Additional Information

January 26, 2021

Table 1: Log POI Visit SIP Policy Effects

	(1) Effect	(2) Standard Error
-20	0.017	0.018
-19	0.016	0.018
-18	0.026	0.017
-17	0.028	0.016
-16	0.029	0.017
-15	0.022	0.018
-14	0.029	0.017
-13	0.033	0.015
-12	0.011	0.014
-11	0.022	0.014
-10	0.004	0.013
-9	-0.006	0.013
-8	0.002	0.012
-7	-0.003	0.011
-6	-0.005	0.011
-5	-0.015	0.009
-4	-0.014	0.010
-3	-0.027	0.008
-2	-0.026	0.008
-1	0.000	0.000
0	-0.058	0.011
1	-0.178	0.013
2	-0.169	0.011
3	-0.156	0.016
4	-0.153	0.014
5	-0.152	0.016
6	-0.154	0.017
7	-0.156	0.016
8	-0.169	0.017
9	-0.179	0.022
10	-0.179	0.023
11	-0.183	0.026
12	-0.192	0.032
13	-0.189	0.033
14	-0.191	0.027
15	-0.197	0.028
16	-0.228	0.031
17	-0.230	0.033
18	-0.251	0.036
19	-0.264	0.042
20	-0.270	0.042

Note: Columns (1) and (2) show the estimated effect and associated standard error of the shelter in place order on the log of visits to points of interest (POI) using equation (1).

Table 2: Log Total Spending SIP Policy Effects

	(1) Effect	(2) Standard Error
-20	-0.017	0.013
-19	-0.013	0.011
-18	-0.000	0.010
-17	0.003	0.009
-16	0.007	0.008
-15	-0.003	0.007
-14	-0.001	0.008
-13	0.004	0.011
-12	0.006	0.009
-11	0.014	0.011
-10	0.008	0.009
-9	-0.003	0.007
-8	-0.008	0.006
-7	-0.013	0.008
-6	-0.013	0.012
-5	-0.016	0.009
-4	-0.010	0.008
-3	-0.014	0.006
-2	-0.006	0.004
-1	0.000	0.000
0	-0.024	0.006
1	-0.071	0.009
2	-0.064	0.009
3	-0.053	0.008
4	-0.046	0.009
5	-0.046	0.010
6	-0.050	0.010
7	-0.067	0.007
8	-0.059	0.019
9	-0.073	0.011
10	-0.040	0.014
11	-0.035	0.012
12	-0.037	0.017
13	-0.054	0.016
14	-0.063	0.011
15	-0.058	0.013
16	-0.059	0.015
17	-0.054	0.014
18	-0.031	0.023
19	-0.024	0.024
20	-0.034	0.020

Note: Columns (1) and (2) show the estimated effect and associated standard error of the shelter in place order on the log of total spending using equation (1).

Table 3: Log Employment SIP Policy Effects

	(1) Effect	(2) Standard Error
-20	0.094	0.032
-19	0.095	0.032
-18	0.115	0.037
-17	0.110	0.030
-16	0.111	0.028
-15	0.107	0.025
-14	0.112	0.028
-13	0.103	0.028
-12	0.094	0.027
-11	0.111	0.032
-10	0.092	0.024
-9	0.086	0.022
-8	0.074	0.017
-7	0.063	0.023
-6	0.040	0.019
-5	0.030	0.017
-4	0.039	0.025
-3	0.025	0.014
-2	0.012	0.012
-1	0.000	0.000
0	-0.048	0.016
1	-0.123	0.015
2	-0.137	0.019
3	-0.127	0.030
4	-0.139	0.020
5	-0.138	0.023
6	-0.155	0.025
7	-0.163	0.024
8	-0.189	0.031
9	-0.193	0.038
10	-0.179	0.048
11	-0.191	0.040
12	-0.194	0.044
13	-0.203	0.047
14	-0.211	0.041
15	-0.231	0.050
16	-0.239	0.056
17	-0.224	0.068
18	-0.239	0.059
19	-0.248	0.065
20	-0.270	0.066

Note: Columns (1) and (2) show the estimated effect and associated standard error of the shelter in place order on the log of total employed using equation (1).

Table 4: Log Count Debit Transaction SIP Policy Effects

	(1)	(2)
	Effect	Standard Error
-20	0.020	0.008
-19	0.023	0.007
-18	0.027	0.006
-17	0.028	0.006
-16	0.030	0.006
-15	0.023	0.006
-14	0.020	0.006
-13	0.024	0.008
-12	0.023	0.006
-11	0.027	0.007
-10	0.023	0.006
-9	0.018	0.005
-8	0.013	0.004
-7	0.007	0.006
-6	0.006	0.009
-5	0.005	0.006
-4	0.003	0.005
-3	-0.001	0.003
-2	0.002	0.003
-1	0.000	0.000
0	-0.020	0.005
1	-0.057	0.007
2	-0.058	0.006
3	-0.050	0.006
4	-0.042	0.006
5	-0.044	0.006
6	-0.050	0.007
7	-0.056	0.006
8	-0.058	0.007
9	-0.065	0.007
10	-0.060	0.008
11	-0.053	0.009
12	-0.053	0.011
13	-0.063	0.013
14	-0.067	0.009
15	-0.067	0.009
16	-0.074	0.009
17	-0.075	0.010
18	-0.068	0.013
19	-0.066	0.015
20	-0.073	0.013

Note: Columns (1) and (2) show the estimated effect and associated standard error of the shelter in place order on the log of the number of Facteus debit transactions using equation (1).

Table 5: Log Total Employment Hours SIP Policy Effects

	(1) Effect	(2) Standard Error
-20	0.109	0.034
-19	0.110	0.035
-18	0.135	0.041
-17	0.125	0.032
-16	0.125	0.030
-15	0.118	0.026
-14	0.122	0.029
-13	0.109	0.029
-12	0.097	0.029
-11	0.120	0.037
-10	0.097	0.026
-9	0.090	0.024
-8	0.076	0.018
-7	0.065	0.025
-6	0.039	0.021
-5	0.030	0.019
-4	0.039	0.028
-3	0.020	0.015
-2	0.008	0.014
-1	0.000	0.000
0	-0.048	0.018
1	-0.132	0.016
2	-0.141	0.019
3	-0.134	0.032
4	-0.146	0.021
5	-0.141	0.025
6	-0.164	0.026
7	-0.169	0.024
8	-0.202	0.033
9	-0.198	0.039
10	-0.190	0.050
11	-0.196	0.040
12	-0.201	0.046
13	-0.208	0.048
14	-0.221	0.041
15	-0.242	0.052
16	-0.250	0.057
17	-0.240	0.069
18	-0.250	0.061
19	-0.255	0.068
20	-0.283	0.068

Note: Columns (1) and (2) show the estimated effect and associated standard error of the shelter in place order on the log of total hours worked in Homebase using equation (1).

Table 6: Log Total Employment Wage SIP Policy Effects

	(1) Effect	(2) Standard Error
-20	0.133	0.037
-19	0.130	0.038
-18	0.157	0.045
-17	0.138	0.035
-16	0.141	0.033
-15	0.136	0.029
-14	0.142	0.032
-13	0.128	0.032
-12	0.109	0.033
-11	0.133	0.043
-10	0.105	0.030
-9	0.103	0.028
-8	0.084	0.022
-7	0.082	0.028
-6	0.058	0.024
-5	0.049	0.023
-4	0.055	0.034
-3	0.025	0.018
-2	0.022	0.014
-1	0.000	0.000
0	-0.039	0.017
1	-0.122	0.018
2	-0.129	0.022
3	-0.131	0.035
4	-0.143	0.023
5	-0.127	0.025
6	-0.149	0.026
7	-0.153	0.026
8	-0.187	0.035
9	-0.187	0.041
10	-0.180	0.050
11	-0.193	0.041
12	-0.186	0.045
13	-0.188	0.043
14	-0.214	0.039
15	-0.221	0.050
16	-0.238	0.056
17	-0.227	0.067
18	-0.248	0.057
19	-0.242	0.064
20	-0.259	0.062

Note: Columns (1) and (2) show the estimated effect and associated standard error of the shelter in place order on the log of total employment wages in Homebase using equation (1).

Table 7: Log POI Visit SIP Policy Effects by County

	(1)	(2)
	Effect	Standard Error
-20	0.030	0.022
-19	0.031	0.025
-18	0.041	0.022
-17	0.050	0.022
-16	0.051	0.022
-15	0.043	0.023
-14	0.048	0.022
-13	0.046	0.019
-12	0.026	0.019
-11	0.039	0.018
-10	0.026	0.017
-9	0.015	0.018
-8	0.017	0.016
-7	0.010	0.014
-6	0.002	0.016
-5	-0.011	0.014
-4	-0.011	0.013
-3	-0.021	0.011
-2	-0.021	0.010
-1	0.000	0.000
0	-0.062	0.013
1	-0.181	0.015
2	-0.176	0.013
3	-0.160	0.013
4	-0.158	0.013
5	-0.157	0.013
6	-0.161	0.014
7	-0.167	0.013
8	-0.183	0.014
9	-0.193	0.017
10	-0.191	0.017
11	-0.196	0.020
12	-0.204	0.024
13	-0.205	0.023
14	-0.212	0.020
15	-0.221	0.022
16	-0.253	0.024
17	-0.254	0.025
18	-0.270	0.028
19	-0.285	0.033
20	-0.293	0.033

Note: Columns (1) and (2) show the estimated effect and associated standard error of the shelter in place order on the log of visits to points of interest (POI) using equation (1) using counties as units.

Table 8: Log Total Spending SIP Policy Effects by County

	(1)	(2)
	Effect	Standard Error
-20	-0.005	0.022
-19	0.000	0.018
-18	0.010	0.013
-17	0.016	0.012
-16	0.019	0.011
-15	0.008	0.011
-14	0.010	0.012
-13	0.010	0.013
-12	0.011	0.012
-11	0.016	0.011
-10	0.014	0.009
-9	0.004	0.009
-8	-0.003	0.008
-7	-0.006	0.010
-6	-0.008	0.013
-5	-0.012	0.010
-4	-0.009	0.008
-3	-0.008	0.006
-2	-0.001	0.005
-1	0.000	0.000
0	-0.024	0.007
1	-0.073	0.010
2	-0.066	0.010
3	-0.058	0.008
4	-0.052	0.010
5	-0.050	0.011
6	-0.052	0.010
7	-0.074	0.010
8	-0.080	0.017
9	-0.083	0.018
10	-0.050	0.019
11	-0.041	0.017
12	-0.044	0.022
13	-0.057	0.019
14	-0.073	0.012
15	-0.070	0.015
16	-0.074	0.016
17	-0.070	0.020
18	-0.045	0.031
19	-0.047	0.031
20	-0.062	0.026

Note: Columns (1) and (2) show the estimated effect and associated standard error of the shelter in place order on the log of total spending using equation (1) using counties as units.

Table 9: Log Employment Hours SIP Policy Effects by County

	(1)	(2)
	Effect	Standard Error
-20	0.099	0.026
-19	0.102	0.030
-18	0.122	0.041
-17	0.119	0.026
-16	0.123	0.025
-15	0.117	0.022
-14	0.117	0.023
-13	0.110	0.023
-12	0.099	0.024
-11	0.118	0.038
-10	0.099	0.022
-9	0.094	0.020
-8	0.081	0.016
-7	0.060	0.021
-6	0.040	0.020
-5	0.032	0.023
-4	0.040	0.039
-3	0.026	0.018
-2	0.014	0.015
-1	0.000	0.000
0	-0.050	0.011
1	-0.126	0.013
2	-0.137	0.016
3	-0.127	0.032
4	-0.144	0.020
5	-0.139	0.021
6	-0.151	0.017
7	-0.166	0.019
8	-0.192	0.025
9	-0.195	0.035
10	-0.173	0.048
11	-0.196	0.036
12	-0.196	0.038
13	-0.202	0.032
14	-0.219	0.033
15	-0.241	0.040
16	-0.243	0.048
17	-0.229	0.063
18	-0.247	0.049
19	-0.252	0.051
20	-0.271	0.043

Note: Columns (1) and (2) show the estimated effect and associated standard error of the shelter in place order on the log of total employment hours using equation (1) using counties as units.

Table 10: Log POI Visit Opening Effects

	(1)	(2)
	Effect	Standard Error
-20	-0.029	0.014
-19	-0.046	0.013
-18	-0.034	0.011
-17	-0.023	0.010
-16	-0.009	0.009
-15	-0.019	0.011
-14	-0.019	0.008
-13	-0.005	0.009
-12	-0.017	0.012
-11	-0.024	0.011
-10	-0.017	0.010
-9	-0.011	0.008
-8	-0.011	0.008
-7	-0.012	0.008
-6	0.001	0.006
-5	-0.001	0.014
-4	0.004	0.009
-3	0.010	0.011
-2	0.007	0.008
-1	0.000	0.000
0	0.029	0.006
1	0.037	0.009
2	0.039	0.010
3	0.046	0.007
4	0.050	0.010
5	0.037	0.011
6	0.029	0.012
7	0.044	0.015
8	0.057	0.014
9	0.061	0.013
10	0.071	0.013
11	0.069	0.015
12	0.074	0.013
13	0.088	0.011
14	0.078	0.012
15	0.084	0.012
16	0.087	0.013
17	0.096	0.015
18	0.100	0.015
19	0.103	0.016
20	0.097	0.015

Note: Columns (1) and (2) show the estimated effect and associated standard error of opening on the log of visits to points of interest (POI) using equation (1).

Table 11: Log Total Spending Opening Effects

	(1)	(2)
	Effect	Standard Error
-20	-0.036	0.034
-19	-0.089	0.035
-18	-0.100	0.031
-17	-0.018	0.028
-16	0.006	0.022
-15	-0.010	0.023
-14	-0.002	0.029
-13	-0.001	0.027
-12	-0.015	0.026
-11	-0.030	0.020
-10	-0.036	0.015
-9	-0.005	0.011
-8	0.003	0.012
-7	0.001	0.017
-6	0.001	0.018
-5	-0.002	0.019
-4	-0.020	0.015
-3	-0.034	0.008
-2	-0.020	0.009
-1	0.000	0.000
0	0.015	0.007
1	0.009	0.012
2	-0.023	0.016
3	-0.032	0.021
4	-0.034	0.018
5	-0.024	0.020
6	-0.007	0.014
7	-0.012	0.016
8	-0.011	0.022
9	-0.011	0.021
10	-0.005	0.022
11	-0.018	0.021
12	0.017	0.021
13	0.016	0.014
14	0.016	0.017
15	0.016	0.024
16	0.005	0.026
17	-0.002	0.027
18	-0.010	0.026
19	0.012	0.025
20	0.017	0.019

Note: Columns (1) and (2) show the estimated effect and associated standard error of opening on the log of total spending using equation (1).

Table 12: Log Employment Opening Effects

	(1) Effect	(2) Standard Error
-20	-0.068	0.021
-19	-0.087	0.024
-18	-0.089	0.030
-17	-0.082	0.022
-16	-0.053	0.014
-15	-0.037	0.009
-14	-0.045	0.020
-13	-0.047	0.021
-12	-0.062	0.024
-11	-0.073	0.028
-10	-0.064	0.023
-9	-0.043	0.013
-8	-0.021	0.005
-7	-0.040	0.020
-6	-0.021	0.021
-5	-0.045	0.024
-4	-0.071	0.029
-3	-0.017	0.027
-2	-0.019	0.013
-1	0.000	0.000
0	0.040	0.010
1	0.024	0.023
2	0.012	0.027
3	0.003	0.028
4	0.022	0.024
5	0.025	0.016
6	0.052	0.009
7	0.053	0.027
8	0.058	0.031
9	0.047	0.032
10	0.042	0.033
11	0.060	0.030
12	0.063	0.023
13	0.096	0.015
14	0.087	0.028
15	0.094	0.029
16	0.083	0.032
17	0.076	0.034
18	0.094	0.031
19	0.101	0.024
20	0.126	0.016

Note: Columns (1) and (2) show the estimated effect and associated standard error of opening on the log of total employed using equation (1).

Table 13: Role of Policy in Explaining Aggregate Temporal Changes in Distancing and Economic Outcomes

	(1)	(2)	(3)
			Percent due
	Total	Policy	to policy
POI Visits	-0.672	-0.109	16.2
		(0.008)	
Homebase Wages	-0.590	-0.092	15.6
		(0.013)	
Homebase Employment	-0.592	-0.095	16.0
		(0.012)	
Facteus Debit Transactions	0.048	-0.055	-115.2
		(0.007)	
Facteus Total Spending	0.284	-0.071	-24.8
		(0.009)	

Note: Table reports the total and policy-induced changes in various outcomes as outlined in Section 5.1. We consider the policy-induced changes of stay-at-home orders. The treatment effects ω_k set $k = 1$. Column (3) presents what percentage of the change is attributable to the stay-at-home order.

Table 14: Role of Policy in Explaining Aggregate Temporal Changes in Health Outcomes

	(1)	(2)	(3)
	$\gamma = 1/12$	$\gamma = 1/9$	$\gamma = 1/6$
			Percent due
	Total	Policy	to policy
$\mathscr{R}_0 = 2.7$	-0.634	-0.098	15.4
		(0.052)	
$\mathscr{R}_0 = 3.0$	-0.670	-0.088	13.1
		(0.047)	
$\mathscr{R}_0 = 3.3$	-0.700	-0.080	11.4
		(0.042)	

Note: Table reports the total and policy-induced changes in various outcomes as outlined in Section 5.1. We consider the policy-induced changes of stay-at-home orders. All specifications estimate the effect of stay-at-home orders using estimates from the CSA level and use the estimated treatment effect ω_k from Table 1. Column (3) presents what percentage of the change is attributable to the stay-at-home order.

Table 15: Counterfactual Estimates for April 30th

	Cases (1,000s)	Deaths (1,000s)
Observed	791.1	23.7
No policy – proportional	1,284.8	38.5
March 17 policy – proportional	636.6	19.1
SF distancing	441.9	13.3

Note: This table presents both the observed cases and deaths (assuming a fatality rate of 3%) as well as those predicted by different counterfactual assumptions.