

ON-LINE APPENDIX:

REPRESENTATIVE BUREAUCRACY AND IMPARTIAL POLICING

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SECTION A: DESCRIPTIVE STATISTICS

Table Ia: Descriptive statistics, Los-Angeles Police Department 2003-2004

	Vehicle stops		Do nothing		Citations		Search		Arrest	
	N	(%)	N	(%)	N	(%)	N	(%)	N	(%)
AA officers	77,100	100	4,095	5.31	66,714	86.53	4,756	6.17	1,535	1.99
AA Drivers	20,739	100	1,352	6.52	17,289	83.36	1,656	7.98	442	2.13
White drivers	25,922	100	1,059	4.09	24,126	93.07	452	1.74	285	1.10
Hispanic drivers	21,980	100	1,407	6.40	17,283	78.63	2,549	11.60	741	3.37
Other drivers	8,459	100	277	3.27	8,016	94.76	99	1.17	67	0.79
White officers	248,910	100	24,328	9.77	188,775	75.84	24,448	9.82	11,359	4.56
AA Drivers	38,855	100	6,170	15.88	23,973	61.70	6,213	15.99	2,499	6.43
White drivers	96,299	100	7,040	7.31	83,060	86.25	3,444	3.58	2,755	2.86
Hispanic drivers	88,094	100	9,699	11.01	58,449	66.35	14,237	16.16	5,709	6.48
Other drivers	25,662	100	1,419	5.53	23,293	90.77	554	2.16	396	1.54
Hispanic officers	181,455	100	22,509	12.40	125,319	69.06	23,454	12.93	10,173	5.61
AA drivers	31,222	100	5,175	16.57	17,847	57.16	5,975	19.14	2,225	7.13
White drivers	54,000	100	5,814	10.77	43,650	80.83	2,631	4.87	1,905	3.53
Hispanic drivers	76,913	100	10,142	13.19	58,449	75.99	14,263	18.54	5,611	7.30
Other drivers	19,320	100	1,378	7.13	16,925	87.60	585	3.03	432	2.24
all officers	507,465	100	50,932	10.04	380,808	75.04	52,658	10.38	23,067	4.55
AA drivers	90,816	100	12,697	13.98	59,109	65.09	13,844	15.24	5,166	5.69
White drivers	176,221	100	13,913	7.90	150,836	85.59	6,527	3.70	4,945	2.81
Hispanic drivers	186,987	100	21,248	11.36	122,629	65.58	31,049	16.60	12,061	6.45
Other drivers	53,441	100	3,074	5.75	48,234	90.26	1,238	2.32	895	1.67

Notes: %=the ratio between the frequency of do nothing/citations/search/arrest and the total number of vehicle stops.

Table Ib: Descriptive statistics, Florida Highway Patrol 2010-2016

	Vehicle stops		Do nothing		Citations		Search		Arrest	
	N	(%)	N	(%)	N	(%)	N	(%)	N	(%)
AA officers	135,312	100	31,889	23.57	103,168	76.24	52	0.04	203	0.15
AA drivers	32,193	100	7,685	23.87	24,409	75.82	17	0.05	82	0.25
White drivers	70,416	100	16,468	23.39	53,837	76.46	27	0.04	84	0.12
Hispanic drivers	26,975	100	6,562	24.33	20,377	75.54	6	0.02	30	0.11
Other drivers	5,728	100	1,174	20.50	4,545	79.35	2	0.03	7	0.12
White officers	561,828	100	223,405	39.76	334,510	59.54	2,103	0.37	1,810	0.32
AA drivers	109,715	100	41,137	37.49	67,074	61.13	765	0.70	739	0.67
White drivers	360,296	100	144,421	40.08	214,059	59.41	954	0.26	862	0.24
Hispanic drivers	72,880	100	32,051	43.98	40,298	55.29	342	0.47	189	0.26
Other drivers	18,937	100	5,796	30.61	13,079	69.07	42	0.22	20	0.11
Hispanic officers	78,761	100	25,826	32.79	52,424	66.56	233	0.30	278	0.35
AA drivers	15,525	100	4,418	28.46	10,909	70.27	91	0.59	107	0.69
White drivers	36,382	100	11,748	32.29	24,438	67.17	81	0.22	115	0.32
Hispanic drivers	23,458	100	8,900	37.94	14,458	61.63	55	0.23	45	0.19
Other drivers	3,396	100	760	22.38	2,619	77.12	6	0.18	11	0.32
all officers	775,901	100	281,120	36.23	490,102	63.17	2,388	0.31	2,291	0.30
AA drivers	157,433	100	53,240	33.82	102,392	65.04	873	0.55	928	0.59
White drivers	467,094	100	172,637	36.96	292,334	62.59	1,062	0.23	1,061	0.23
Hispanic drivers	123,313	100	47,513	38.53	75,133	60.93	403	0.33	264	0.21
Other drivers	28,061	100	7,730	27.55	20,243	72.14	50	0.18	38	0.14

Notes: %=the ratio between the frequency of do nothing/citations/search/arrest and the total number of vehicle stops.

Table 1c: Descriptive statistics, Charlotte-Mecklenburg Police Department 2010-2016

	Vehicle stops		Do nothing		Citations		Search		Arrest	
	N	(%)	N	(%)	N	(%)	N	(%)	N.	(%)
AA officers	111,696	100	56,304	50.41	51,617	46.21	1,870	1.67	1,905	1.71
AA Drivers	62,045	100	32,761	52.80	26,549	42.79	1,491	2.40	1,244	2.00
White drivers	34,996	100	16,922	48.35	17,453	49.87	226	0.65	395	1.13
Hispanic drivers	10,991	100	4,748	43.20	5,880	53.50	136	1.24	227	2.07
Other drivers	3,664	100	1,873	51.12	1,735	47.35	17	0.46	39	1.06
White officers	664,224	100	342,526	51.57	287,237	43.24	18,596	2.80	15,865	2.39
AA Drivers	343,609	100	174,993	50.93	144,708	42.11	14,211	4.14	9,697	2.82
White drivers	237,048	100	129,710	54.72	100,387	42.35	2,951	1.24	4,000	1.69
Hispanic drivers	61,664	100	26,485	42.95	32,035	51.95	1,235	2.00	1,909	3.10
Other drivers	21,904	100	11,339	51.77	10,107	46.14	199	0.91	259	1.18
Hispanic officers	26,874	100	14,359	53.43	11,109	41.34	792	2.95	614	2.28
AA Drivers	14,442	100	8,116	56.20	5,343	37.00	592	4.10	391	2.71
White drivers	8,253	100	4,094	49.61	3,931	47.63	116	1.41	112	1.36
Hispanic drivers	3,311	100	1,631	49.26	1,496	45.18	76	2.30	108	3.26
Other drivers	868	100	518	59.68	339	39.06	8	0.92	3	0.35
all officers	802,795	100	413,190	51.47	349,963	43.59	21,258	2.65	18,384	2.29
AA Drivers	420,096	100	215,870	51.39	176,600	42.04	16,294	3.88	11,332	2.70
White drivers	280,297	100	150,726	53.77	121,771	43.44	3,293	1.17	4,507	1.61
Hispanic drivers	75,966	100	32,864	43.26	39,411	51.88	1,447	1.90	2,244	2.95
Other drivers	26,436	100	13,730	51.94	12,181	46.08	224	0.85	301	1.14

Notes: %=the ratio between the frequency of do nothing/citations/search/arrest and the total number of vehicle stops.

Table Id: Descriptive statistics, Louisville Metro Police Department 2015-2017

	Vehicle stops		Do nothing		Citations		Search		Arrest	
	N	(%)	N	(%)	N	(%)	N	(%)	N	(%)
AA officers	18,878	100	2,897	15.35	15,236	80.71	745	3.95	..	..
AA Drivers	5,866	100	1,268	21.62	4,242	72.32	356	6.07	..	..
White drivers	11,891	100	1,435	12.07	10,083	84.80	373	3.14	..	..
Hispanic drivers	704	100	97	13.78	596	84.66	11	1.56	..	..
Other drivers	417	100	97	23.26	315	75.54	5	1.20	..	..
White officers	75,210	100	18,046	23.99	52,115	69.29	5,049	6.71	..	..
AA drivers	23,475	100	6,987	29.76	14,166	60.35	2,322	9.89	..	..
White drivers	47,398	100	9,806	20.69	35,078	74.01	2,514	5.30	..	..
Hispanic drivers	3,272	100	802	24.51	2,304	70.42	166	5.07	..	..
Other drivers	1,065	100	451	42.35	567	53.24	47	4.41	..	..
Hispanic officers	611	100	377	61.70	115	18.82	119	19.48	..	..
AA drivers	237	100	150	63.29	42	17.72	45	18.99	..	..
White drivers	307	100	183	59.61	59	19.22	65	21.17	..	..
Hispanic drivers	50	100	29	58.00	13	26.00	8	16.00	..	..
Other drivers	17	100	15	88.24	1	5.88	1	5.88	..	..
all officers	94,699	100	21,320	22.51	67,466	71.24	5,913	6.24	..	..
AA drivers	29,578	100	8,405	28.42	18,450	62.38	2,723	9.21	..	..
White drivers	59,596	100	11,424	19.17	45,220	75.88	2,952	4.95	..	..
Hispanic drivers	4,026	100	928	23.05	2,913	72.35	185	4.60	..	..
Other drivers	1,499	100	563	37.56	883	58.91	53	3.54	..	..

Notes: %=the ratio between the frequency of do nothing/citations/search/arrest and the total number of vehicle stops.

SECTION B: CONTROL VARIABLES

Table IIa: Control variables, Los-Angeles Police Department 2003-2004

	Average (Standard deviation)		
	2003	2004	2003-2004
Officer gender (% male)	91.6 (27.8)	92.2 (26.8)	91.9 (27.2)
Officer age (years)	36.08 (7.19)	36.50 (7.41)	36.31 (7.32)
Officer tenure (years)	9.51 (6.73)	9.96 (6.95)	9.75 (6.86)
Driver age 1-17 (%)	2.07 (14.2)	2.05 (14.2)	2.06 (14.2)
Driver age 18-25 (%)	27.2 (44.5)	26.8 (44.3)	27.0 (44.4)
Driver age 26-35 (%)	30.3 (45.9)	30.0 (45.8)	30.1 (45.9)
Driver age 36-45 (%)	21.9 (41.4)	21.7 (41.2)	21.8 (41.3)
Driver age 46-55 (%)	12.0 (32.5)	12.5 (33)	12.3 (32.8)
Driver age 56 or above (%)	6.51 (24.7)	7.07 (25.6)	6.82 (25.2)
Driver gender (% male)	70.1 (45.8)	69.6 (46)	69.9 (45.9)
Officer type: traffic (%)	52.6 (49.9)	53.1 (49.9)	52.9 (49.9)
Officer type: patrol (%)	46.1 (49.8)	44.8 (49.7)	45.4 (49.8)
Officer type: other (%)	1.3 (11.3)	2.1 (14.3)	1.7 (13.1)
Share of AA officers in Regional Division	8.06 (1.88)	7.91 (1.83)	7.98 (1.85)
Share of Hispanic officers in Regional Division	35.42 (7.12)	34.91 (6.61)	35.14 (6.85)
Share of AA citizens in Reporting District	12.3 (17.7)	10.9 (16.2)	11.5 (16.9)
Share of Hispanic citizens in Reporting District	42.5 (27.7)	39.0 (26.8)	40.6 (27.3)
Property Crimes in Reporting District per 10,000 People	2,495 (10,249)	7,619 (18,712)	5,304 (15,681)
Violent Crimes in Reporting District Per 10,000 People	157.1 (264.4)	177.7 (257.9)	168.4 (261.1)
Drug crimes in Reporting District Per 10,000 People	NA	NA	NA
Time (median)	14	14	14

Notes: Data consists of the second half (July to December) of 2003, and the first half (January to June) of 2004.

Table IIb: Control variables, Florida Highway Patrol 2010-2016

	Average (Standard deviation)						
	2010	2011	2012	2013	2014	2015	2010-2015
Officer gender (% male)	91.8 (27.4)	92.3 (26.7)	93.7 (24.2)	93.6 (24.5)	90.7 (29)	89.0 (31.3)	91.9 (27.3)
Officer age (years)	37.22 (13.44)	38.58 (12.50)	39.92 (11.53)	40.01 (11.81)	38.38 (12.57)	39.20 (13.12)	38.89 (12.52)
Officer tenure (years)	5.48 (7.93)	6.01 (8.21)	6.92 (8.53)	7.04 (8.57)	6.20 (8.11)	7.40 (8.78)	6.50 (8.38)
Driver age (years)	NA	NA	NA	NA	NA	NA	NA
Driver gender (% male)	NA	NA	NA	NA	NA	NA	NA
Share of AA officers in regional troop (%)	11.80 (10.23)	13.45 (12.43)	13.26 (11.19)	9.85 (9.38)	9.25 (6.69)	10.14 (7.79)	11.29 (9.98)
Share of Hispanic officers in regional troop (%)	7.30 (8.97)	7.15 (6.94)	8.16 (7.41)	8.79 (8.56)	8.15 (7.88)	8.28 (7.33)	7.97 (7.88)
Property crimes in the troop's geographical area (#)	NA	NA	NA	NA	NA	NA	NA
Violent crimes in the troop's geographical area (#)	NA	NA	NA	NA	NA	NA	NA
Drug crimes in the troop's geographical area (#)	NA	NA	NA	NA	NA	NA	NA
Time (median)	11	12	11	12	11	12	12

Table IIc: Control variables, Charlotte-Mecklenburg Police Department 2010-2016

	Average (Standard deviation)							
	2010	2011	2012	2013	2014	2015	2016	2010-2016
Officer gender (% male)	93.1 (25.4)	93.0 (25.5)	93.3 (25.1)	93.4 (24.9)	91.1 (28.5)	91.2 (28.3)	91.1 (28.4)	92.4 (26.5)
Officer age (years)	NA	NA	NA	NA	NA	NA	NA	NA
Officer tenure (years)	8.61 (6.66)	9.17 (6.93)	9.66 (7.10)	10.50 (7.38)	10.58 (7.85)	10.70 (7.92)	11.20 (8.26)	9.958 (7.45)
Driver age (years)	34.99 (12.25)	35.38 (12.42)	35.47 (12.52)	35.72 (12.60)	35.74 (12.58)	35.59 (12.66)	35.91 (12.84)	35.51 (12.53)
Driver gender (% male)	60.3 (48.9)	59.4 (49.1)	59.1 (49.2)	58.9 (49.2)	58.2 (49.3)	57.9 (49.4)	58.0 (49.3)	58.9 (49.2)
Share of AA officers in regional division (%)	NA	NA	NA	NA	NA	NA	14.61 (4.72)	NA
Share of Hispanic officers in regional division (%)	NA	NA	NA	NA	NA	NA	4.10 (2.05)	NA
Property crimes in regional division's geographical area (#) 2012-2016 average Jan-Mar	NA	NA	NA	NA	NA	NA	536.2 (116.0)	NA
Property crimes in regional division's geographical area (#) – 2016 Jan-Dec	NA	NA	NA	NA	NA	NA	2,844 (657.1)	NA
Violent crimes in regional division's geographical area (#) – 2012-2016 average Jan-Mar	NA	NA	NA	NA	NA	NA	85.82 (37.30)	NA
Violent crimes in regional division's geographical area (#) – 2016 Jan-Dec	NA	NA	NA	NA	NA	NA	461.7 (223.7)	NA
Drug crimes in regional division's geographical area (#)	NA	NA	NA	NA	NA	NA	NA	NA
Time (median)	NA	NA	NA	NA	NA	NA	NA	NA
Investigation stops (%)	3.73	3.15	2.96	3.24	2.82	3.10	2.52	3.12

Table IId: Control variables, Louisville Metro Police Department 2015-2017

	Average (Standard deviation)			
	2015	2016	2017	2015-2017
Officer gender (% male)	94.8 (22.2)	96.1 (19.4)	95.8 (20)	95.5 (20.8)
Officer age 21-30 (%)	10.3 (30.4)	10.5 (30.7)	13.3 (34)	11.0 (31.3)
Officer age 31-40 (%)	19.8 (39.8)	18.0 (38.4)	18.7 (39)	18.9 (39.2)
Officer age 41-50 (%)	43.6 (49.6)	45.3 (49.8)	40.1 (49)	43.4 (49.6)
Officer age 51-60 (%)	20.0 (40)	20.4 (40.3)	22.8 (41.9)	20.7 (40.5)
Officer age Over 60 (%)	6.37 (24.4)	5.78 (23.3)	5.16 (22.1)	5.91 (23.6)
Officer tenure (years)	NA	NA	NA	NA
Driver age Under 20 (%)	5.9 (23.6)	6.28 (24.3)	6.4 (24.5)	6.14 (24)
Driver age 20-25 (%)	20.0 (40)	19.7 (39.8)	20.2 (40.1)	19.9 (39.9)
Driver age 26-30 (%)	15.9 (36.6)	16.4 (37)	16.1 (36.7)	16.1 (36.7)
Driver age 31-40 (%)	23.8 (42.6)	23.9 (42.7)	24.0 (42.7)	23.9 (42.6)
Driver age 41-50 (%)	16.7 (37.3)	16.7 (37.3)	15.5 (36.2)	16.4 (37)
Driver age 51-60 (%)	11.8 (32.3)	11.5 (31.9)	11.7 (32.2)	11.7 (32.1)
Driver age Over 60 (%)	5.93 (23.6)	5.62 (23)	6.12 (24)	5.86 (23.5)
Driver gender (% male)	63.1 (48.3)	63.9 (48)	63.6 (48.1)	63.5 (48.2)
Share of AA officers in regional division (%)	NA	NA	13.10 (6.45)	NA
Share of Hispanic officers in regional division (%)	NA	NA	2.28 (2.05)	NA
Property crimes in division's geographical area – average of 2015, 2016, 2017 (#)	4,538 (1,361)	4,717 (1,353)	4,852 (1,427)	4,666 (1,379)
Violence crimes in division's geographical area– average of 2015, 2016, 2017 (#)	1,988 (942.2)	1,961 (860.9)	2,034 (868.7)	1,989 (900.1)
Drug crimes in division's geographical area– average of 2015, 2016, 2017 (#)	1,719 (833.0)	1,608 (731.3)	1,650 (727.3)	1,667 (779.0)
Time (median)	13	14	14	14

* The average crimes rates for the years 2015-2017, per division, varies each year, as a function of the proportion of vehicle stops per division out of the overall number of stops in each year; Data for the year 2017 relates to the months January to August for which data was publicly available at the time of download.

SECTION C: MARGINAL EFFECTS AT MEANS

Table IIIa: The Marginal Effects at Means-Los-Angeles Police Department 2003-2004

	A			B			C		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Do-nothing	Citation	Search	Do-nothing	Citation	Search	Do-nothing	Citation	Search
AA Officer	-0.0506*** (0.0084)	0.110*** (0.0151)	-0.0594*** (0.0078)	-0.0259*** (0.00704)	0.0506*** (0.0103)	-0.0246*** (0.00502)	-0.0289*** (0.00698)	0.0552*** (0.00980)	-0.0263*** (0.00446)
Hispanic officer	0.0252** (0.0102)	-0.0514*** (0.0164)	0.0262*** (0.0087)	0.00441 (0.00734)	-0.00567 (0.0103)	0.00126 (0.00478)	0.00211 (0.00747)	-0.00130 (0.0102)	-0.000810 (0.00439)
AA driver	0.0666*** (0.0050)	-0.218*** (0.0090)	0.151*** (0.0053)	0.0328*** (0.00276)	-0.108*** (0.00441)	0.0748*** (0.00298)	0.0275*** (0.00257)	-0.0874*** (0.00382)	0.0599*** (0.00251)
Hispanic driver	0.0322*** (0.0052)	-0.190*** (0.0071)	0.158*** (0.0042)	0.0119*** (0.00274)	-0.0890*** (0.00471)	0.0771*** (0.00368)	0.00540* (0.00295)	-0.0651*** (0.00426)	0.0597*** (0.00273)
Other driver	-0.0224*** (0.0032)	0.0464*** (0.0049)	-0.0240*** (0.0023)	-0.0271*** (0.00221)	0.0559*** (0.00304)	-0.0288*** (0.00170)	-0.0307*** (0.00263)	0.0604*** (0.00347)	-0.0297*** (0.00169)
Observations	507,465	507,465	507,465	507,292	507,292	507,292	507,292	507,292	507,292
Personal characteristics	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes
Division ethnic composition	No	No	No	No	No	No	Yes	Yes	Yes
District characteristics	No	No	No	No	No	No	Yes	Yes	Yes
Division FE	No	No	No	Yes	Yes	Yes	No	No	No
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Hour FE	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes

*** p<0.01, ** p<0.05, * p<0.1; Table entries are marginal effects (in units of probabilities) calculated based on the multinomial logit models presented in Panels A-D in table Va below. The standard errors of these marginal effects are computed employing the delta method. "White" is the omitted category for "officer" and "driver" ethnicity.

Table IIIb: The marginal effects at means-Florida Highway Patrol 2010-2016

	A			B			C		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Do-nothing	Citation	Search	Do-nothing	Citation	Search	Do-nothing	Citation	Search
AA Officer	-0.158*** (0.0375)	0.162*** (0.0375)	-0.0042*** (0.0008)	-0.0973*** (0.0348)	0.100*** (0.0349)	-0.00278*** (0.000411)	-0.0969** (0.0433)	0.0998** (0.0434)	-0.00294*** (0.000471)
Hispanic officer	-0.0759 (0.0515)	0.0763 (0.0525)	-0.0004 (0.0024)	-0.0313 (0.0487)	0.0313 (0.0499)	-1.63e-05 (0.00172)	-0.0555 (0.0517)	0.0553 (0.0526)	0.000185 (0.00185)
AA driver	-0.0229** (0.00907)	0.0191** (0.009)	0.0037*** (0.0007)	-0.0329*** (0.00728)	0.0300*** (0.00740)	0.00290*** (0.000415)	-0.0124 (0.00846)	0.00941 (0.00856)	0.00302*** (0.000518)
Hispanic driver	0.0295 (0.0220)	-0.0306 (0.0220)	0.0011* (0.0006)	-0.0486*** (0.0111)	0.0474*** (0.0111)	0.00120** (0.000563)	0.0354* (0.0202)	-0.0366* (0.0202)	0.00124** (0.000580)
Other driver	-0.0854*** (0.0110)	0.0860*** (0.0110)	-0.0006** (0.0003)	-0.0790*** (0.00677)	0.0794*** (0.00678)	-0.000396** (0.000192)	-0.0781*** (0.00959)	0.0785*** (0.00960)	-0.000389** (0.000196)
Observations	775,901	775,901	775,901	775,042	775,042	775,042	775,036	775,036	775,036
Personal characteristics	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes
Troop ethnic composition	No	No	No	No	No	No	Yes	Yes	Yes
Troop FE	No	No	No	Yes	Yes	Yes	No	No	No
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Hour FE	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes

*** p<0.01, ** p<0.05, * p<0.1; Table entries are marginal effects (in units of probabilities) calculated based on the multinomial logit models presented in Panels A-D in table Vb below. The standard errors of these marginal effects are computed employing the delta method; “White” is the omitted category for “officer” and “driver” ethnicity.

Table IIIc: The marginal effects at means-Charlotte Mecklenburg Police Department 2010-2016

	A			B			C		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Do-nothing	Citation	Search	Do-nothing	Citation	Search	Do-nothing	Citation	Search
AA Officer	-0.0178*** (0.0016)	0.0364*** (0.0016)	-0.0186*** (0.0004)	-0.0348*** (0.00170)	0.0475*** (0.00170)	-0.0127*** (0.000301)	-0.115* (0.0620)	0.125* (0.0640)	-0.0103*** (0.00281)
Hispanic officer	0.0229*** (0.0031)	-0.0214*** (0.0030)	-0.0015 (0.0011)	-0.0145*** (0.00327)	0.0195*** (0.00328)	-0.00501*** (0.000633)	-0.0258 (0.0308)	0.0317 (0.0304)	-0.00590 (0.00464)
AA driver	-0.0226*** (0.0012)	-0.0129*** (0.0012)	0.0355*** (0.0004)	-0.0450*** (0.00129)	0.0264*** (0.00129)	0.0186*** (0.000335)	-0.00361 (0.0127)	-0.0132 (0.0127)	0.0168*** (0.00215)
Hispanic driver	-0.101*** (0.0020)	0.0871*** (0.0020)	0.0138*** (0.0007)	-0.132*** (0.00218)	0.134*** (0.00219)	-0.00218*** (0.000341)	-0.0745*** (0.0158)	0.0732*** (0.0161)	0.00129 (0.00194)
Other driver	-0.0230*** (0.0032)	0.0294*** (0.0032)	-0.0064*** (0.0007)	-0.0253*** (0.00336)	0.0321*** (0.00336)	-0.00683*** (0.000490)	0.0107 (0.0155)	-0.00443 (0.0158)	-0.00631*** (0.00193)
Observations	802,795	802,795	802,795	802,794	802,794	802,794	65,633	65,633	65,633
Personal characteristics	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes
Division ethnic composition	No	No	No	No	No	No	Yes	Yes	Yes
Stop characteristics	No	No	No	Yes	Yes	Yes	No	No	No
Years	2010-2016	2010-2016	2010-2016	2010-2016	2010-2016	2010-2016	2016	2016	2016
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No
Clustering	None	None	None	None	None	None	Division	Division	Division

*** p<0.01, ** p<0.05, * p<0.1; Table entries are marginal effects (in units of probabilities) calculated based on the multinomial logit models presented in Panels A-D in table Vc below. The standard errors of these marginal effects are computed employing the delta method; “White” is the omitted category for “officer” and “driver” ethnicity.

Table IIIId: The marginal effects at means-Louisville Metro Police Department 2015-2017

	A			B			C		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Do-nothing	Citation	Search	Do-nothing	Citation	Search	Do-nothing	Citation	Search
AA Officer	-0.0886** (0.0424)	0.1160** (0.0513)	-0.0272*** (0.0101)	-0.0435*** (0.0149)	0.0562*** (0.0164)	-0.0127*** (0.00280)	-0.0462* (0.0269)	0.0582** (0.0295)	-0.0119*** (0.00383)
Hispanic officer	0.379*** (0.0808)	-0.504*** (0.0810)	0.125*** (0.0351)	0.417*** (0.0891)	-0.489*** (0.107)	0.0724** (0.0358)	0.540*** (0.126)	-0.551*** (0.134)	0.0117 (0.0127)
AA driver	0.0925*** (0.0246)	-0.135*** (0.0360)	0.0420*** (0.0124)	0.0195** (0.00918)	-0.0181* (0.00984)	-0.00135 (0.00361)	0.0351*** (0.0127)	-0.0315** (0.0131)	-0.00357 (0.00420)
Hispanic driver	0.0329* (0.0175)	-0.0288 (0.0221)	-0.00408 (0.0078)	0.0172 (0.0187)	-0.00917 (0.0221)	-0.00805* (0.00433)	0.0612*** (0.0207)	-0.0688** (0.0271)	0.00758 (0.00949)
Other driver	0.191*** (0.0183)	-0.179*** (0.0177)	-0.0121** (0.0061)	0.134*** (0.0247)	-0.120*** (0.0247)	-0.0138*** (0.00209)	0.162*** (0.0570)	-0.149** (0.0578)	-0.0131** (0.00543)
Observations	94,699	94,699	94,699	94,679	94,679	94,679	20,381	20,381	20,381
Personal characteristics	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes
Division ethnic composition	No	No	No	No	No	No	Yes	Yes	Yes
Years	2015-2017	2015-2017	2015-2017	2015-2017	2015-2017	2015-2017	2017	2017	2017
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Division FE	No	No	No	Yes	Yes	Yes	No	No	No
Hour FE	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes

*** p<0.01, ** p<0.05, * p<0.1; Table entries are marginal effects (in units of probabilities) calculated based on the multinomial logit models presented in Panels A-D in table Vd below. The standard errors of these marginal effects are computed through the delta method; "White" is the omitted category for "officer" and "driver" ethnicity.

SECTION D: PREDICTED PROBABILITIES BY OFFICER AND DRIVER CHARACTERISTICS

Table IVa: Predicted Probabilities by officer and driver ethnicities-Los Angeles

	Do-nothing		Citation		Search	
	AA officer	White officer	AA officer	White officer	AA officer	White officer
AA driver	0.0802*** (0.00889)	0.147*** (0.00811)	0.799*** (0.0170)	0.638*** (0.0155)	0.1210*** (0.00940)	0.2150*** (0.00913)
White driver	0.0378*** (0.0046)	0.0795*** (0.0058)	0.932*** (0.0070)	0.859*** (0.0094)	0.0302*** (0.0028)	0.0617*** (0.0041)
Observations	507,465	507,465	507,465	507,465	507,465	507,465

*** p<0.01, ** p<0.05, * p<0.1.

Notes: Table entries are predicted probabilities, calculated based on the estimated multinomial logit model in table Va below (Panel A). The standard errors of these predicted probabilities are computed employing the delta method.

Table IVb: Predicted Probabilities by officer and driver ethnicities-Florida

	Do-nothing		Citation		Search	
	AA officer	White officer	AA officer	White officer	AA officer	White officer
AA driver	0.222*** (0.0317)	0.374*** (0.0176)	0.777*** (0.0317)	0.617*** (0.0179)	0.0008*** (0.0002)	0.0093*** (0.0018)
White driver	0.239*** (0.0333)	0.399*** (0.0168)	0.760*** (0.0333)	0.598*** (0.0168)	0.00031*** (0.0001)	0.00358*** (0.0006)
Observations	775,901	775,901	775,901	775,901	775,901	775,901

Notes: Table entries are predicted probabilities, calculated based on the estimated multinomial logit model in table Vb below (Panel A). The standard errors of these predicted probabilities are computed employing the delta method.

Table IVc: Predicted Probabilities by officer and driver ethnicities-Charlotte

	Do-nothing		Citation		Search	
	AA officer	White officer	AA officer	White officer	AA officer	White officer
AA driver	0.5120*** (0.0016)	0.5230*** (0.0008)	0.4550*** (0.0016)	0.4150*** (0.0008)	0.0332*** (0.0006)	0.0614*** (0.0004)
White driver	0.526*** (0.0017)	0.548*** (0.0010)	0.462*** (0.0017)	0.429*** (0.0010)	0.0121*** (0.0003)	0.0228*** (0.0003)
Observations	802,795	802,795	802,795	802,795	802,795	802,795

Notes: Table entries are predicted probabilities, calculated based on the estimated multinomial logit model in table Vc below (Panel A). The standard errors of these predicted probabilities are computed employing the delta method.

Table IVd: Predicted Probabilities by officer and driver ethnicities-Louisville

	Do-nothing		Citation		Search	
	AA officer	White officer	AA officer	White officer	AA officer	White officer
AA driver	0.2000*** (0.0452)	0.3010*** (0.0308)	0.7400*** (0.0629)	0.6010*** (0.0505)	0.0600*** (0.0191)	0.0980*** (0.0210)
White driver	0.126*** (0.0289)	0.205*** (0.0194)	0.844*** (0.0389)	0.741*** (0.0264)	0.0302*** (0.0105)	0.0533*** (0.00976)
Observations	94,699	94,699	94,699	94,699	94,699	94,699

Notes: Table entries are predicted probabilities, calculated based on the estimated multinomial logit model in table Vd below (Panel A). The standard errors of these predicted probabilities are computed employing the delta method.

SECTION E: MULTINOMIAL REGRESSION MODELS

Table Va: Multinomial Regression Coefficients-Los-Angeles Police Department 2003-2004

	A			B			C		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Citation Vs. Nothing-Done	Search Vs. Nothing Done	Search Vs. Citation	Citation Vs. Nothing-Done	Search Vs. Nothing Done	Search Vs. Citation	Citation Vs. Nothing-Done	Search Vs. Nothing Done	Search Vs. Citation
AA Officer	0.827*** (0.145)	0.029 (0.085)	-0.797*** (0.111)	0.408*** (0.111)	0.034 (0.091)	-0.374*** (0.076)	0.451*** (0.109)	0.027 (0.090)	-0.424*** (0.072)
Hispanic officer	-0.291*** (0.109)	-0.028 (0.076)	0.263*** (0.084)	-0.056 (0.092)	-0.035 (0.075)	0.021 (0.062)	-0.025 (0.093)	-0.032 (0.075)	-0.008 (0.061)
AA driver	-0.908*** (0.060)	0.637*** (0.046)	1.545*** (0.052)	-0.483*** (0.033)	0.470*** (0.037)	0.953*** (0.033)	-0.394*** (0.032)	0.405*** (0.035)	0.799*** (0.031)
Hispanic driver	-0.595*** (0.063)	0.940*** (0.054)	1.535*** (0.042)	-0.250*** (0.036)	0.695*** (0.040)	0.945*** (0.035)	-0.142*** (0.039)	0.627*** (0.040)	0.769*** (0.033)
Other driver	0.390*** (0.049)	-0.170*** (0.045)	-0.560*** (0.045)	0.487*** (0.034)	-0.246*** (0.043)	-0.733*** (0.034)	0.532*** (0.038)	-0.218*** (0.044)	-0.750*** (0.035)
Observations	507,465	507,465	507,465	507,292	507,292	507,292	507,292	507,292	507,292
Personal characteristics	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes
Division ethnic composition	No	No	No	No	No	No	Yes	Yes	Yes
Division FE	No	No	No	Yes	Yes	Yes	No	No	No
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Hour FE	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes
AIC	691581	691581	691581	601701	601701	601701	597770	597770	597770
LL	-345776	-345776	-345776	-300735	-300735	-300735	-298791	-298791	-298791
BIC	691737	691737	691737	602993	602993	602993	598817	598817	598817

*** p<0.01, ** p<0.05, * p<0.1;

Notes: Table entries are log odds coefficients. Robust standard errors in parentheses. SEs are clustered at the level of officer. "White" is the omitted category for "officer" and "driver" ethnicity.

Table Vb: Multinomial Regression Coefficients-Florida Highway Patrol 2010-2016

	A			B			C		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Citation Vs. Nothing-Done	Search Vs. Nothing Done	Search Vs. Citation	Citation Vs. Nothing-Done	Search Vs. Nothing Done	Search Vs. Citation	Citation Vs. Nothing-Done	Search Vs. Nothing Done	Search Vs. Citation
AA Officer	0.750*** (0.198)	-1.934*** (0.302)	-2.683*** (0.293)	0.434*** (0.161)	-1.813*** (0.300)	-2.246*** (0.296)	0.449** (0.211)	-1.817*** (0.305)	-2.267*** (0.289)
Hispanic officer	0.333 (0.237)	0.119 (0.518)	-0.214 (0.604)	0.133 (0.211)	0.076 (0.468)	-0.056 (0.603)	0.246 (0.238)	0.215 (0.470)	-0.031 (0.566)
AA Driver	0.095** (0.040)	1.015*** (0.092)	0.920*** (0.094)	0.135*** (0.031)	1.094*** (0.106)	0.959*** (0.108)	0.051 (0.038)	1.034*** (0.102)	0.983*** (0.106)
Hispanic driver	-0.128 (0.093)	0.305 (0.214)	0.433** (0.205)	0.207*** (0.048)	0.673*** (0.231)	0.467** (0.231)	-0.154* (0.086)	0.435* (0.228)	0.589*** (0.226)
Other Driver	0.397*** (0.053)	-0.035 (0.142)	-0.433*** (0.139)	0.346*** (0.030)	-0.049 (0.135)	-0.395*** (0.137)	0.367*** (0.046)	0.004 (0.133)	-0.364*** (0.133)
Observations	775,901	775,901	775,901	775,042	775,042	775,042	775,036	775,036	775,036
Personal characteristics	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes
Division ethnic composition	No	No	No	No	No	No	Yes	Yes	Yes
Troop FE	No	No	No	Yes	Yes	Yes	No	No	No
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Hour FE	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes
AIC	1.025e+06	1.025e+06	1.025e+06	845979	845979	845979	996674	996674	996674
LL	-512357	-512357	-512357	-422892	-422892	-422892	-498259	-498259	-498259
BIC	1.025e+06	1.025e+06	1.025e+06	847112	847112	847112	997575	997575	997575

*** p<0.01, ** p<0.05, * p<0.1;

Notes: Table entries are log odds coefficients. Robust standard errors in parentheses. SEs are clustered at the level of officer. “White” is the omitted category for “officer” and “driver” ethnicity.

Table Vc: Multinomial Regression Coefficients-Charlotte Mecklenburg Police Department 2010-2016

	A			B			C		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Citation Vs. Nothing-Done	Search Vs. Nothing Done	Search Vs. Citation	Citation Vs. Nothing-Done	Search Vs. Nothing Done	Search Vs. Citation	Citation Vs. Nothing-Done	Search Vs. Nothing Done	Search Vs. Citation
AA Officer	0.115*** (0.007)	-0.593*** (0.021)	-0.707*** (0.021)	0.171*** (0.007)	-0.635*** (0.021)	-0.806*** (0.021)	0.499* (0.260)	-0.372*** (0.137)	-0.871*** (0.290)
Hispanic officer	-0.093*** (0.013)	-0.081*** (0.031)	0.012 (0.032)	0.072*** (0.013)	-0.195*** (0.032)	-0.266*** (0.033)	0.125 (0.129)	-0.247 (0.270)	-0.372 (0.273)
AA driver	0.012** (0.005)	1.036*** (0.015)	1.024*** (0.015)	0.144*** (0.005)	0.872*** (0.015)	0.728*** (0.016)	-0.027 (0.054)	0.811*** (0.122)	0.838*** (0.125)
Hispanic driver	0.387*** (0.008)	0.713*** (0.024)	0.325*** (0.024)	0.545*** (0.009)	0.109*** (0.025)	-0.437*** (0.025)	0.304*** (0.067)	0.227* (0.135)	-0.076 (0.147)
Other driver	0.109*** (0.013)	-0.325*** (0.053)	-0.434*** (0.053)	0.121*** (0.014)	-0.538*** (0.054)	-0.658*** (0.054)	-0.029 (0.066)	-0.642*** (0.206)	-0.613*** (0.235)
Observations	802,795	802,795	802,795	802,794	802,794	802,794	65,633	65,633	65,633
Personal characteristics	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes
Division ethnic composition	No	No	No	No	No	No	Yes	Yes	Yes
Stop characteristics	No	No	No	Yes	Yes	Yes	No	No	No
Years	2010-2016	2010-2016	2010-2016	2010-2016	2010-2016	2010-2016	2016	2016	2016
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No
Division FE	No	No	No	No	No	No	No	No	No
Clustering	None	None	None	None	None	None	Division	Division	Division
AIC	1.319e+06	1.319e+06	1.319e+06	1.222e+06	1.222e+06	1.222e+06	102035	102035	102035
LL	-659342	-659342	-659342	-611091	-611091	-611091	-51006	-51006	-51006
BIC	1.319e+06	1.319e+06	1.319e+06	1.223e+06	1.223e+06	1.223e+06	102145	102145	102145

*** p<0.01, ** p<0.05, * p<0.1; Notes: Table entries are log odds coefficients. Robust standard errors in parentheses. SEs are clustered at the division in Panel D. "White" is the omitted category for "officer" and "driver" ethnicity.

Table Vd: Multinomial Coefficients-Louisville Metro Police Department 2015-2017

	A			B			C		
	(1)	(2)	(3)	(7)	(8)	(9)	(10)	(11)	(12)
	Citation Vs. Nothing-Done	Search Vs. Nothing Done	Search Vs. Citation	Citation Vs. Nothing-Done	Search Vs. Nothing Done	Search Vs. Citation	Citation Vs. Nothing-Done	Search Vs. Nothing Done	Search Vs. Citation
AA Officer	0.619* (0.318)	-0.081 (0.093)	-0.700** (0.313)	0.338*** (0.114)	-0.184* (0.094)	-0.522*** (0.136)	0.320* (0.186)	-0.213** (0.107)	-0.533*** (0.183)
Hispanic officer	-2.237*** (0.516)	0.125 (0.294)	2.362*** (0.468)	-2.166*** (0.517)	-0.059 (0.325)	2.107*** (0.625)	-2.574*** (0.821)	-0.956*** (0.222)	1.617* (0.875)
AA driver	-0.592*** (0.147)	0.227*** (0.063)	0.819*** (0.159)	-0.132** (0.060)	-0.150 (0.121)	-0.018 (0.115)	-0.212*** (0.072)	-0.293* (0.152)	-0.081 (0.147)
Hispanic driver	-0.199* (0.106)	-0.248* (0.132)	-0.050 (0.185)	-0.109 (0.127)	-0.373*** (0.104)	-0.264 (0.180)	-0.373*** (0.107)	-0.062 (0.234)	0.311 (0.290)
Other driver	-0.965*** (0.095)	-0.985*** (0.171)	-0.020 (0.155)	-0.746*** (0.115)	-1.117*** (0.150)	-0.370*** (0.123)	-0.830*** (0.225)	-1.166*** (0.282)	-0.336 (0.330)
Observations	94,699	94,699	94,699	94,679	94,679	94,679	20,381	20,381	20,381
Personal characteristics	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes
Division ethnic composition	No	No	No	No	No	No	Yes	Yes	Yes
Years	2015-2017	2015-2017	2015-2017	2015-2017	2015-2017	2015-2017	2017	2017	2017
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Hour FE	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes
Division FE	No	No	No	Yes	Yes	Yes	No	No	No
AIC	138251	138251	138251	99539	99539	99539	20960	20960	20960
LL	-69109	-69109	-69109	-49762	-49762	-49762	-10473	-10473	-10473
BIC	138402	138402	138402	99605	99605	99605	21015	21015	21015

*** p<0.01, ** p<0.05, * p<0.1; Notes: Table entries are log odds coefficients. Robust standard errors in parentheses. SEs are clustered at the level of the division. "White" is the omitted category for "officer" and "driver" ethnicity.

SECTION F: DETAILED DESCRIPTION OF DATASETS

I LOS ANGELES POLICE DEPARTMENT (JULY 2003 TO JUNE 2004)

During the relevant period, the Los Angeles Police Department (LAPD) was made up of 18 regional divisions, each headed by a Captain.

The original LAPD dataset included all police stops of vehicles and pedestrians between 1 July 2003 and 30 June 2004. In addition to the dataset, we relied, where applicable, on information from two reports (Alpert et al. 2006; Ayres and Borowski, 2008).

The LAPD dataset was first released to the ACLU of Southern California following a public records request. It was analyzed, on behalf of the ACLU, by Prof. Ian Ayres (Yale) who produced a report on their behalf. The report and link to the full dataset were made originally available online for public scrutiny.

The original dataset consisted of 799,815 observations. To ensure consistency with the other three datasets we filtered out three types of observations. First, we excluded all observations involving stops of pedestrians as opposed to vehicles. Second, we excluded all observations regarding police officers who were recorded as neither African American, White or Hispanic or as Null. Third, we excluded all observations relating to police officers who specialize in policing gangs, as opposed to routine stops. The remaining dataset consists of 507,465 observations.

Operationalization of the Control Variables

Officer gender is a dummy variable, with male coded as 1 and female as 0.

Officer age in years is a scale variable.

Officer tenure in years is a scale variable (months divided by 12).

Driver age is an ordinal variable (18-25; 26-35; 36-45; 45-55; 56 and above).

Driver gender is a dummy variable, with male coded as 1 and female as 0.

Officer type includes three categories: Traffic, Patrol and Other. Patrol officers are responsible for a large array of activities, of which enforcing the traffic laws is one, whereas “traffic officers” are primarily responsible for enforcing traffic laws and investigating accidents.

The *Share of African American police officers* and the *Share of Hispanic police officers* in each regional division, in the relevant period, is computed as a percentage of all sworn officers in the division, based on statistics available from a report by Alpert et al. (2006).

Property Crime in reporting district and *Violent Crime in reporting district* are based on LAPD reporting districts for around 10 block geographical areas.

Year (2003, 2004).

Regional Division (1 to 18).

Officer ID is an individual reference number.

Time relates to the hour and minute of the stop.

II FLORIDA HIGHWAY PATROL (2010-2015)

Florida Highway Patrol (FHP) is a state-wide police patrol. During the relevant period it consisted of 12 regional troops, each headed by a Major.

The original FHP dataset included all police stops of vehicles by FHP between 2010 and 2015. The dataset was obtained by the second author upon request from the FHP. Vehicle stops data from previous years was no longer available.

The original dataset consisted of 1,048,575 observations. To achieve consistency with the other three datasets we filtered out two types of observations. First, following the second author's email correspondence with FHP, we excluded cases that were coded in the original dataset as "misdemeanor arrest" as it is impossible to know, from the dataset, whether these are cases of mere citations or actual custody arrests. Second, we excluded all observations regarding police officers whose ethnicity was coded as neither African American, White nor Hispanic or as Null. Following these exclusions, the remaining datasets consists of 775,901 observations.

Operationalization of the Control Variables

Officer gender is a dummy variable, with male coded as 1 and female as 0.

Officer age in years is a scale variable.

Officer tenure in years is a scale variable.

The *Share of African American police officers* and the *Share of Hispanic police officers* regards their percentage out of all sworn police officers, in each troop, per year, as calculated from the dataset on the basis of officer ID reference numbers.

Year (2010, 2011, 2012, 2013, 2014, 2015)

Regional troop (1 to 12).

Officer ID is an individual reference number.

Time relates to the hour and minute of the stop.

III CHARLOTTE-MECKLENBURG POLICE DEPARTMENT (2010 to 2016)

In 2016, Charlotte-Mecklenburg Police Department (CMPD) comprised 13 regional divisions, each headed by a Captain.

The original CMPD dataset covered all police stops of vehicles by this department between 2010 and 2016. Stops data for 2016 was publicly available, and downloaded, from the CMPD website (https://catalog-bsp.data.gov/dataset/officer-traffic-stops/resource/da88171b-6cdb-4a52-8986-d8d1e739e72a?inner_span=True). Corresponding data for 2010 to 2015 was provided by the CMPD upon request by the second author.

CMPD further provided, upon the second author's request, information about the overall headcount of officers, and the percentage of African American, White and Hispanics per each of the regional division in 2016. The data for 2010 to 2015 does not include information on officers' allocation to regional divisions.

Information regarding crime rates per regional division areas was collected from the CMPD's website (<http://charlottenc.gov/CMPD/Safety/Pages/CrimeStats.aspx>).

The original dataset consisted of 856,429 observations. To ensure consistency with the other three datasets we excluded all observations regarding police officers whose ethnicity was coded as neither African American, White nor Hispanic. Following these exclusions, the remaining dataset consists of 802,795 observations.

Operationalization of the Control Variables

Officer gender is a dummy variable, with male coded as 1 and female as 0.

Officer tenure in years is a scale variable.

Driver age in years is a scale variable.

Driver gender is a dummy variable, with male coded as 1 and female as 0.

The *Share of African American police officers* and the *Share of Hispanic police officers* in the relevant percentage of officers out of all sworn officers in each regional division. This variable is available for 2016 only, based on information provided by CMPD to the second author.

Property, Drug and Violent Crime Statistics relate to the average number of reported crimes between 2012 to 2016, or the number of such crimes rates during 2016 only.

Year (2010, 2011, 2012, 2013, 2014, 2015, 2016).

Regional Division (1 to 13).

Reason for Stop includes the following: "check point", "driving while impaired" (i.e. driving under the influence of alcohol), "investigation", "other", "safe movement", "seatbelt", "speeding", "stop light/sign", "vehicle movement" and "vehicle regulatory"

IV LOUISVILLE METRO POLICE DEPARTMENT (2015-2017)

During the relevant period, the Louisville Metro Police Department (LMPD) comprised 8 regional patrol divisions, each headed by a Major.

The original LMPD dataset included all police stops of vehicles by this department between 2015 and 2017. Vehicle stops data for 2015 to 2017 was publicly available from the LMPD website (<https://data.louisvilleky.gov/dataset/lmpd-stops-data>).

Information about the overall headcount of officers per regional division, and the percentage of African American, White and Hispanics per each of the regional division in LMPD, was computed from personnel statistics dataset available for 2017 only (<https://data.world/louisville/lmpd-employee-characteristics>)

Information regarding crime rates was collected from the LMPD website.

The original dataset consisted of 101,745 observations. To create consistency with the other three datasets we excluded all observations regarding police officers whose ethnicity was coded as neither African American, White or Hispanic. Following these exclusions, the remaining datasets consists of 94,699 observations.

Operationalization of the Control Variables

Officer gender is a dummy variable, with male coded as 1 and female as 0.

Officer age in years is a categorical variable (21-30, 31-40, 41-50, 51-60, over 60).

Driver age in years is a categorical variable (under 20, 21-25, 26-30, 31-40, 41-50, 51-60, over 60).

Driver gender is a dummy variable, with male coded as 1 and female as 0.

The *Share of African American police officers* and the *Share of Hispanic police officers* in the relevant percentage of officers out of all sworn officers in each regional division. This variable is available for 2017 only, based on information downloaded from the LMPD website.

Property, Drug and Violent Crime Statistics relate to the average number of reported crimes for 2015 to 2017 per regional division.

Year (2010, 2011, 2012, 2013, 2014, 2015, 2016).

Regional Division (1 to 8).

Time is hour and minute of stop.

SECTION G: ROBUST ESTIMATION OF ETHNORACIAL DISPARITIES IN SEARCH

To further confirm the robustness of the results of H₃ in the paper, we run linear probability models per each police department, wherein the dependent variable, search, is a binary variable, with Search=1 and Non-search=0.

The data, for this analysis, is restricted to African American and White drivers and police officers.

The interaction term takes the value of 1 when officer and driver races match, and 0 otherwise. Thus:

$$y_i = a_0 + a_1AAO + a_2AAD + a_3SameRace$$

*AAO=African American officer; AAD=African American driver

Employing this modeling, the predicted values of officer/driver race dyads are interpretable from the model coefficients, so:

(1) African American officer/African American driver = $a_0+a_1+a_2+a_3$

(2) White officer/African American driver = a_0+a_2

(3) African American officer/White driver = a_0+a_1

(4) White officer/White driver = a_0+a_3

Building on the above, our estimation of H₃ rests on the following three propositions, which underlie this hypothesis:

Proposition (i) African American officers do not treat African American drivers preferentially, compared with their treatment of White drivers. That is, they search African Americans either equally or more than White drivers.

Namely: (1)-(3)≥0, and therefore, **a₂+a₃≥0**

Proposition (ii) White officers are inclined to search African American drivers more than White drivers.

Namely: (2)-(4)>0, and therefore, **a₂-a₃>0**

Proposition (iii) Given the above, if correct, the implications of H₃, according to which African American officers, compared with White officers, display smaller ethnoracial disparities, entails a negative coefficient of the interaction term.

Namely: [(1)-(3)]-[(2)-(4)]= **2*a₃<0**

Tables G1 and G2, below, present the linear probability models per each police department, and for the integrated sample, and the predicted values for the above three propositions.

Table G1: Linear Probability Model of Search

VARIABLES	(1) CMPD	(2) FHP	(3) LAPD	(4) LMPD	(5) Merged
African American Officer	-0.0203*** (0.000675)	-0.0059*** (0.000241)	-0.0772*** (0.00157)	-0.0300*** (0.00215)	-0.0224*** (0.000389)
African American Driver	0.0289*** (0.000673)	0.00298*** (0.000240)	0.116*** (0.00157)	0.0379*** (0.00215)	0.0310*** (0.000395)
Same Race	-0.0061*** (0.000673)	-0.0029*** (0.000240)	-0.0445*** (0.00157)	-0.0078*** (0.00215)	-0.0082*** (0.000386)
Constant	0.0321*** (0.000673)	0.00634*** (0.000240)	0.105*** (0.00157)	0.0609*** (0.00215)	0.0316*** (0.000387)
Observations	743,628	572,657	181,815	88,630	1,586,730
R-squared	0.008	0.002	0.055	0.009	0.010
Number of Years	7	6	2	3	
Year FE	YES	YES	YES	YES	YES
Police department FE	-	-	-	-	YES

Table G2: Predicted Values for Racial Disparities in Search

Comparison	Estimated coefficients	CMPD	FHP	LAPD	LMPD	Merged
Proposition (i)	a_2+a_3	0.0228	0.0001	0.0715	0.0301	0.0228
Proposition (ii)	a_2-a_3	0.0350	0.0057	0.1605	0.0457	0.0392
Proposition (iii)	$2 * a_3$	-0.0122	-0.0056	-0.0890	-0.0156	-0.0164

As evident from Table G1, the interaction term of same race is negative and significant, as expected. Moving to Table G2, we find that African American officers search African American drivers more than White drivers (i.e. $a_2+a_3>0$). White officers search African American drivers more than White drivers (i.e. $a_2-a_3>0$). Most importantly, as per H_3 , African officers display smaller disparities of search across the two racial groups (i.e. $2*a_3<0$).