Supplemental Appendix

The Effect of Field Training Officers on Police Use of Force

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Figure A.1: Recruit and FTO Training Timeline

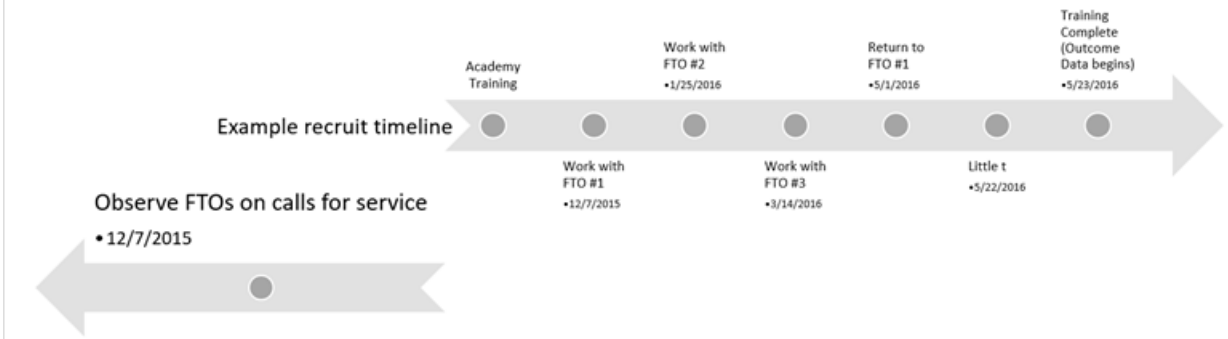
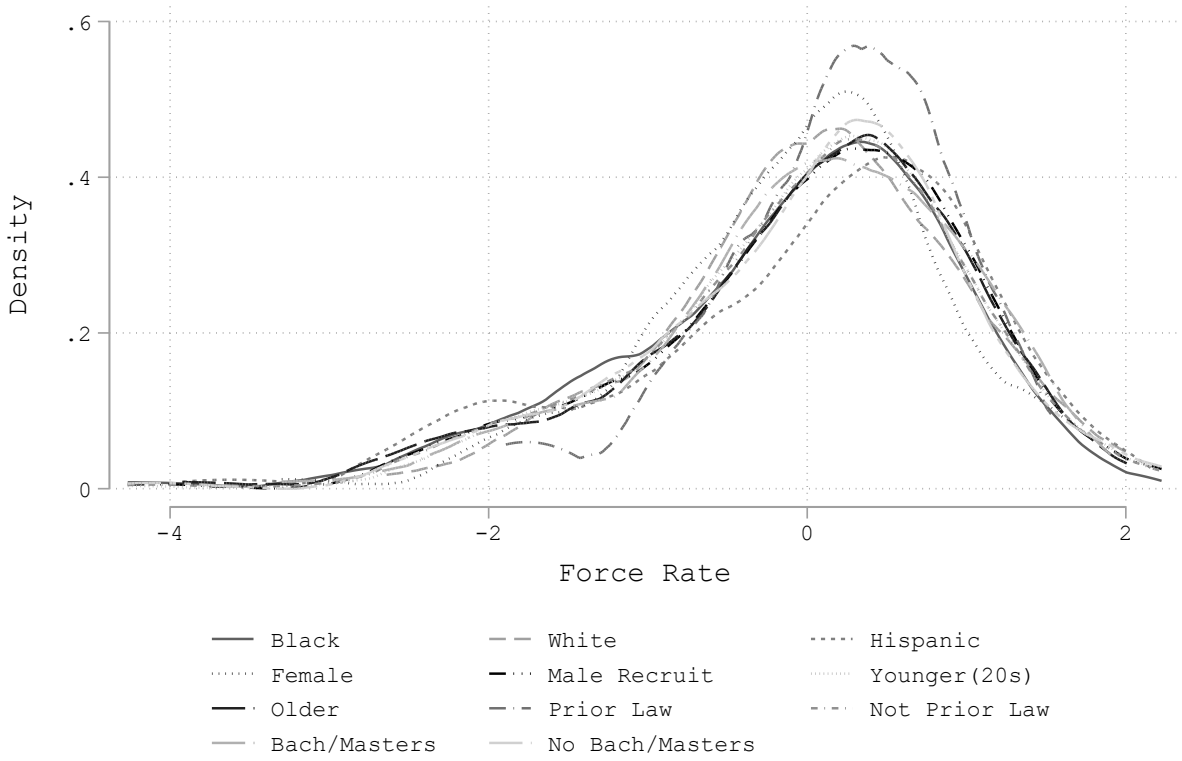


Figure A.2: Density of Officer Propensity to Use Force for All Officers

Notes: The figure shows density plots comparing force rates among three groups: All Officers, Field Training Officers, and Senior Corporals or Sergeants. Field Training Officers demonstrate slightly higher force rates compared to the overall average, while Senior Corporals and Sergeants show lower rates. Senior Corporals and Sergeants represent the first two possible promotion ranks and are the most common rank for Field Training Officers. The distributions are trimmed to exclude the top 3 percent of extreme force users for better visualization. Force rates are centered near zero across all groups, showing that most officers use similar levels of force in comparable situations

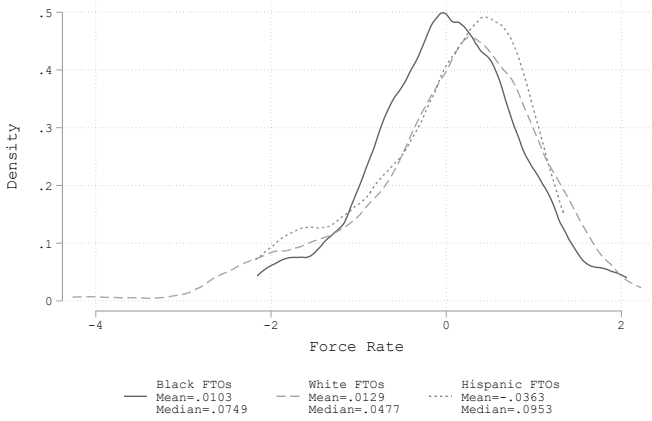
Figure A.3: Density of Field Training Officer Propensity to Use Force by Recruit Characteristics



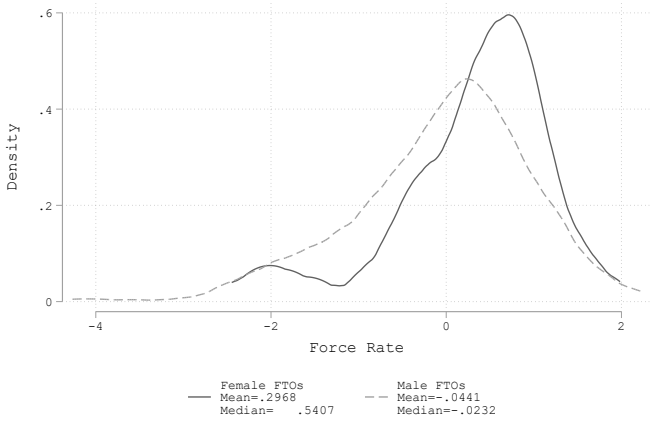
Notes: This figure presents the density of FTO force rates, grouped by recruit demographics, including race (Black, White, Hispanic), gender (Male, Female), age (Older, Younger), prior law enforcement experience, and educational attainment (Bachelor's/Master's vs. No Bachelor's/Master's). Older recruits are classified as those above the sample mean age. The figure illustrates the variation in FTOs' historical use of force propensity across different recruit groups, providing insight into whether recruits with different characteristics are systematically exposed to higher or lower-force FTOs.

Figure A.4: Density of Field Training Officer Propensity to Use Force by Field Training Officer Characteristics

(a) Field Training Officer Race



(b) Field Training Officer Gender



(c) Field Training Officer Age

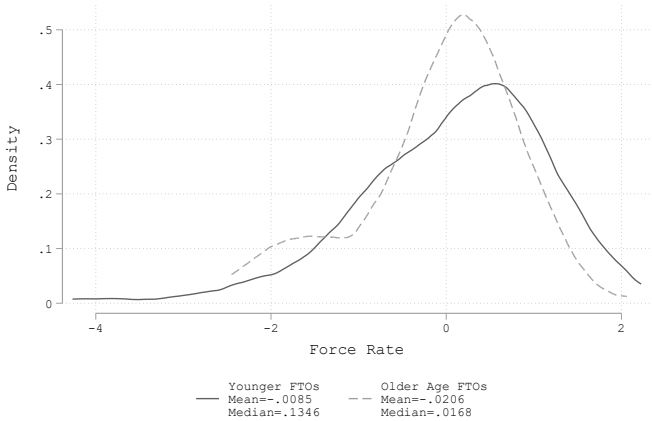
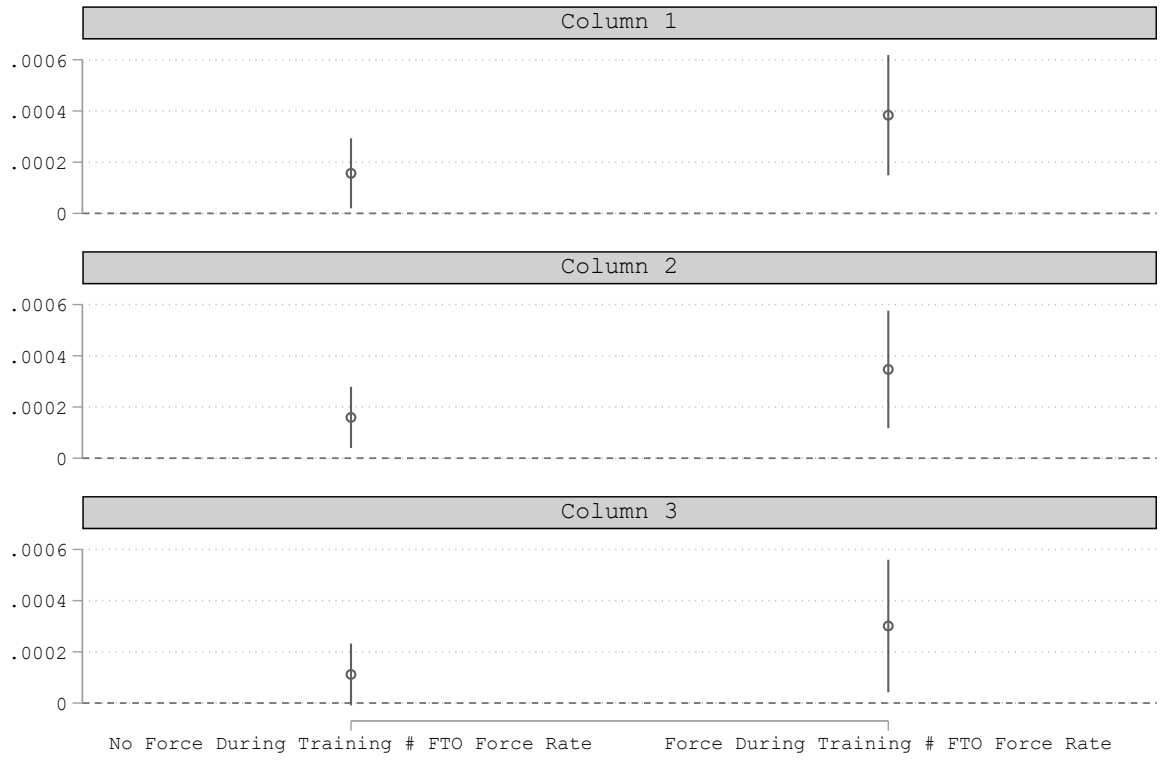
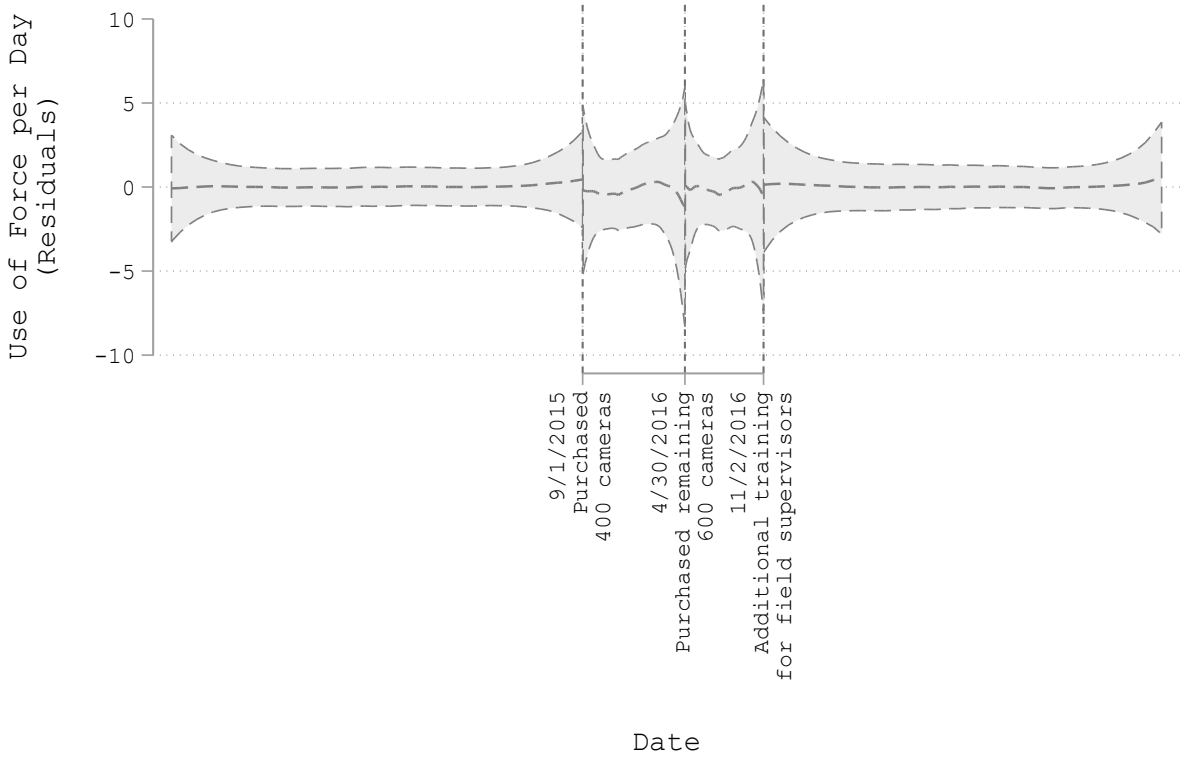


Figure A.5: The Effect of Field Training Officers on Force by Recruit Force Experience



This figure presents estimates of the effect of field training officer (FTO) force rates on recruit use of force, separately for recruits who did and did not experience force incidents during their training period. The plotted points represent coefficient estimates of β_1 from our primary specification $\text{Force}_{r,c} = \theta_r + \beta_1 \Lambda_{o(r)} + \beta_2 X_c + \epsilon_{r,c}$, where β_1 captures the effect of a one standard deviation increase in FTO force rate. Vertical lines show confidence intervals with standard errors multiway clustered at the FTO and recruit levels. Column 1 shows the baseline specification with recruit fixed effects. Column 2 adds controls for recruit characteristics (age, gender, race, prior law enforcement experience, education, training). Column 3 further includes call characteristic fixed effects (number of officers, beat, call priority-by-type, and temporal controls).

Figure A.6: Police Camera Adoption



Notes:This figure plots the daily average use of force over time, after removing year-by-month fixed effects. The solid line represents a local linear polynomial fit, with the gray shaded area showing 95 percent confidence intervals. Vertical dashed lines indicate three key dates in the body-worn camera program implementation: the initial purchase of 400 cameras (September 1, 2015), the subsequent purchase of 600 additional cameras (April 30, 2016), and the completion of supplementary training for field supervisors (November 2, 2016). The y-axis shows the residualized number of force incidents per day, controlling for seasonal patterns through year-by-month fixed effects.

Table A.1: **Robustness to Different Force Measures**: The Effect of Field Training Officer Force Rate on Recruit Use of Force

	(1)	(2)	(3)
Panel A: Theta Shrunk			
Theta Shrunk	0.141	0.139	0.107
	(0.0450)	(0.0402)	(0.0412)
Observations	1198564	1198564	1198564
Outcome Mean	0.00116	0.00116	0.00116
Panel B: Inverse Hyperbolic Sine			
Inverse Hyperbolic Sine	0.141	0.139	0.107
	(0.0450)	(0.0402)	(0.0412)
Observations	1198564	1198564	1198564
Outcome Mean	0.00116	0.00116	0.00116
Panel C: Unshrunken Force Rate			
Force Rate	0.122	0.121	0.0941
	(0.0380)	(0.0338)	(0.0343)
Observations	1198564	1198564	1198564
Outcome Mean	0.00116	0.00116	0.00116
Panel D: Theta Shrunk No Call Controls			
Force Rate (No Call Controls)	0.197	0.199	0.158
	(0.0726)	(0.0726)	(0.0796)
Observations	1198564	1198564	1198564
Outcome Mean	0.00116	0.00116	0.00116
Assigned Div by Cohort FE	Y	Y	Y
Recruit Characteristics	-	Y	Y
Call Controls	-	-	Y

Standard errors in parentheses

Notes: This table presents estimates of field training officer (FTO) effects on recruit use of force using three different measures of FTO force rates. Our primary regression specification is $\text{Force}_{r,c} = \theta_r + \beta_1 \Lambda_{o(r)} + \beta_2 X_c + \epsilon_{r,c}$. Panel A uses the empirical Bayes-shrunken force measure, Panel B applies its inverse hyperbolic sine transformation, and Panel C use the raw, unshrunken force rates. Panel D shows effects using our primary measure while excluding call controls. For each measure, the baseline specification includes assigned division-by-cohort fixed effects. The second specification adds recruit characteristics, including age, gender, race, prior law enforcement experience, education, and training. The third specification further incorporates call characteristic fixed effects, such as the number of officers, beat, call priority-by-type, and temporal controls. Standard errors, shown in parentheses, are multiway clustered at the FTO and recruit levels.

Table A.2: Recruit Level Summary Statistics

	(1) Entire Sample	(2) High Force Trainer	(3) Low Force Trainer
White	0.453	0.440	0.469
	(0.498)	(0.497)	(0.500)
Black	0.219	0.215	0.224
	(0.414)	(0.412)	(0.418)
Hispanic	0.278	0.287	0.268
	(0.449)	(0.453)	(0.444)
Female	0.182	0.181	0.184
	(0.386)	(0.386)	(0.389)
Age	32.01	32.13	31.85
	(5.147)	(5.207)	(5.076)
Prior Law Enforcement	0.0787	0.0887	0.0658
	(0.270)	(0.285)	(0.248)
Bachelors	0.351	0.341	0.364
	(0.478)	(0.475)	(0.482)
Masters	0.0250	0.0273	0.0219
	(0.156)	(0.163)	(0.147)
Defensive Training	0.0211	0.0273	0.0132
	(0.144)	(0.163)	(0.114)
Crisis Intervention Training	0.0192	0.0137	0.0263
	(0.137)	(0.116)	(0.160)
Observations	521	293	228

Notes: This table presents recruit-level summary statistics (means with standard deviations) comparing demographics and training across the sample and by FTO force usage. High Force FTOs show above-average force rates, while Low Force FTOs exhibit below-average rates compared to departmental means. Defensive Training and Crisis Intervention Training occur before field training begins. Age reflects recruit age when training commenced.

Table A.3: **Robust to Alternative Standard Errors (Robust SEs)** Balance Test: Correlation between Recruit and Field Training Officer Characteristics

	FTO Characteristics						Recruit Outcomes	
	Age	Female	Black	Hispanic	Hire Date	FTO Force	Recruit Force	Recruit Force NC
Recruit Chars								
Female	-0.4661	0.0137	0.0620	0.0342	0.3789	0.0000	-0.0000	-0.0000
	(1.2947)	(0.0460)	(0.0525)	(0.0527)	(1.2128)	(0.0002)	(0.0001)	(0.0001)
Black	-0.5571	0.0634	0.0867	-0.0770	0.1093	-0.0001	-0.0001	-0.0002
	(1.3818)	(0.0459)	(0.0590)	(0.0458)	(1.1653)	(0.0002)	(0.0001)	(0.0001)
Hispanic	0.5837	0.0544	-0.0140	0.0328	-0.7922	0.0000	-0.0000	-0.0001
	(1.1267)	(0.0449)	(0.0498)	(0.0448)	(0.9934)	(0.0002)	(0.0001)	(0.0001)
Prior Law	0.7052	-0.0278	-0.0892	-0.0915	-0.7689	0.0003	0.0003	0.0003
	(2.2115)	(0.0818)	(0.0929)	(0.0636)	(1.8971)	(0.0002)	(0.0001)	(0.0001)
Bachelors	-1.4008	0.0213	0.0257	0.0131	0.6346	-0.0001	-0.0001	-0.0001
	(1.0440)	(0.0375)	(0.0463)	(0.0398)	(0.9034)	(0.0002)	(0.0001)	(0.0001)
Masters	-4.0827	-0.0469	0.0536	0.0912	2.5177	0.0001	0.0001	0.0000
	(2.7644)	(0.1077)	(0.1233)	(0.1408)	(3.1270)	(0.0003)	(0.0002)	(0.0002)
Descalation Training	1.5722	-0.0430	-0.1082	0.2807	2.5551	-0.0004	-0.0006	-0.0005
	(4.5776)	(0.1522)	(0.1280)	(0.1521)	(4.2585)	(0.0007)	(0.0003)	(0.0003)
Crisis Intervention Training	0.6236	0.1982	0.1823	-0.1812	-1.6883	-0.0009	-0.0003	-0.0004
	(3.7082)	(0.1843)	(0.1251)	(0.1071)	(4.0911)	(0.0006)	(0.0003)	(0.0003)
Age 30s	-0.1551	0.0361	0.0117	-0.0192	0.9462	-0.0001	0.0000	-0.0001
	(1.1927)	(0.0430)	(0.0477)	(0.0456)	(1.0875)	(0.0002)	(0.0001)	(0.0001)
Age 40s	1.0537	0.0870	0.1627	0.1003	-0.1839	-0.0004	-0.0001	-0.0002
	(3.3371)	(0.1265)	(0.1699)	(0.1547)	(2.8227)	(0.0006)	(0.0001)	(0.0001)
Div-x-Cohort FE	X	X	X	X	X	X	X	X
Observations	521	521	521	521	521	521	521	521
Outcome Mean	42.1382	0.1248	0.1843	0.1459	41.6620	-0.0005	-0.0000	0.0001
F-Test P-Value	0.866	0.819	0.318	0.157	0.967	0.541	0.438	0.031

Notes: Columns report coefficients from regressing each FTO characteristic on all recruit characteristics (with robust SEs and division-by-cohort fixed effects–i.e, replicating Table **??** with robust SEs). Column F-tests assess joint significance. The pairwise omnibus test combines all 60 FTO-recruit characteristic pairs in a stacked regression with pair and division-by-cohort-by-pair fixed effects. The outcome "Recruit Force NC" is the recruit force rate excluding call controls.

Table A.4: Balance Test for All Three Field Training Officers: Correlation between Recruit and Field Training Officer Characteristics

	FTO Characteristics					Recruit Outcomes		
	Age	Female	Black	Hispanic	Hire Date	FTO Force	Recruit Force	Recruit Force NC
Recruit Chars								
Female	-0.0998	-0.0014	0.0198	0.0087	6.6682	-0.0000	-0.0000	-0.0000
	(0.4861)	(0.0199)	(0.0211)	(0.0209)	(160.4048)	(0.0000)	(0.0001)	(0.0001)
Black	0.2741	-0.0052	0.0265	-0.0222	-43.3663	0.0000	-0.0001	-0.0002
	(0.5838)	(0.0198)	(0.0265)	(0.0191)	(186.8171)	(0.0000)	(0.0001)	(0.0001)
Hispanic	0.0656	-0.0050	-0.0198	0.0149	-109.9749	0.0000	-0.0000	-0.0001
	(0.5177)	(0.0157)	(0.0226)	(0.0207)	(155.1407)	(0.0000)	(0.0000)	(0.0000)
Prior Law	0.7050	0.0096	-0.0102	-0.0093	-429.0094	0.0001	0.0003	0.0003
	(0.9183)	(0.0397)	(0.0428)	(0.0368)	(299.2283)	(0.0001)	(0.0001)	(0.0001)
Bachelors	0.0483	0.0067	-0.0039	-0.0025	-60.2234	0.0000	-0.0001	-0.0001
	(0.4024)	(0.0135)	(0.0166)	(0.0160)	(132.8710)	(0.0000)	(0.0000)	(0.0000)
Masters	0.6460	-0.0003	-0.0276	0.0762	-539.0592	-0.0000	0.0000	-0.0000
	(1.3585)	(0.0473)	(0.0504)	(0.0476)	(506.0512)	(0.0001)	(0.0001)	(0.0001)
Descalation Training	0.1594	0.0037	-0.0960	0.0438	444.9898	-0.0001	-0.0006	-0.0005
	(1.7804)	(0.0734)	(0.0743)	(0.0717)	(668.3300)	(0.0001)	(0.0002)	(0.0002)
Crisis Intervention Training	-0.5844	0.0638	0.0432	0.0052	443.9824	0.0001	-0.0003	-0.0004
	(1.3399)	(0.0675)	(0.0558)	(0.0761)	(503.0017)	(0.0001)	(0.0002)	(0.0002)
Age 30s	-0.2075	0.0136	-0.0044	0.0045	80.6862	-0.0000	-0.0000	-0.0001
	(0.4978)	(0.0183)	(0.0231)	(0.0249)	(160.1679)	(0.0000)	(0.0000)	(0.0000)
Age 40s	-2.6722	-0.0134	0.1467	-0.0622	736.5207	0.0000	-0.0001	-0.0003
	(1.3449)	(0.0647)	(0.0622)	(0.0695)	(452.9242)	(0.0001)	(0.0001)	(0.0001)
Div-x-Cohort FE	X	X	X	X	X	X	X	X
Observations	1558	1558	1558	1558	1558	1558	1558	1558
Outcome Mean	42.0334	0.1316	0.1849	0.1521	1.53e+04	0.0001	-0.0000	0.0001
F-Test P-Value	0.849	0.993	0.380	0.750	0.784	0.749	0.000	0.000

Notes: Columns report coefficients from regressing each FTO characteristic on all recruit characteristics using FTO-phase SRs and division-by-cohort fixed effects (i.e., replicating Table **??** for all three FTOs). Column F-tests assess joint significance. The outcome "Recruit Force NC" is the recruit force rate excluding call controls.

Table A.5: The Effect of High Force Field Training Officers on Recruit Arrests

	(1) Any Arrest	(2) Any Arrest	(3) Any Arrest
FTO Force Rate	0.000594	0.000647	0.000342
	(0.000553)	(0.000551)	(0.000444)
Observations	1198564	1198564	1198564
Outcome Mean	0.0363	0.0363	0.0363
Assigned Div by Cohort FE	Y	Y	Y
Recruit Characteristics	-	Y	Y
Call Controls	-	-	Y

Notes: This table presents the effect of FTO force rate on recruit arrests. Our primary regression specification is given by $\text{Arrest}_{r,c} = \theta_r + \beta_1 \Lambda_{o(r)} + \beta_2 X_c + \epsilon_{r,c}$ (Equation **??**), where β_1 represents the effect of a one standard deviation increase in FTO force rate. Standard errors are multiway clustered at the field training officer and recruit levels. Column 2 includes controls for recruit characteristics (age, gender, race, prior law enforcement experience, education, and training), while Column 3 further adds call characteristic fixed effects (number of officers on the scene, beat, call type—priority-by-type, year-by-month, and day-of-week-by-night interactions).

Table A.6: **Robustness Attrition**: Correlation between FTO, Recruit Characteristics and Attrition

	Coefficient	Standard Error	Outcome Mean
FTO Characteristics			
Age	0.1578	(1.2622)	46.7447
Female	0.0120	(0.0524)	0.1248
Black	0.0207	(0.0534)	0.1843
Hispanic	0.0129	(0.0401)	0.1459
Hire Date	0.9593	(1.1925)	41.6620
Force Rate	-0.0573	(0.1267)	-0.0000
Recruit Characteristics			
Female	0.0305	(0.0509)	0.1823
Black	-0.0332	(0.0531)	0.2188
Hispanic	-0.0114	(0.0639)	0.2783
Prior Law Enforcement	-0.0626	(0.0356)	0.0787
Bachelors	-0.0216	(0.0658)	0.3512
Masters	0.0282	(0.0302)	0.0250
Defensive Training	-0.0225	(0.0186)	0.0211
Crisis Intervention Training	-0.0063	(0.0177)	0.0192
Age 30s	-0.0833	(0.0577)	0.2169
Age 40s	0.0024	(0.0262)	0.0326
Observations	521		
Div-x-Cohort FE	X		

Notes: This table examines whether recruits who leave the department after training differ from those who remain in terms of their assigned FTOs' characteristics or their own personal attributes. Each row presents results from a separate regression of the characteristic on an indicator for leaving, controlling for division-by-cohort fixed effects. Standard errors are clustered at the FTO level. The table reports coefficients, standard errors, and outcome means for each characteristic.

Table A.7: **Robustness Attrition**: The Effect of High Force Field Training Officers on Recruit Use of Force

	Two Years After Training			**One Year After Training**		
	(1)	(2)	(3)	(4)	(5)	(6)
	Force	Force	Force	Force	Force	Force
FTO Force Rate	0.000258	0.000245	0.000202	0.000250	0.000243	0.000216
	(0.0000620)	(0.0000556)	(0.0000576)	(0.0000643)	(0.0000614)	(0.0000629)
Observations	895551	895551	895551	553394	553394	553394
Outcome Mean	0.00119	0.00119	0.00119	0.00118	0.00118	0.00118
Div by Cohort FE	Y	Y	Y	Y	Y	Y
Recruit Chars	-	Y	Y	-	Y	Y
Call Controls	-	-	Y	-	-	Y

Notes: This table presents the effect of Field Training Officer (FTO) force rate on recruit use of force. Each column shows regression results with Force as the dependent variable. Columns 1-3 analyze calls for service within two years after training completion, while columns 4-6 examine calls within one year. Models progressively add controls: all specifications include division by cohort fixed effects, columns 2-3 and 5-6 add recruit characteristics, and columns 3 and 6 include additional call-level controls. The coefficients represent the effect of a one-unit increase in FTO force rate on recruit force probability. Thirty-five recruits leave the department before completing one year of service, and sixty-seven leave before completing two years.

Table A.8: **Robustness Attrition**: The Effect of High Force Field Training Officers on Recruit Use of Force by Retention Status

	(1) Force	(2) Force	(3) Force
FTO Force Rate	0.000232	0.000222	0.000176
	(0.0000626)	(0.0000602)	(0.0000635)
Leaver	-0.0000912	-0.000133	-0.000177
	(0.000133)	(0.000125)	(0.000135)
Force Rate*Leaver	-0.000145	-0.000112	-0.000118
	(0.000153)	(0.000134)	(0.000147)
Observations	1198564	1198564	1198564
Outcome Mean	0.00116	0.00116	0.00116
Assigned Div by Cohort FE	Y	Y	Y
Recruit Characteristics	-	Y	Y
Call Controls	-	-	Y

Standard errors in parentheses

Notes: This table presents the effect of FTO force rate on recruit use of force, comparing recruits who remain with the department ("stayers") versus those who leave ("leavers"). The interaction term (Force Rate*Leaver) tests whether FTO influence differs for officers who eventually quit. Column 1 presents the baseline specification with assigned division by cohort fixed effects. Column 2 adds controls for recruit characteristics (age, gender, race, prior law enforcement experience, education, and training course participation). Column 3 further incorporates call characteristics fixed effects (number of officers on scene, beat, call priority-by-type, year-by-month, and day of week-by-night). Standard errors in parentheses

Table A.9: The Effect of High Force Field Training Officers for All Field Training Officers

	(1) Force	(2) Force	(3) Force
FTO 1 Force Rate	0.000199	0.000206	0.000148
	(0.0000680)	(0.0000662)	(0.0000696)
FTO 2 Force Rate	-0.0000491	-0.0000106	-0.0000448
	(0.0000701)	(0.0000695)	(0.0000729)
FTO 3 Force Rate	0.0000307	0.0000207	0.0000192
	(0.0000642)	(0.0000616)	(0.0000645)
Observations	1194521	1194521	1194521
Outcome Mean	0.00116	0.00116	0.00116
Assigned Div by Cohort FE	Y	Y	Y
Recruit Characteristics	-	Y	Y
Call Controls	-	-	Y

Standard errors in parentheses

Notes: This table presents the effect of individual field training officers (FTOs) on recruit use of force, examining the distinct influence of each of the three FTOs in a recruit's training rotation. Our specification is $\text{Force}_{r,c} = \theta_r + \beta_1 \Lambda_{o_1(r)} + \beta_2 \Lambda_{o_2(r)} + \beta_3 \Lambda_{o_3(r)} + \beta_4 X_c + \epsilon$, where the coefficients represent the effect of a one standard deviation increase in each FTO's force rate on subsequent recruit behavior. Column 1 presents the baseline specification with assigned division by cohort fixed effects. Column 2 adds controls for recruit characteristics (age, gender, race, prior law enforcement experience, education, and training). Column 3 incorporates call characteristic fixed effects (number of officers on scene, beat, call priority-by-type, year-by-month, and day of week-by-night). Note that the sample size is slightly smaller than other analyses because we are missing FTOs for some recruits.

Appendix B: Other Field Training Officer Rates

To better understand the mechanism behind our results, and to rule out explanations such as reporting, we calculate field training officer propensity to make arrests, respond to calls in a timely manner, and write up informative reports in a manner similar to our force rate calculations. Namely, we estimate Equation **??** using arrest, misdemeanor arrests, felony arrests, filed arrests, unfiled arrests, response time, and time spent on a call as our outcome. We then shrink our FTO-recruit pair estimates of $\lambda_{o(r)}$ according to Equation **??**.

To address whether our results are driven by officer reporting, we also estimate field training officers propensity to write wordy reports. For example, it is reasonable to believe that officers that are more likely to write informative and lengthy reports are also the most likely to report force. Unfortunately, we do not have incident reports written by officers for each 911 call. To measure officer wordiness we rely on a separate data set of incident reports. In this data set, we observe 507 of our 514 field training officer-recruit pairs. We attempt to estimate our $\lambda_{o(r)}$'s in a very similar manner.

Finally, we also link field training officers to their complaints. Unfortunately, this data set is the most incomplete of the outcome measures. We only observe type of complaint and the date it was filed (not the date the incident occurred). Therefore, we simply take the number of complaints per FTO before they are assigned to a recruit and divide this by the number of calls their respond to during this time period to calculate our rates.

The results of these calculations are show in B.1. Figures B.1a , B.1b, B.1c, B.1d, B.1e show the distribution for our unshrunken and shrunken measures for a field training officer's propensity to make different types of arrests. Both distributions have a longer right tail, indicating that there are some officers with much higher arrest rates than the average field training officer. Further, there is substantial variation in our arrests rates. A one standard deviation increase in officer effects corresponds to a 32 percent (0.012/.037)and 33 percent (0.007/ 0.0215) increase in arrest or misdemeanor arrest rates.

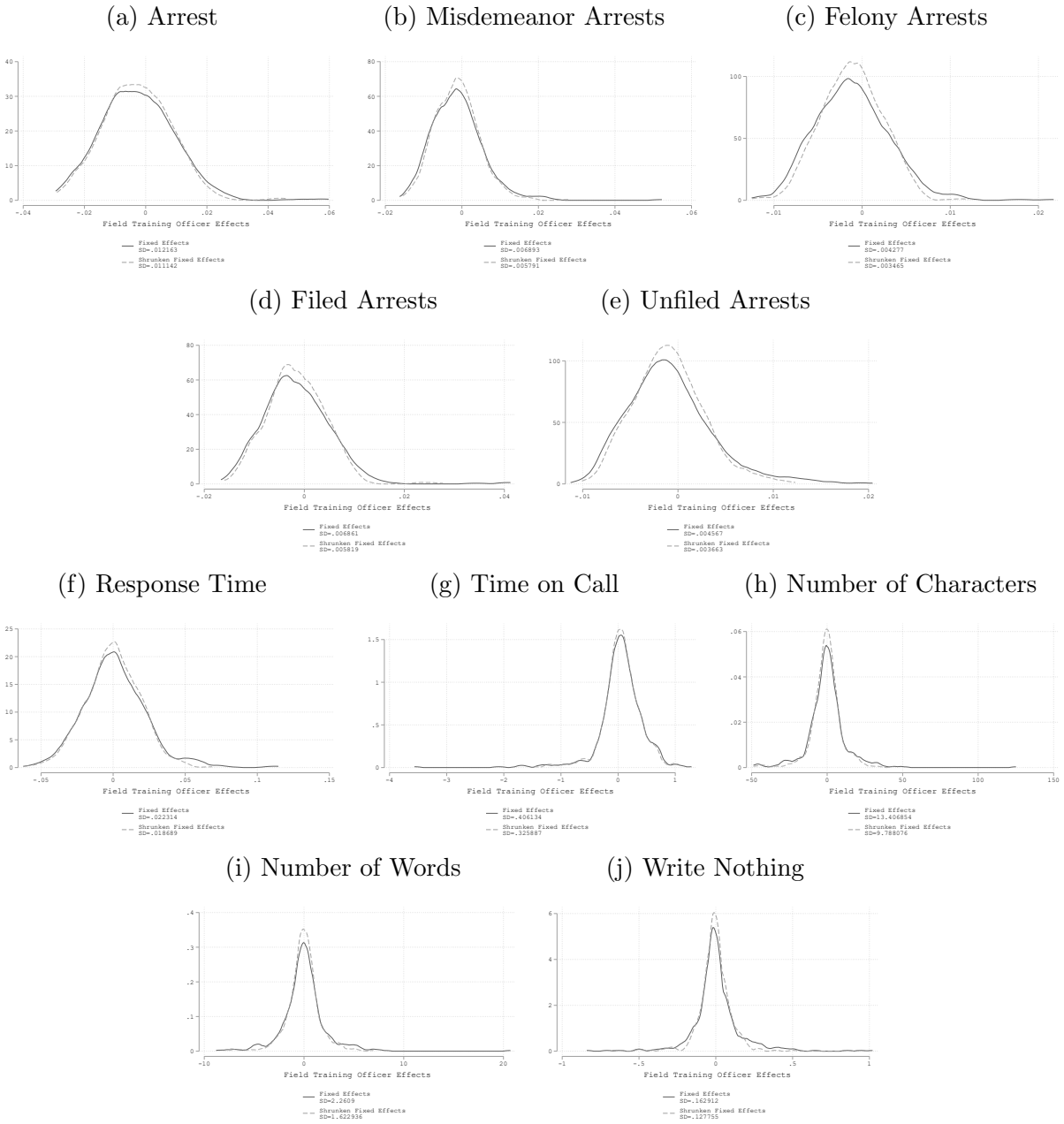
Figures B.1c and B.1d show results for our measures of time use (measured in hours). A one standard deviation increase in response time is 1 minute (0.02 hours) or 17 percent (.02/.12 hours) increase. A one standard deviation increase in time on a call is 0.359 hours or a 150 percent (.359/.24) increase.

Next, we consider how many words an officer uses when writing up an incident in Figures B.1e, B.1f, and B.1g . Unsurprisingly, the two distributions for number of words and characters look similar. The average number of characters used in an incident report is 43 and there are a few officers that are very wordy. A one standard deviation increase in number of characters used is an increase of 8.5 characters or 19 percent. The average number of words in a report is 7.31. A one standard deviation increase in wordiness is an increase of 1.39 words or a 20 percent (1.4/7.31) increase. Finally, we consider an officers propensity to write nothing. On average 10 percent of incidents don't have a description. A one standard deviation increase in writing nothing corresponds to a 81 percent (0.08/0.099) increase in writing nothing. Together these figures show substantial variation in other officer behaviors.

Finally, we consider officer complaints. Complaints are fairly common for FTOs in our sample; Over 80 percent of FTOs have at least one complaint. We also consider internal

complaints (complaints filed by a DPD employee) and use of force complaints separately. FTOs receive a complaint about once for every 500 calls.

Figure B.1: Other Field Training Officer Rates



Notes: This figure plots the distribution of field training officer effects for arrests, response time, time on a call and measures of wordiness. Response time is the number of hours between arrival time and assigned time. Time on call is the number of hours between the time an officer was enroute and when the call was cleared.