

Tables

Table 1: Summary Statistics of Response Times (seconds)

| | Mean | Std. Dev. | Median | Min | Max |
|-------------------------------------|------------------------|-----------------------|------------------------|-----------------------|--------------------------|
| Main Outcomes: | | | | | |
| Call to Dispatch (Priority 1) | 289.38 (4.82 mins) | 201.04 (3.35 mins) | 223.92 (3.73 mins) | 40.82 (0.68 mins) | 2,136.20 (35.60 mins) |
| Call to On-Scene (Priority 1) | 802.44 (13.37 mins) | 295.46 (4.92 mins) | 737.45 (12.29 mins) | 103.00 (1.72 mins) | 5,577.00 (92.95 mins) |
| Controls/Secondary Outcomes: | | | | | |
| Number Dispatches | 151.62 | 48.88 | 145.00 | 33.00 | 451.00 |
| Priority 1 | 64.86 | 24.25 | 62.00 | 8.00 | 244.00 |
| Priority 2 | 29.04 | 11.15 | 28.00 | 0.00 | 131.00 |
| Priority 3 | 57.71 | 23.38 | 54.00 | 7.00 | 272.00 |
| Number Arrests | 20.46 | 7.08 | 20.00 | 2.00 | 55.00 |
| Arrest Rate | 0.14 | 0.03 | 0.14 | 0.02 | 0.38 |
| Number SST Alerts | 2.57 | 4.46 | 0.00 | 0.00 | 71.00 |
| Officer Hours | 1,205.34 | 316.58 | 1,196.00 | 200.50 | 3,431.50 |
| Number Gun Victimizations | 0.37 | 0.70 | 0.00 | 0.00 | 8.00 |

Note:

Units are in seconds unless otherwise noted. Data is at the district-by-day level. Call to Dispatch represents the amount of time from the 911 call to the dispatcher finding and dispatching a police officer to the scene. Dispatch to On-Scene is the time from dispatch to the scene of the reported crime. Priority 1 refers to an immediate dispatch, Priority 2 a rapid dispatch, and Priority 3 a routine dispatch. Officer Hours are the number of working hours sworn police officers work. Number of SST Alerts is the number of ShotSpotter alerts. Note that New Years Eve/New Years Day/Fourth of July are excluded from the sample as ShotSpotter Alerts can be as high as 392 on these days.

Table 2: Effect of ShotSpotter Rollout on Response Times (OLS)

| | | | | | Officer Hours | |
|----------------------------------|------------------------|------------------------|------------------------|------------------------|-----------------------|------------------------|
| | | | | | > Median | <= Median |
| | (1) | (2) | (3) | (4) | (5) | (6) |
| <i>Panel A: Call to Dispatch</i> | | | | | | |
| ShotSpotter Activated | 93.203*** (31.051) | 94.480*** (29.541) | 102.737*** (29.922) | 92.370*** (28.934) | 38.221** (18.233) | 178.246*** (50.570) |
| Border District Activated | | | | 14.643 (20.019) | | |
| Mean of Dependent Variable | 289.377 | 289.377 | 289.377 | 289.377 | 255.198 | 323.554 |
| Observations | 55,792 | 55,792 | 55,792 | 55,792 | 27,895 | 27,897 |
| Wild Bootstrap P-Value | 0.008 | 0.003 | | 0.006 | 0.062 | 0.001 |
| <i>Panel B: Call to On-Scene</i> | | | | | | |
| ShotSpotter Activated | 144.281*** (34.308) | 143.804*** (33.256) | 159.733*** (33.462) | 140.889*** (32.803) | 87.153*** (27.742) | 220.132*** (56.916) |
| Border District Activated | | | | 20.245 (21.543) | | |
| Mean of Dependent Variable | 802.444 | 802.444 | 802.444 | 802.444 | 745.249 | 859.637 |
| Observations | 55,791 | 55,791 | 55,791 | 55,791 | 27,895 | 27,896 |
| Wild Bootstrap P-Value | | | | | | |
| FE: Day-by-Month-by-Year | X | X | X | X | X | X |
| FE: District | X | X | X | X | X | X |
| Control Variables | | X | X | X | X | X |
| Gardner (2021) Robust | | | X | | | |

Note:

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Standard errors are clustered by district. Shotspotter is activated in 12 of the 22 police districts in Chicago. Panel A shows the time from entry call to dispatched officer. Panel B shows time from the dispatched officer to on scene. Controls in all models include controls for officer hours and number of dispatches.

Table 3: Effect of Number of ShotSpotter Alerts on Response Times (OLS)

| | | | | | Officer Hours | |
|----------------------------------|----------------------|----------------------|----------------------|----------------------|---------------------|----------------------|
| | | | | | > Median | <= Median |
| | (1) | (2) | (3) | (4) | (5) | (6) |
| <i>Panel A: Call to Dispatch</i> | | | | | | |
| Number SST Alerts | 10.412*** (2.918) | 10.026*** (2.960) | 14.205*** (3.946) | 9.901*** (2.886) | 5.578*** (1.948) | 9.956*** (2.339) |
| Border Police District | | | | 17.668 (19.108) | | |
| Mean of Dependent Variable | 289.377 | 289.377 | 289.377 | 289.377 | 255.198 | 323.554 |
| Observations | 55,792 | 55,792 | 55,792 | 55,792 | 27,895 | 27,897 |
| <i>Panel B: Call to On-Scene</i> | | | | | | |
| Number SST Alerts | 13.884*** (3.215) | 13.255*** (3.271) | 20.493*** (4.241) | 13.056*** (3.201) | 8.820*** (2.404) | 11.711*** (2.636) |
| Border Police District | | | | 27.914 (20.760) | | |
| Mean of Dependent Variable | 802.444 | 802.444 | 802.444 | 802.444 | 745.249 | 859.637 |
| Observations | 55,791 | 55,791 | 55,791 | 55,791 | 27,895 | 27,896 |
| FE: Day-by-Month-by-Year | X | X | X | X | X | X |
| FE: District | X | X | X | X | X | X |
| Control Variables | | X | X | X | X | X |
| Gardner (2021) Robust | | | X | | | |

Note:

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Standard errors are clustered by district. Shotspotter is activated in 12 of the 22 police districts in Chicago. Panel A shows the time from entry call to dispatched officer. Panel B shows time from the dispatched officer to on scene. Controls in all models include controls for officer hours and number of dispatches.

Table 4: Effect of ShotSpotter Enactment on Arrest Rates (OLS)

| | Arrest Rate | Arrest Rate by Most Frequent Arrest Calls | | | | |
|----------------------------|----------------------|---|----------------------|--------------------|-------------------|---------------------|
| | | Domestic Battery | Domestic Disturbance | Robbery | EMS | Battery |
| | (1) | (2) | (3) | (4) | (5) | (6) |
| ShotSpotter Activated | -0.007*** (0.002) | -0.018** (0.007) | -0.003 (0.004) | -0.018* (0.009) | -0.006 (0.005) | -0.011** (0.004) |
| Mean of Dependent Variable | 0.147 | 0.347 | 0.134 | 0.666 | 0.156 | 0.152 |
| Observations | 55,792 | 50,068 | 55,186 | 29,550 | 54,307 | 53,771 |
| FE: Day-by-Month-by-Year | X | X | X | X | X | X |
| FE: District | X | X | X | X | X | X |

Note:

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Standard errors are clustered by district. Shotspotter is activated in 12 of the 22 police districts in Chicago. Panel A shows the time from entry call to dispatched officer. Panel B shows time from the dispatched officer to on scene. Controls in all models include controls for officer hours and number of dispatches.