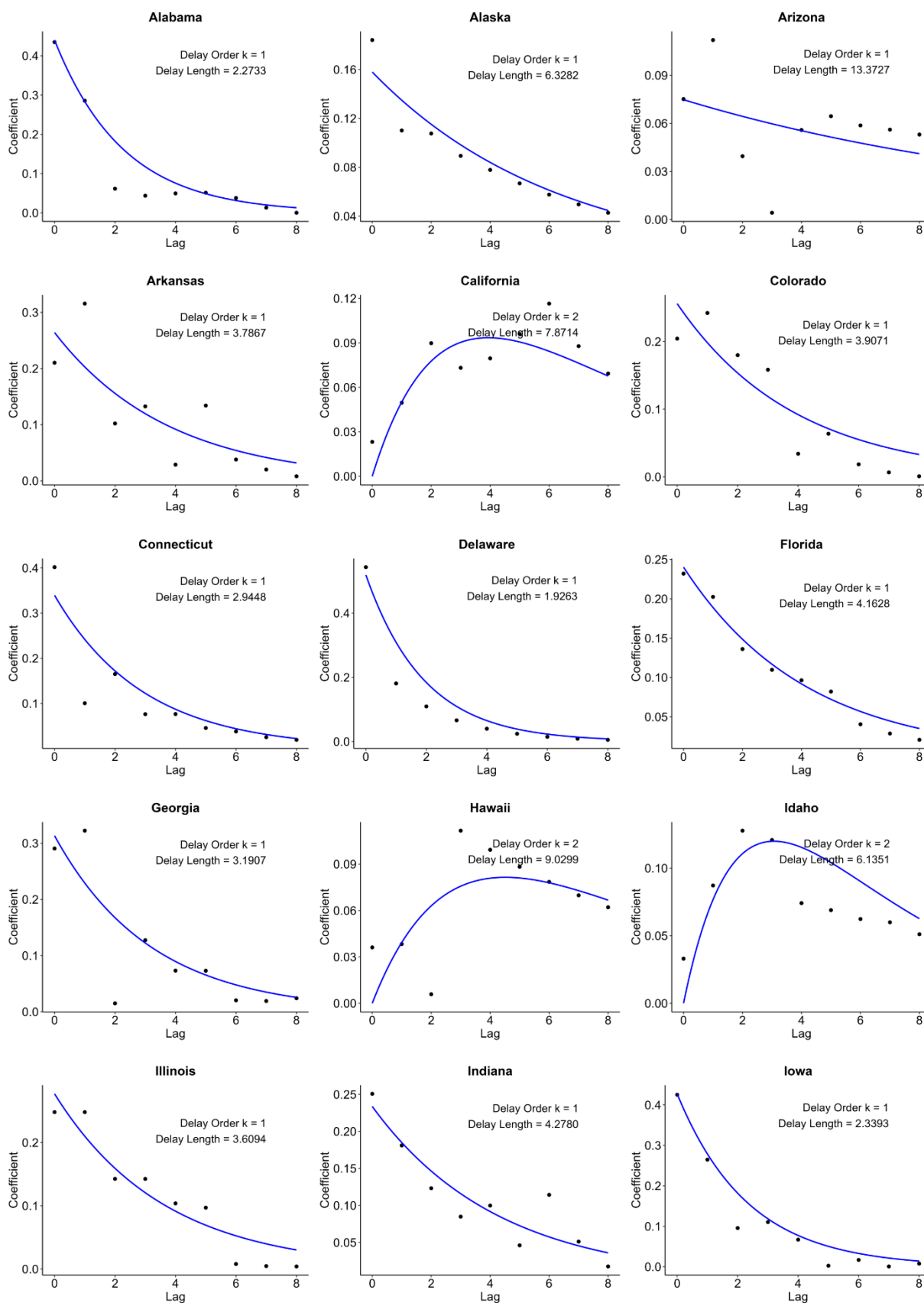
**Identifying Delayed Human Response to External Risks: An Econometric
Analysis of Mobility Change during a Pandemic**

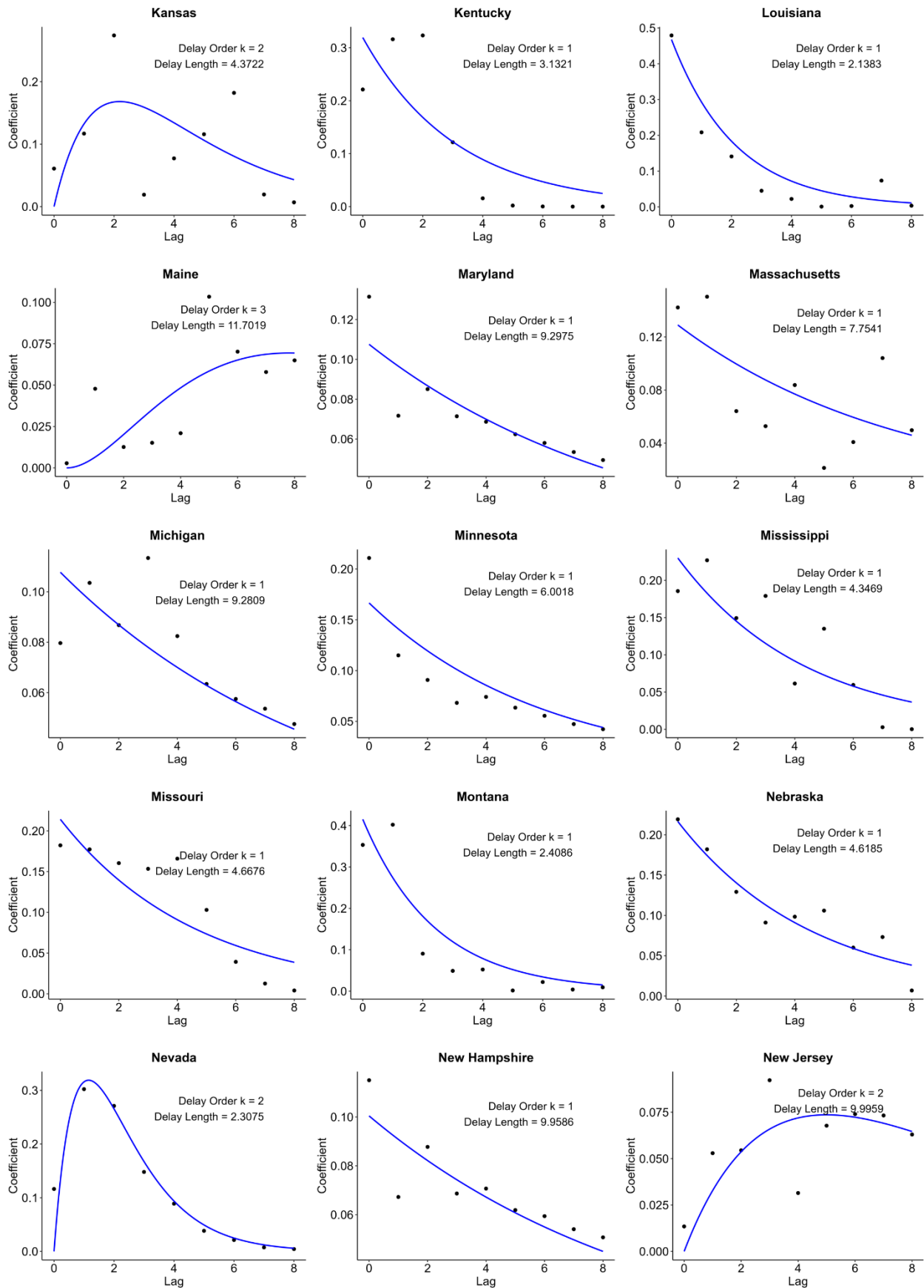
1 National and State Level Results from the ARDL Model: Overall Impact, Confidence Intervals, and Average Delay Length

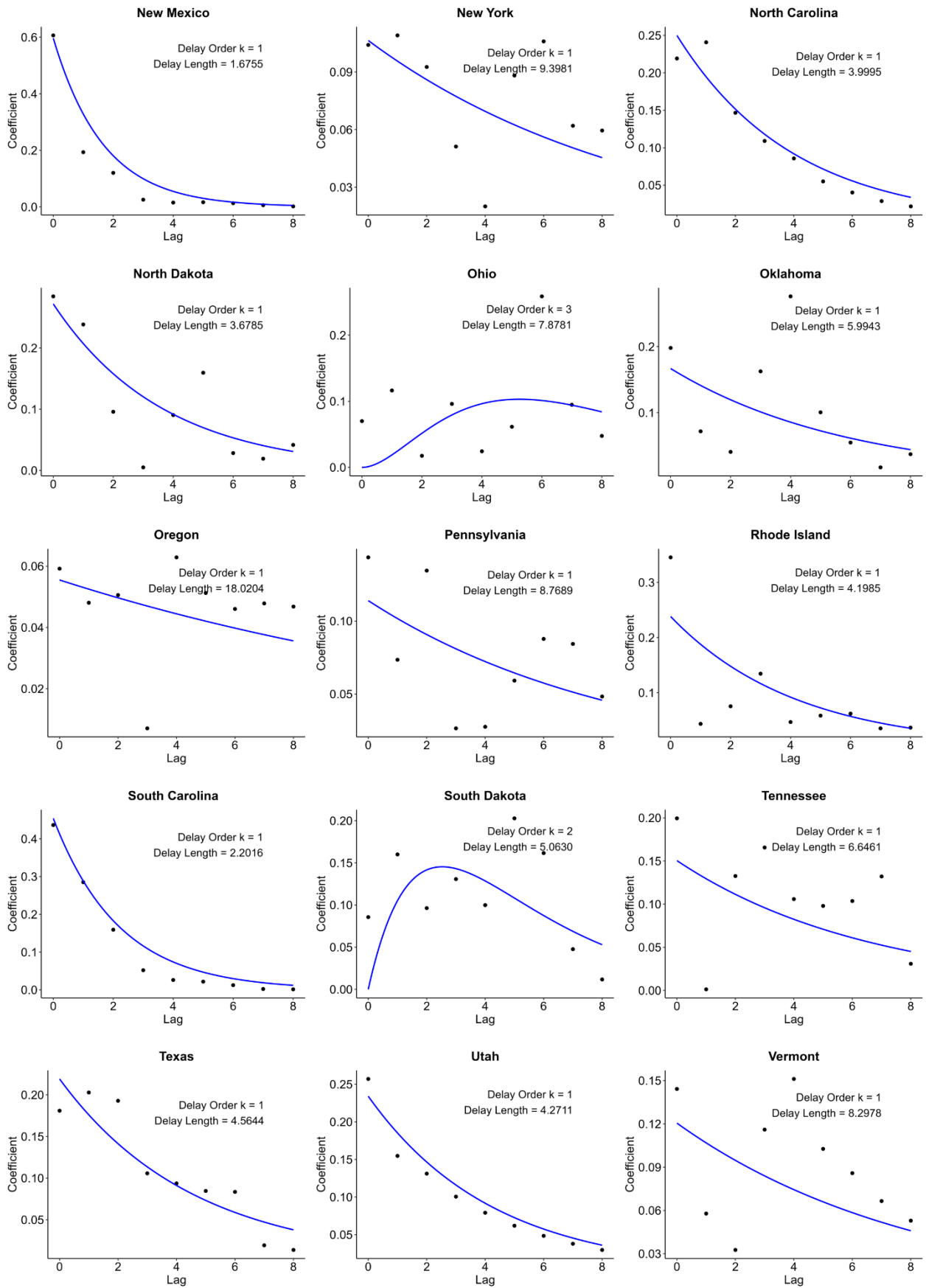
State	Shape Parameter, k	Overall Impact				Avg. delay length (weeks)
		Value	95% CI Lower	95% CI Upper	p-value	
Alabama	1	-0.26	-0.29	-0.24	<0.001***	2.27
Alaska	1	0.15	-0.28	0.58	0.491	6.33
Arizona	1	1.00	-2.96	4.96	0.619	13.37
Arkansas	1	-0.18	-0.24	-0.12	<0.001***	3.79
California	2	-0.46	-0.76	-0.16	<0.01**	7.87
Colorado	1	0.09	-0.92	1.09	0.867	3.91
Connecticut	1	-0.18	-0.53	0.17	0.309	2.94
Delaware	1	-0.19	-1.17	0.79	0.709	1.93
Florida	1	0.45	0.26	0.65	<0.001***	4.16
Georgia	1	-0.06	-0.09	-0.03	<0.01**	3.19
Hawaii	2	-0.42	-1.94	1.09	0.586	9.03
Idaho	2	-0.29	-1.16	0.58	0.51	6.14
Illinois	1	-0.29	-0.38	-0.20	<0.001***	3.61
Indiana	1	-0.33	-0.36	-0.30	<0.001***	4.28
Iowa	1	-0.20	-0.25	-0.16	<0.001***	2.34
Kansas	2	0.07	-0.33	0.48	0.722	4.37
Kentucky	1	-0.14	-0.18	-0.10	<0.001***	3.13
Louisiana	1	-0.20	-0.26	-0.14	<0.001***	2.14
Maine	3	-1.07	-3.91	1.78	0.462	11.70
Maryland	1	-0.57	-1.30	0.16	0.126	9.30
Massachusetts	1	-0.03	-0.79	0.73	0.931	7.75
Michigan	1	0.91	0.16	1.67	<0.05*	9.28
Minnesota	1	0.14	-0.01	0.29	0.074	6.00
Mississippi	1	-0.08	-0.14	-0.02	<0.05*	4.35
Missouri	1	-0.46	-0.57	-0.34	<0.001***	4.67
Montana	1	-0.02	-0.23	0.18	0.823	2.41
Nebraska	1	-0.84	-1.00	-0.69	<0.001***	4.62
Nevada	2	-0.39	-0.67	-0.11	0.0070	2.31
New Hampshire	1	-0.07	-1.33	1.19	0.9150	9.96
New Jersey	2	2.13	-1.82	6.07	0.2910	10.00
New Mexico	1	-0.20	-0.33	-0.08	0.0010	1.68
New York	1	-0.50	-0.97	-0.03	0.0350	9.40
North Carolina	1	-0.37	-0.47	-0.27	<0.001***	4.00
North Dakota	1	-0.40	-0.57	-0.23	<0.001***	3.68
Ohio	3	-0.20	-0.29	-0.12	<0.001***	7.88
Oklahoma	1	0.18	0.02	0.33	0.0280	5.99
Oregon	1	-1.31	-8.76	6.14	0.7300	18.02
Pennsylvania	1	0.21	-0.13	0.56	0.2280	8.77
Rhode Island	1	-0.49	-1.40	0.42	0.2930	4.20
South Carolina	1	-0.32	-0.36	-0.27	<0.001***	2.20

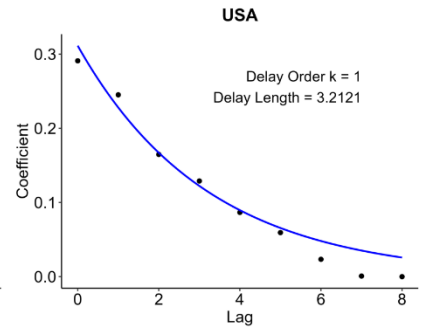
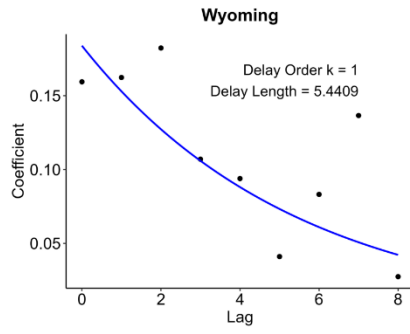
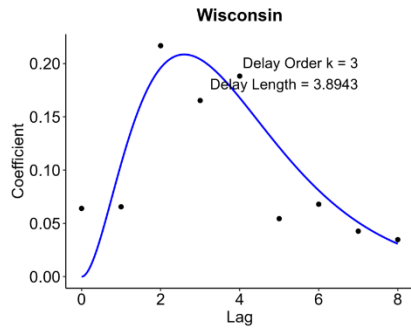
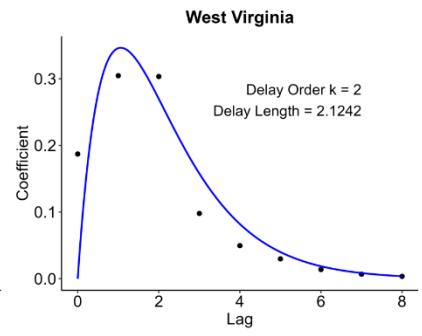
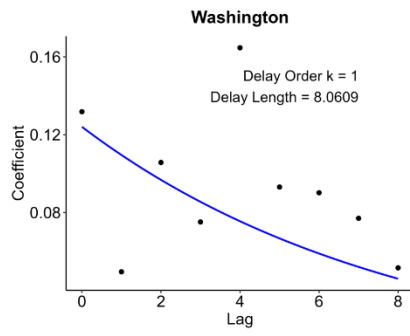
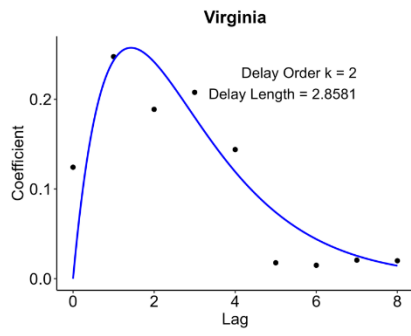
South Dakota	2	-0.41	-0.56	-0.26	<0.001***	5.06
Tennessee	1	-0.08	-0.16	0.00	0.051	6.65
Texas	1	0.26	0.18	0.35	<0.001***	4.56
Utah	1	-0.12	-0.32	0.08	0.256	4.27
Vermont	1	0.27	-0.72	1.26	0.593	8.30
Virginia	2	-0.13	-0.19	-0.07	<0.001***	2.86
Washington	1	-0.15	-0.97	0.67	0.717	8.06
West Virginia	2	-0.17	-0.23	-0.10	<0.001***	2.12
Wisconsin	3	-0.17	-0.58	0.24	0.426	3.89
Wyoming	1	-0.90	-1.11	-0.69	<0.001***	5.44
USA	1	-0.46	-0.47	-0.45	<0.001***	3.21

2 Fitted Erlang distribution for the US and each state. Black dots represent the standardized IDL coefficients (transformed from the ARDL model) and blue line represents the fitted Erlang distribution.





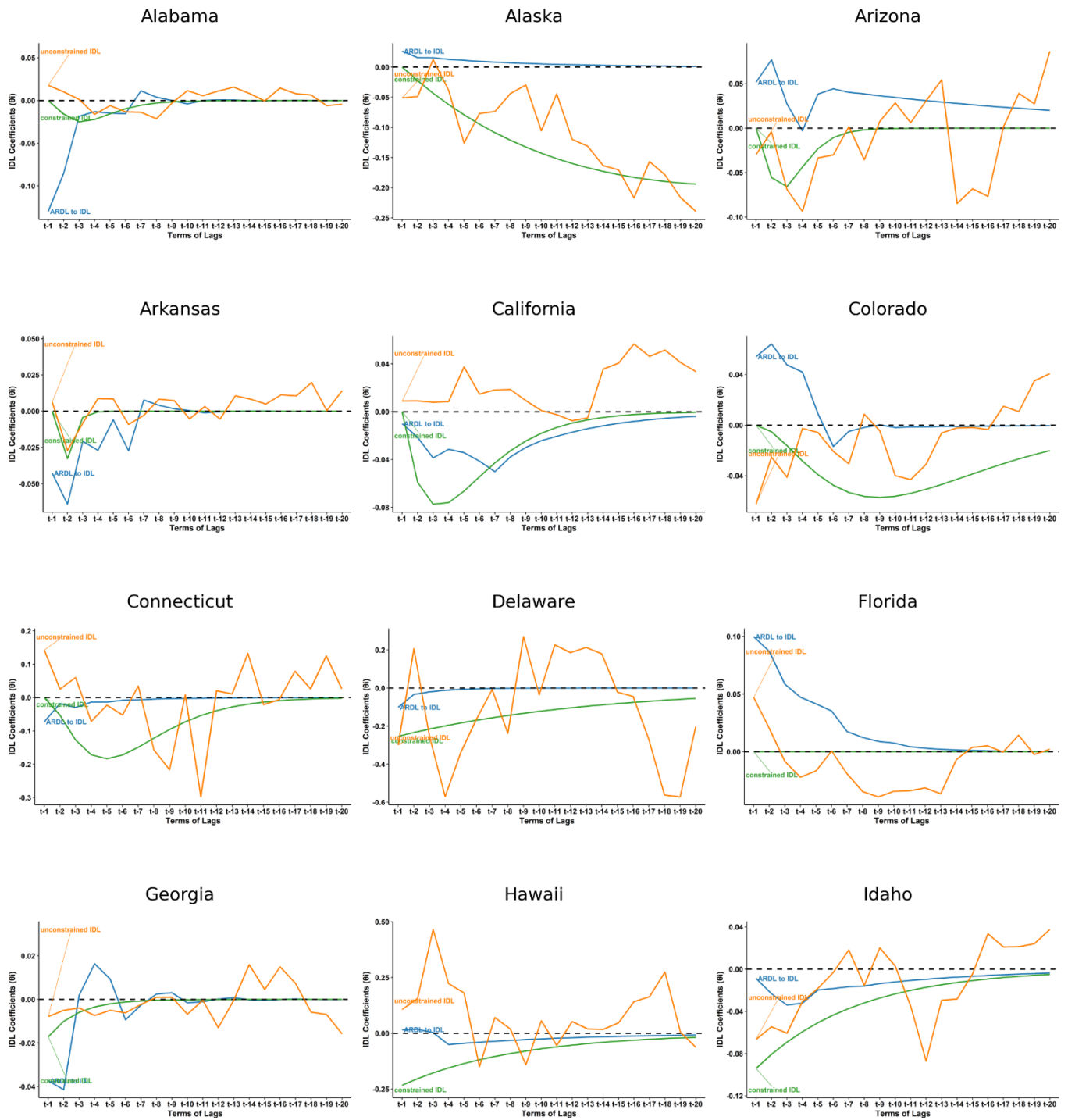




3 Comparing ARDL to IDL with Unconstrained and Constrained Models: National and State Level Results for Total Impact, R^2 , and Delay Length

ARDL to IDL Model					
Metric	National	States			
		Median	Interquartile Range (IQR)	Minimum	Maximum
R^2	0.39	0.52	0.61	0.22	0.83
Total Impact	-0.46	-0.18	0.36	-1.31	2.13
Average Delay Length (weeks)	3.21	4.47	4.58	1.68	18.02
Shape Parameter		Count	%		
k=1	√	38	76		
k=2		9	18		
k=3		3	6		
Unconstrained IDL Model					
Metric	National	States			
		Median	Interquartile Range (IQR)	Minimum	Maximum
R^2	0.09	0.19	0.28	0.05	0.78
Total Impact	0.06	-0.08	0.31	-2.30	1.59
Constrained IDL Model					
Metric	National	States			
		Median	Interquartile Range (IQR)	Minimum	Maximum
R^2	0.08	0.17	0.29	0.03	0.70
Total Impact	-0.23	-0.39	1.04	-4.03	0.00
Average Delay Length (weeks)	7.10	5.18	4.62	0.00	55.35
Shape Parameter		Count	%		
k=1		11	22		
k=2		16	32		
k=3	√	23	46		

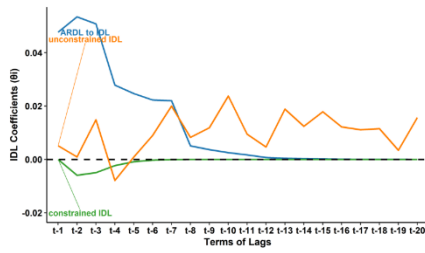
4 State-Level Distribution of IDL Coefficients: Comparison Across ARDL to IDL, Unconstrained, and Constrained Models



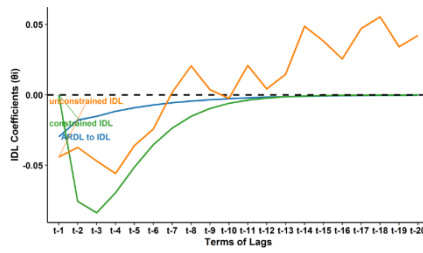




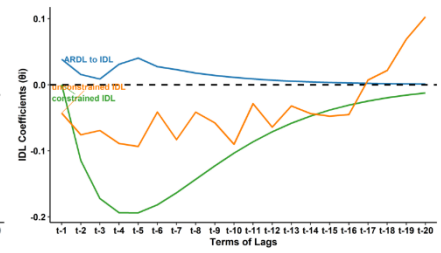
Texas



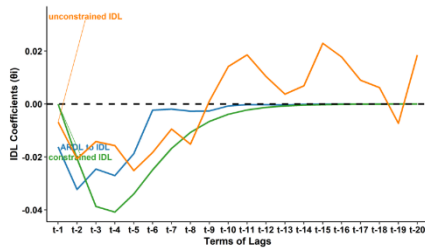
Utah



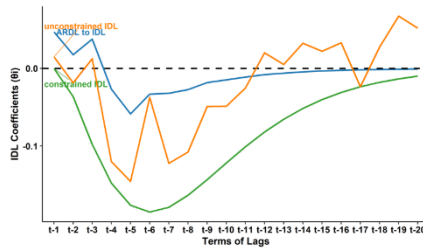
Vermont



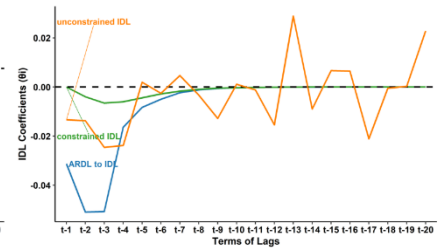
Virginia



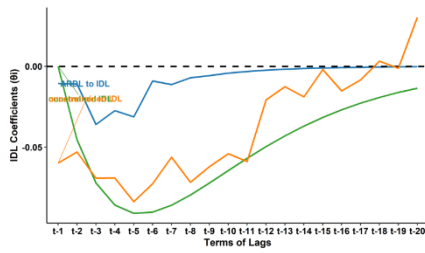
Washington



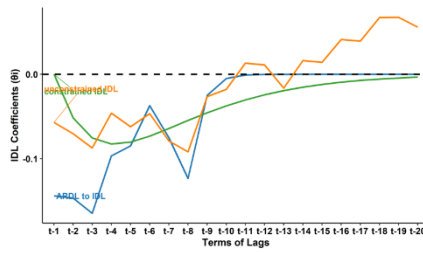
West Virginia



Wisconsin



Wyoming



USA

