

Table S8: Relationship between Temperature, Relative Humidity, and R Value: F Check with the Serial Interval of Mean 7.5 Days and Standard Deviation 3.4 day (2020)[2] for the U.S. Counties

This table utilizes the estimated serial interval in a previous paper (mean 7.5 days, std 3.4 days)[2] to construct R values for the U.S. counties. The table reports the coefficients of the effective reproductive number, R value, on an intercept, temperature, relative humidity and control variables in the Fama-MacBeth regressions.

	Overall	Before Lockdown (April 7)	After Lockdown (April 7)
R2	0.1170	0.1508	0.0760
Temperature			
coef	-0.0199	-0.0271	-0.0113
95%CI	[-0.0330,-0.0069]	[-0.0456,-0.0086]	[-0.0296,0.0071]
std.err	0.0065	0.0089	0.0087
t-stat	-3.08	-3.03	-1.29
p-value	0.004	0.006	0.214
Relative Humidity			
coef	-0.0052	-0.0086	-0.0011
95%CI	[-0.0114,0.0011]	[-0.0169,-0.0003]	[-0.0030,0.0008]
std.err	0.0031	0.0040	0.0009
t-stat	-1.68	-2.14	-1.20
p-value	0.101	0.044	0.244
Population Density			
coef	0.00002	3.00E-05	5.07E-08
95%CI	[-0.00003,0.00006]	[-0.0001,0.0001]	[-2.20e-6,2.30e-6]
std.err	0.00002	4.00E-05	1.07E-06
t-stat	0.73	0.71	0.05
p-value	0.469	0.483	0.963
Percentage over 65			
coef	-0.9733	-1.2685	-0.6159

	Overall	Before Lockdown (April 7)	After Lockdown (April 7)
95%CI	[-1.4465,-0.5000]	[-1.9245,-0.6124]	[-1.0408,-0.1911]
std.err	0.2343	0.3163	0.2022
t-stat	-4.15	-4.01	-3.05
p-value	0.0002	0.001	0.007
Gini			
coef	-1.9913	-2.4119	-1.4822
95%CI	[-3.6305,-0.3521]	[-4.9880,0.1643]	[-2.2360,-0.7285]
std.err	0.8117	1.2422	0.3588
t-stat	-2.45	-1.94	-4.13
p-value	0.018	0.065	0.001
Socio-economic factor			
coef	0.0906	0.1424	0.0279
95%CI	[0.0166,0.1646]	[0.0627,0.2222]	[-0.0112,0.0670]
std.err	0.0366	0.0385	0.0186
t-stat	2.47	3.70	1.50
p-value	0.018	0.001	0.152
No. of ICU beds per capita			
coef	-0.0113	-0.0127	-0.0096
95%CI	[-0.0263,0.0038]	[-0.0367,0.0113]	[-0.0147,-0.0044]
std.err	0.0075	0.0116	0.0025
t-stat	-1.51	-1.10	-3.91
p-value	0.138	0.285	0.001
Fraction of maximum moving distance over normal time			
coef	0.0036	0.0019	0.0056
95%CI	[0.0006,0.0066]	[-0.0023,0.0061]	[0.0043,0.0070]
std.err	0.0015	0.0020	0.0007
t-stat	2.44	0.94	8.67
p-value	0.019	0.356	0
Home-stay minutes			

	Overall	Before Lockdown (April 7)	After Lockdown (April 7)
coef	0.0003	0.0007	-0.0003
95%CI	[-0.0003,0.0008]	[0.0003,0.0011]	[-0.0005,-2e-05]
std.err	0.0003	0.0002	0.0001
t-stat	1.00	3.28	-2.24
p-value	0.321	0.003	0.038
Latitude			
coef	-0.0259	-0.0514	0.0049
95%CI	[-0.0551,0.0032]	[-0.0825,-0.0203]	[-0.0179,0.0277]
std.err	0.0144	0.0150	0.0109
t-stat	-1.80	-3.43	0.45
p-value	0.080	0.002	0.657
Longitude			
coef	0.0070	0.0110	0.0021
95%CI	[0.0019,0.0120]	[0.0059,0.0161]	[0.0003,0.0039]
std.err	0.0025	0.0025	0.0009
t-stat	2.79	4.45	2.50
p-value	0.008	0.0002	0.022
const			
coef	1.7601	2.2325	1.1882
95%CI	[1.1636,2.3566]	[1.6514,2.8137]	[1.1588,1.2177]
std.err	0.2954	0.2802	0.0140
t-stat	5.96	7.97	84.82
p-value	0	0	0