

Note: we are using time in office to define temperature

## 1 Growth Table - First Half

	Dependent Variable: <b>Productivity Growth</b>					
	First Half of Study		No Prior Computer Experience		Computer Experience	
	(1)	(2)	(3)	(4)	(5)	(6)
Sum of Temperature Coefficients	-0.02619** [0.021]	-0.02927*** [0.004]	-0.02803** [0.038]	-0.03020** [0.014]	-0.01464 [0.448]	-0.02761 [0.106]
Temperature ( $^{\circ}C$ )	-0.0207** (0.00746)	-0.0180** (0.00662)	-0.0224* (0.00876)	-0.0182* (0.00792)	-0.0131 (0.0140)	-0.0211 (0.0122)
Lag 1 of Temperature	0.00295 (0.00879)	-0.00131 (0.00788)	0.00111 (0.0106)	-0.00472 (0.00984)	0.00901 (0.0144)	0.0107 (0.0112)
Lag 2 of Temperature	-0.00365 (0.00676)	-0.00329 (0.00571)	-0.00208 (0.00812)	-0.00128 (0.00692)	-0.00671 (0.0121)	-0.00943 (0.00994)
Lag 3 of Temperature	-0.00478 (0.00623)	-0.00668 (0.00574)	-0.00470 (0.00745)	-0.00598 (0.00703)	-0.00388 (0.0115)	-0.00780 (0.0101)
Control for Lag of Dependent Variable	No	Yes	No	Yes	No	Yes
Dependent Variable Mean	0.109	0.109	0.121	0.121	0.0697	0.0697
Observations	1435	1435	1089	1089	344	344
R-squared	0.319	0.447	0.306	0.433	0.385	0.533

## 2 Growth Table - Full Study

	Dependent Variable: <b>Productivity Growth</b>					
	Full Sample		No Prior Computer Experience		Computer Experience	
	(1)	(2)	(3)	(4)	(5)	(6)
Sum of Temperature Coefficients	-0.00134 [0.755]	-0.00197 [0.640]	-0.00119 [0.810]	-0.00264 [0.580]	-0.00602 [0.472]	-0.00469 [0.613]
Temperature ( $^{\circ}C$ )	-0.00962* (0.00434)	-0.00783* (0.00386)	-0.00907 (0.00506)	-0.00777 (0.00453)	-0.0151 (0.00882)	-0.0127 (0.00686)
Lag 1 of Temperature	0.00735 (0.00545)	0.00398 (0.00478)	0.00217 (0.00638)	-0.00107 (0.00563)	0.0255* (0.0101)	0.0209** (0.00771)
Lag 2 of Temperature	-0.00272 (0.00452)	-0.000130 (0.00378)	0.00186 (0.00519)	0.00344 (0.00429)	-0.0201* (0.00940)	-0.0116 (0.00792)
Lag 3 of Temperature	0.00365 (0.00347)	0.00201 (0.00313)	0.00385 (0.00391)	0.00276 (0.00354)	0.00374 (0.00764)	-0.00131 (0.00667)
Control for Lag of Dependent Variable	No	Yes	No	Yes	No	Yes
Dependent Variable Mean	0.0671	0.0671	0.0749	0.0749	0.0423	0.0423
Observations	2733	2733	2079	2079	654	654
R-squared	0.265	0.392	0.265	0.389	0.298	0.466

### 3 Growth Table - First Half English

	Dependent Variable: <b>Productivity Growth</b>					
	First Half of Study		No English		English	
	(1)	(2)	(3)	(4)	(5)	(6)
Sum of Temperature Coefficients	-0.02619** [0.021]	-0.02927*** [0.004]	-0.01452 [0.557]	-0.01600 [0.505]	-0.02974** [0.023]	-0.03316*** [0.004]
Temperature ( $^{\circ}C$ )	-0.0207** (0.00746)	-0.0180** (0.00662)	-0.0159 (0.0163)	-0.0112 (0.0162)	-0.0216* (0.00847)	-0.0212** (0.00711)
Lag 1 of Temperature	0.00295 (0.00879)	-0.00131 (0.00788)	-0.00562 (0.0252)	-0.00834 (0.0242)	0.00414 (0.00916)	0.0000577 (0.00776)
Lag 2 of Temperature	-0.00365 (0.00676)	-0.00329 (0.00571)	0.00410 (0.0189)	0.00454 (0.0169)	-0.00573 (0.00717)	-0.00584 (0.00613)
Lag 3 of Temperature	-0.00478 (0.00623)	-0.00668 (0.00574)	0.00288 (0.0169)	-0.00102 (0.0165)	-0.00655 (0.00681)	-0.00622 (0.00594)
Control for Lag of Dependent Variable	No	Yes	No	Yes	No	Yes
Dependent Variable Mean	0.109	0.109	0.143	0.143	0.100	0.100
Observations	1435	1435	292	292	1142	1142
R-squared	0.319	0.447	0.362	0.413	0.308	0.512

### 4 Growth Table - Placebo

	Dependent Variable: <b>Productivity Growth</b>			
	First Half of Study	Second Half of Study	First Half of Study	Second Half of Study
	(1)	(2)	(3)	(4)
Sum of Temperature Coefficients	-0.01686 [0.146]	0.01501* [0.066]	-0.02116** [0.043]	0.01099 [0.179]
Temperature ( $^{\circ}C$ )	-0.00966 (0.00851)	0.00301 (0.00694)	-0.00836 (0.00749)	0.00381 (0.00573)
Lag 1 of Temperature	-0.00360 (0.00915)	0.00503 (0.00747)	-0.00702 (0.00808)	-0.00119 (0.00568)
Lag 2 of Temperature	0.000519 (0.00683)	-0.00476 (0.00623)	0.000339 (0.00572)	0.000751 (0.00494)
Lag 3 of Temperature	-0.00412 (0.00627)	0.0117* (0.00488)	-0.00611 (0.00576)	0.00762 (0.00445)
Control for Lag of Dependent Variable	No	No	Yes	Yes
Dependent Variable Mean	0.109	0.0206	0.109	0.0206
Observations	1435	1254	1435	1254
R-squared	0.314	0.231	0.443	0.451

## 5 Growth Table w/ Leads - First Half

	Dependent Variable: <b>Productivity Growth</b>			
	Full Sample		No Prior Computer Experience	Computer Experience
	(1)	(2)	(3)	(4)
Sum of Temperature Coefficients	-0.01098 [0.271]	-0.01073 [0.288]	-0.01015 [0.382]	-0.00461 [0.840]
Sum of Lead Temperature Coefficients	0.01254 [0.166]	0.01122 [0.225]	0.01227 [0.254]	0.01483 [0.512]
Temperature ( $^{\circ}C$ )	-0.0235** (0.00726)	-0.0219** (0.00719)	-0.0224* (0.00910)	-0.0194 (0.0119)
Control for Lag of Dependent Variable	No	Yes	Yes	Yes
Dependent Variable Mean	0.105	0.105	0.122	0.0585
Observations	1415	1415	1046	369
R-squared	0.362	0.368	0.380	0.462

## 6 Growth Table w/ Leads - Full Sample

	Dependent Variable: <b>Productivity Growth</b>			
	Full Sample		No Prior Computer Experience	Computer Experience
	(1)	(2)	(3)	(4)
Sum of Temperature Coefficients	-0.00282 [0.584]	-0.00218 [0.675]	-0.00415 [0.501]	0.00403 [0.751]
Sum of Lead Temperature Coefficients	0.00982* [0.076]	0.01021* [0.064]	0.01000 [0.117]	0.00956 [0.476]
Temperature ( $^{\circ}C$ )	-0.0126** (0.00478)	-0.0124** (0.00474)	-0.0142* (0.00553)	-0.00553 (0.00875)
Control for Lag of Dependent Variable	No	Yes	Yes	Yes
Dependent Variable Mean	0.0879	0.0879	0.101	0.0483
Observations	2092	2092	1557	534
R-squared	0.256	0.262	0.262	0.430

## 7 Productivity with N lags

	Dependent Variable: <b>Productivity</b>							
	N = 0 Lags		N = 1 Lag		N = 2 Lags		N = 3 Lags	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Temperature ( $^{\circ}C$ )	-11.65*** (2.852)	-11.15*** (2.748)	-16.75*** (2.724)	-17.02*** (2.708)	-18.86*** (2.951)	-19.06*** (2.930)	-20.01*** (3.166)	-20.24*** (3.152)
Lag 1 of Temperature			7.698** (2.447)	8.879*** (2.443)	9.543*** (2.856)	10.56*** (2.910)	9.856** (3.211)	10.52** (3.252)
Lag 2 of Temperature					0.128 (2.712)	-0.371 (2.721)	0.720 (3.021)	0.394 (3.038)
Lag 3 of Temperature							-4.293 (2.997)	-4.335 (2.989)
p-value for Sum of Coefficients = 0	.	.	0.00161	0.00247	0.00542	0.00519	0.000773	0.000632
Control for Lag of Dependent Variable	No	Yes	No	Yes	No	Yes	No	Yes
Dependent Variable Mean	1581.2	1622.1	1621.7	1621.7	1642.5	1642.5	1654.6	1654.6
Observations	9515	9003	8447	8447	7487	7487	6634	6634
R-squared	0.871	0.877	0.880	0.881	0.883	0.883	0.884	0.884

## 8 Attendance by Computer

	Dependent Variable:					
	Participant Present (=1)	Check-in Time	Check-out Time			
	(1)	(2)	(3)	(4)	(5)	(6)
Temperature ( $^{\circ}C$ )	-0.00167 (0.00220)	0.00411 (0.00492)	0.00452 (0.00428)	-0.00288 (0.00938)	-0.0106 (0.00704)	0.0104 (0.0227)
Lag 1 of Temperature	0.00363 (0.00244)	0.00424 (0.00425)	-0.00854 (0.00438)	-0.0271** (0.00964)	0.00342 (0.00657)	-0.00677 (0.0202)
Computer?	No	Yes	No	Yes	No	Yes
Dependent Variable Mean	0.887	0.912	10.59	10.60	18.31	18.37
Observations	9660	2995	8256	2628	8256	2628
R-squared	0.277	0.207	0.478	0.479	0.218	0.208

## 9 Table 1

	Dependent Variable is <b>Average Hourly</b>				
	<b>Quality Adjusted Output</b>	<b>Total Number of Entries</b>	<b>Active Typing Time</b>	<b>Mistakes (per 100 entries)</b>	<b>Performance Earnings</b>
	(1)	(2)	(3)	(4)	(5)
Temperature ( $^{\circ}C$ )	-11.05*** (2.656)	-11.40*** (2.728)	-0.146*** (0.0305)	-0.0342 (0.0324)	-0.192*** (0.0546)
Dependent Variable Mean	1570.5	1683.1	25.88	11.35	21.15
Observations	10884	10884	10884	10884	10884
R-squared	0.864	0.858	0.549	0.661	0.761

## 10 Table 2

	Dependent Variable is <b>Average Hourly Quality Adjust Output</b>			
	N = No Lags	N = Three Lags	N = Four Lags	N = Five Lags
	(1)	(2)	(3)	(4)
Temperature ( $^{\circ}C$ )	-10.80*** (2.561)	-20.24*** (2.951)	-20.62*** (3.223)	-22.94*** (3.343)
Sum of Lagged Temperature Coefficients, Lag 3 to N	.	-4.576	-8.302	-4.991
p-value	.	0.113	0.0200	0.216
Observations	10215	7270	6353	5547
R-squared	0.871	0.881	0.883	0.887

## 11 Table a1

	Dependent Variable is <b>Average Hourly</b>				
	<b>Quality Adjusted Output</b>	<b>Total Number of Entries</b>	<b>Active Typing Time</b>	<b>Mistakes (per 100 entries)</b>	<b>Performance Earnings</b>
	(1)	(2)	(3)	(4)	(5)
Heat Index	-6.475*** (1.374)	-6.454*** (1.411)	-0.0803*** (0.0157)	0.000256 (0.0175)	-0.0958*** (0.0287)
Dependent Variable Mean	1570.5	1683.1	25.88	11.35	21.15
Observations	10884	10884	10884	10884	10884
R-squared	0.864	0.858	0.549	0.661	0.761

## 12 Table a2

	Dependent Variable is <b>Average Hourly</b>				
	<b>Quality Adjusted Output</b>	<b>Total Number of Entries</b>	<b>Active Typing Time</b>	<b>Mistakes (per 100 entries)</b>	<b>Performance Earnings</b>
	(1)	(2)	(3)	(4)	(5)
Temperature ( $^{\circ}C$ )	-11.06*** (2.653)	-11.36*** (2.724)	-0.145*** (0.0304)	-0.0296 (0.0326)	-0.191*** (0.0550)
PM 2.5	0.00786 (0.137)	-0.0386 (0.141)	-0.000766 (0.00161)	-0.00444* (0.00197)	-0.00103 (0.00290)
Dependent Variable Mean	1570.5	1683.1	25.88	11.35	182.4
Observations	10884	10884	10884	10884	10884
R-squared	0.864	0.858	0.549	0.661	0.761

## 13 Table a3

	Dependent Variable is				
	Quality Adjusted Output (per day)	Total Number of Entries (per day)	Active Typing Time (min/day)	Mistakes (per 100 entries)	Performance Earnings (per day)
	(1)	(2)	(3)	(4)	(5)
Temperature ( $^{\circ}C$ )	-216.7*** (29.82)	-227.1*** (30.95)	-3.156*** (0.370)	-1.080*** (0.309)	-0.192*** (0.0546)
Dependent Variable Mean	13520.4	14486.3	222.7	97.48	182.4
Observations	10884	10884	10884	10884	10884
R-squared	0.796	0.785	0.460	0.633	0.761

## 14 Table a4

	Dependent Variable is				
	Quality Adjusted Output (per hr)	Total Number of Entries (per hr)	Active Typing Time (min/hr)	Mistakes (per 100 entries)	Performance Earnings (per hr)
	(1)	(2)	(3)	(4)	(5)
Temperature ( $^{\circ}C$ )	-5.934* (2.543)	-6.070* (2.624)	-0.0956** (0.0326)	-0.0225 (0.0324)	-0.0908 (0.0478)
Dependent Variable Mean	1586.7	1700.0	26.13	11.44	21.41
Observations	92744	92744	92744	92744	92744
R-squared	0.488	0.476	0.290	0.267	0.345

## 15 Table a5

	Dependent Variable is			
	Participant Present (=1)	Check-in Time	Check-out Time	Total Hours of Work
	(1)	(2)	(3)	(4)
Temperature ( $^{\circ}C$ )	0.00190 (0.00188)	-0.00283 (0.00350)	-0.00566 (0.00591)	-0.00283 (0.00690)
Dependent Variable Mean	0.893	10.59	18.33	7.740
Observations	12655	10884	10884	10884
R-squared	0.258	0.474	0.213	0.331

## 16 Table a6

	Dependent Variable:							
	Participant Present (=1)		Check-in Time		Check-out Time		Total Hours of Work	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Temperature ( $^{\circ}C$ )	-0.000297 (0.00201)		0.00373 (0.00387)		-0.00640 (0.00706)		-0.0101 (0.00806)	
Lag 1 of Temperature	0.00395 (0.00213)		-0.0116** (0.00401)		0.00131 (0.00649)		0.0129 (0.00769)	
High Temperature (=1)		0.0175 (0.0151)		-0.0180 (0.0298)		-0.0133 (0.0495)		0.00470 (0.0591)
Medium Temperature (=1)		0.00855 (0.0135)		-0.0125 (0.0258)		0.00427 (0.0404)		0.0168 (0.0489)
Low Temperature (=1)		-0.000467 (0.0107)		-0.00326 (0.0189)		-0.0656* (0.0283)		-0.0623 (0.0346)
Dependent Variable Mean	0.893	0.893	10.59	10.59	18.33	18.33	7.740	7.740
Observations	12655	12655	10884	10884	10884	10884	10884	10884
R-squared	0.259	0.258	0.474	0.474	0.213	0.214	0.331	0.331

## 17 Table a7

	Dependent Variable is			
	Cognition Index (1)	PVT (2)	Corsi (3)	Hearts and Flowers (4)
Temperature ( $^{\circ}C$ )	0.00134 (0.00450)	0.00488 (0.00497)	-0.00666 (0.00701)	0.00524 (0.00514)
Observations	9.866e+03	9.675e+03	5.102e+03	5.142e+03
R-squared	1	0	1	1

## 18 Table a11

	April-September (1)	October-March (2)	p-value, 1 = 2 (3)
Literate in English (=1)	0.799 (0.030)	0.781 (0.025)	0.645
Prior Computer Experience (=1)	0.247 (0.033)	0.306 (0.028)	0.179
Years of Education	9.983 (0.210)	10.309 (0.177)	0.241
Math Ability (=1)	0.632 (0.037)	0.615 (0.029)	0.716