Summary of Traffic Stops Statistics
Greensboro Police Department

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This report compiles and presents statistical summaries of traffic stops statistics drawn from the NC State Bureau of Investigation database to which each police agency reports their statistics each month.[1] Data in this report cover the period of 2002 through 2020. The data exclude checkpoint stops because such stops are not recorded systematically. The data also include only the driver of the vehicle, excluding any passengers. Passenger information is generally recorded only in the event of an adverse outcome (e.g., search, arrest).[2]

This report provides the following summary statistics.[3]

First is a table providing summary statistics on numbers of stops, searches, contraband hits, and arrests, as well as relevant rates of these outcomes.

Second is a series of graphics as follows:

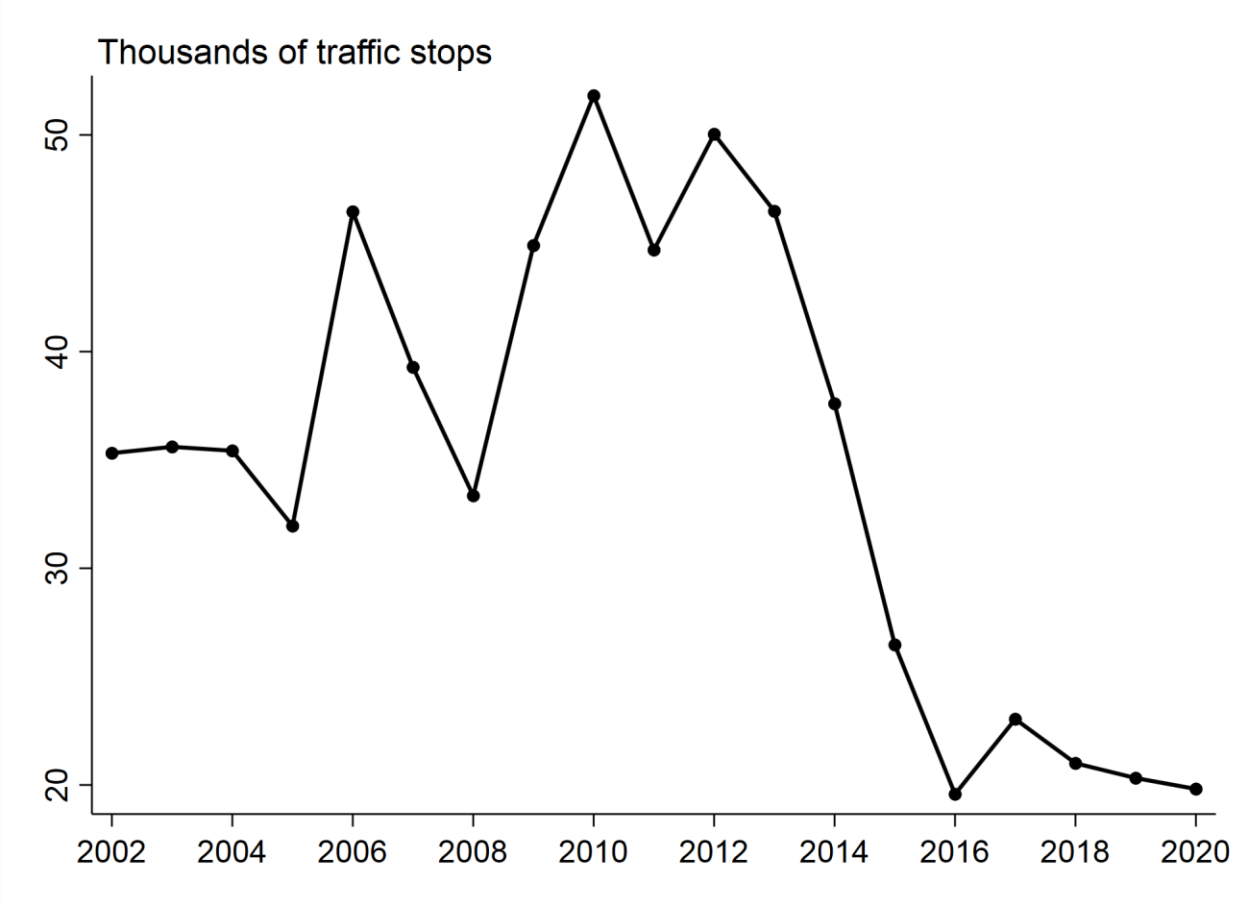
1. Number of stops
2. Percent of stops by race-gender category
3. Percent of stops for "safety" purposes (speeding, stop sign, DUI, unsafe movement)
4. Percent of stops resulting in a search, by race-gender category
5. Percent of stops resulting in arrest, by race-gender category
6. Percent of searches resulting in contraband, by race-gender category
7. Percent of searches resulting in contraband and arrest, by race-gender category
8. Percent of stops resulting in contraband and arrest, by race-gender category
9. Percent of consent searches resulting in contraband and arrest, by race-gender category
10. Percent of probable cause resulting in contraband and arrest, by race-gender category
11. Percent of contraband hits resulting in arrest, by race-gender category
12. Black-White Ratio of search rates, arrest rates, hit rates, and arrest rates per hit, for males

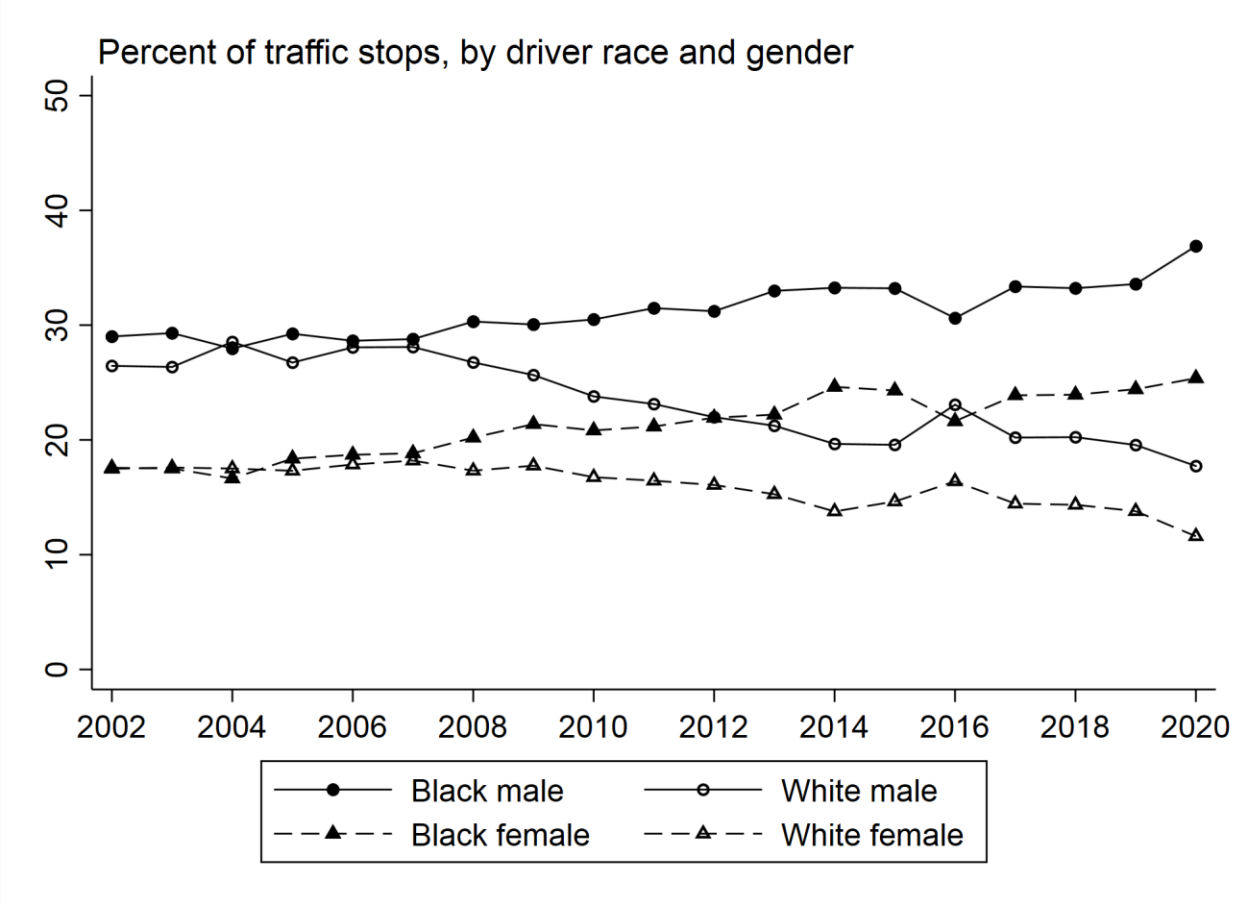
[1] For more information about this database, see: https://trafficstops.ncsbi.gov/.
[2] For a copy of the SBI-122 form filled out by officers following a traffic stop, see: http://fbaum.unc.edu/TrafficStops/SBI-122-form.pdf.
[3] All of the data associated with this report is / will be made available at the following website: http://fbaum.unc.edu/traffic.htm. Summaries for every agency in North Carolina are available, and the data are presented at three levels of aggregation: All data for that agency; yearly; and monthly. This report uses the yearly data and provides graphical summaries. Percentages are calculated only if there are 100 observations in the relevant category; this avoids erratic findings based on small numbers of observations.

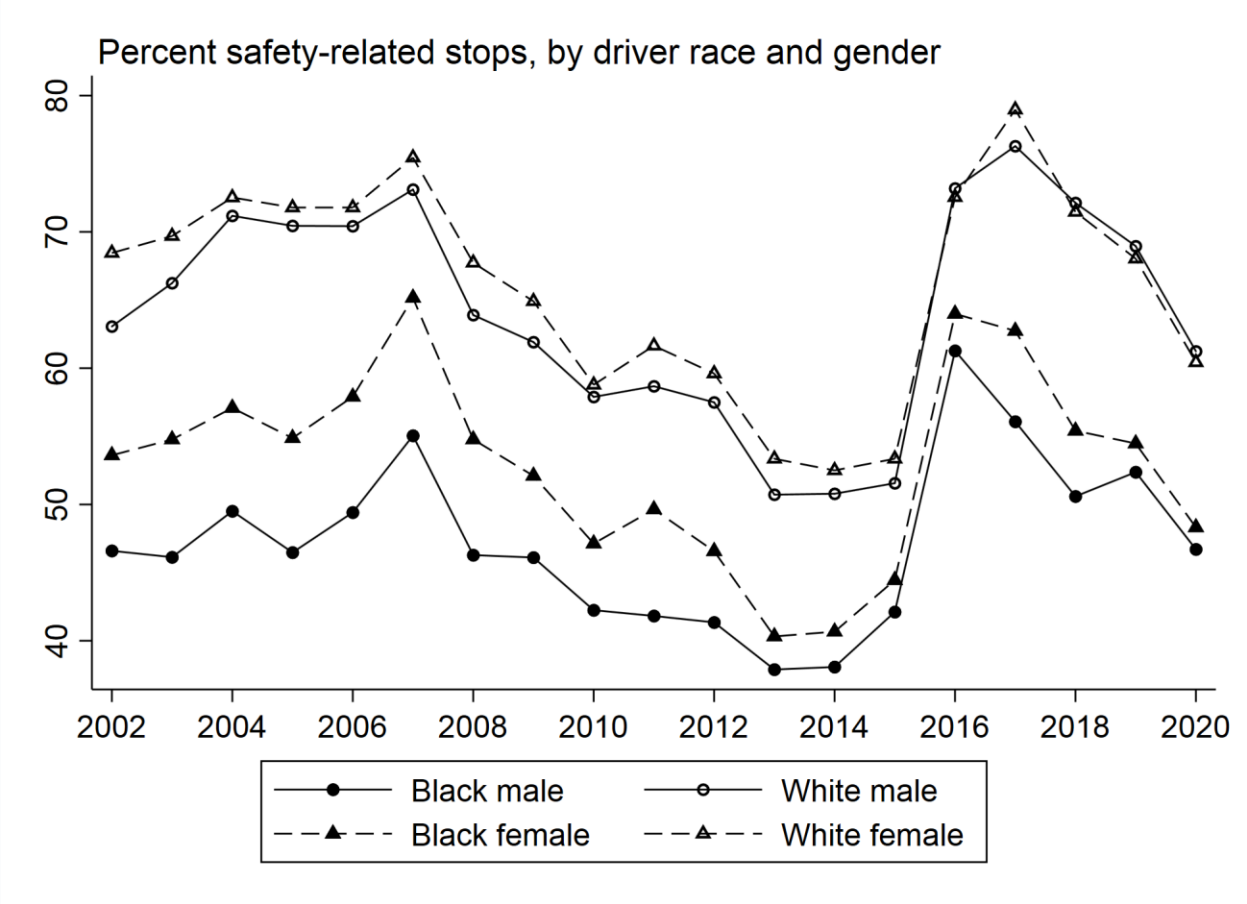
13. Black-White Ratio of search rates, arrest rates, hit rates, and arrest rates per hit, for females
14. Summary of stops over the year: Stops, percent safety-related, percent ending in citation, search, and arrest
15. Test of the "end of month quota" hypothesis. This compares outcomes for the last three days of the month compared to all other days of the month.
16. Summary of stops by hour over the week: Stops, percent safety-related, percent ending in citation, search, and arrest
17. Summary of stops by hour over the day: Stops, percent safety-related, percent ending in citation, search, and arrest
18. Hourly breakdown of percent of stops by race-gender category
19. Hourly breakdown of percent of stops related to traffic safety, by race-gender category
20. Hourly breakdown of percent of stops resulting in search, by race-gender category
21. Hourly breakdown of percent of stops resulting in arrest, by race-gender category

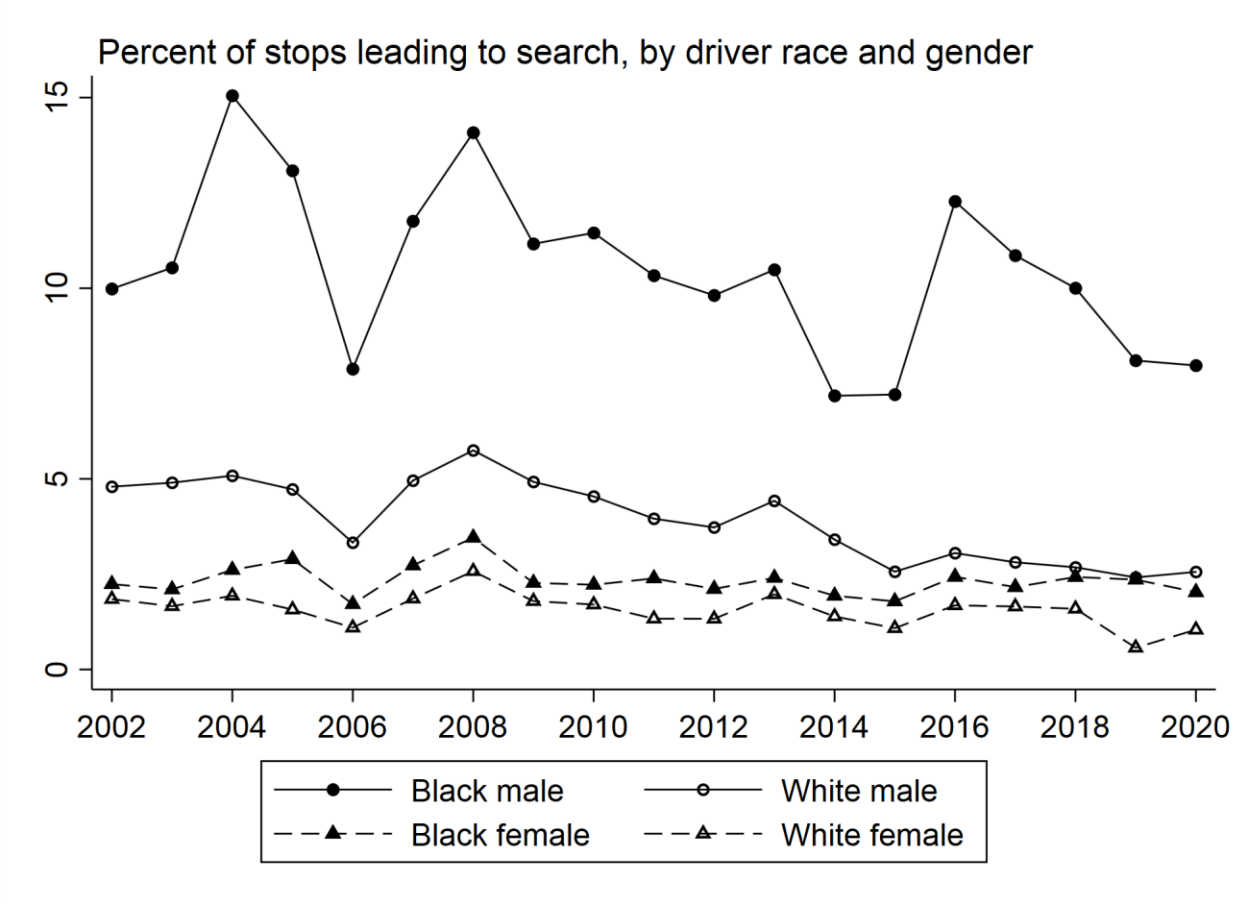
Summary of outcomes

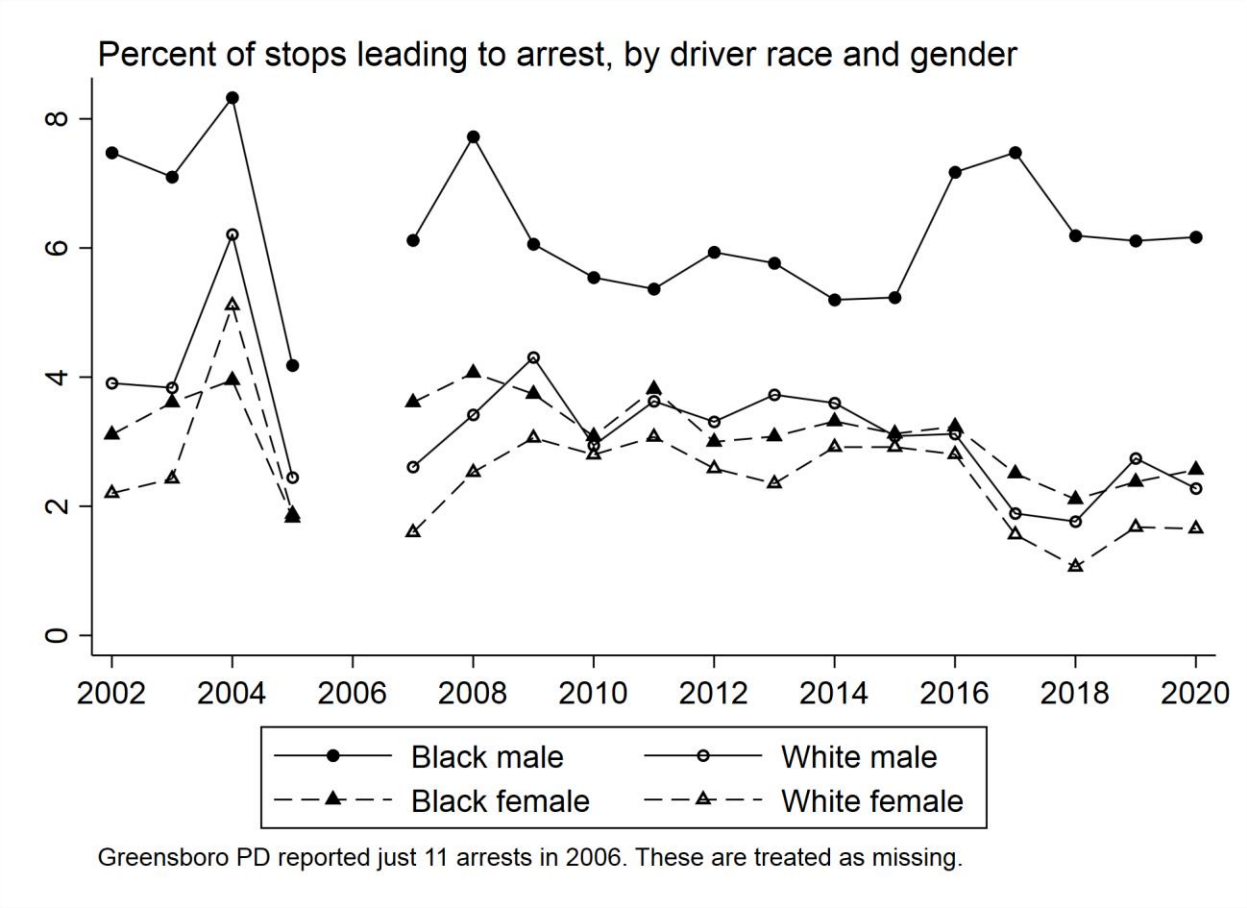
Category	State-wide	Greensboro PD
Stops	24,980,776	663,154
Traffic Safety Stops	13,365,910	368,253
Searches	763,343	35,663
Hits	280,152	14,012
Arrests	500,040	25,818
Arrest From Hit From Search	105,784	6,211
Consent Searches	346,475	21,182
Arrest From Hit From Consent Search	20,759	2,021
Probable Cause Searches	264,963	10,384
Arrest From Hit From Probable Cause Search	54,326	3,148
Percent Traffic Safety Stops	53.50%	55.5
Search Rate Per Stop	3.06%	5.4
Hit Rate Per Search	33.48%	36.6
Arrest Rate Per Hit	38.85%	45.7
Hit-and-Arrest Rate Per Search	13.86%	17.4
Hit-and-Arrest Rate Per Probable Cause Search	20.50%	30.3
Hit-and-Arrest Rate Per Consent Search	5.99%	9.5
Arrest Rate Per Stop	2.00%	3.9
Hit-and-Arrest Rate Per Stop	0.42%	0.9


Thousands of traffic stops
50
40
30
20
2002
2004
2006
2008
2010
2012
2014
2016
2018
2020

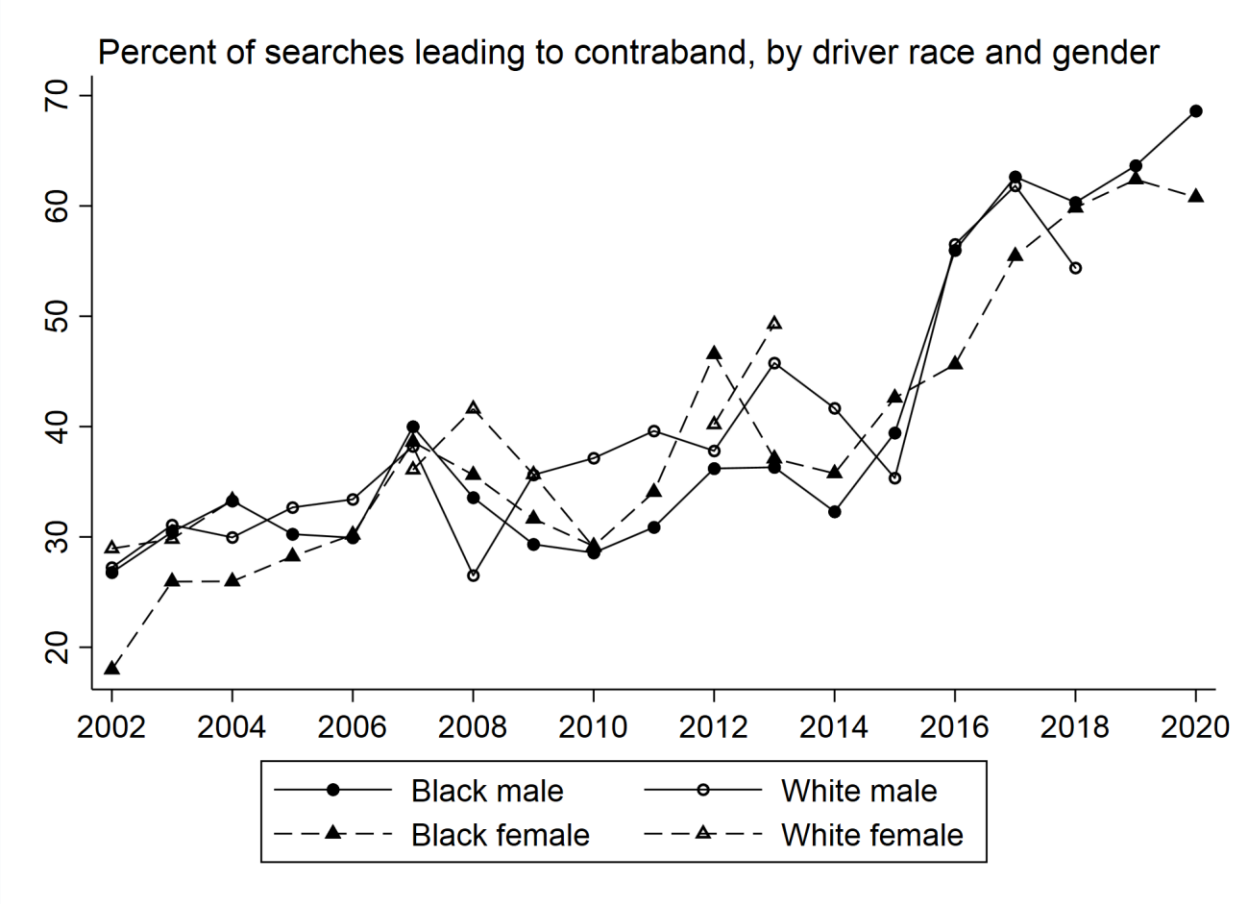

Percent of traffic stops, by driver race and gender
0
10
20
30
40
50
2002
2004
2006
2008
2010
2012
2014
2016
2018
2020
Black male
White male
Black female
White female

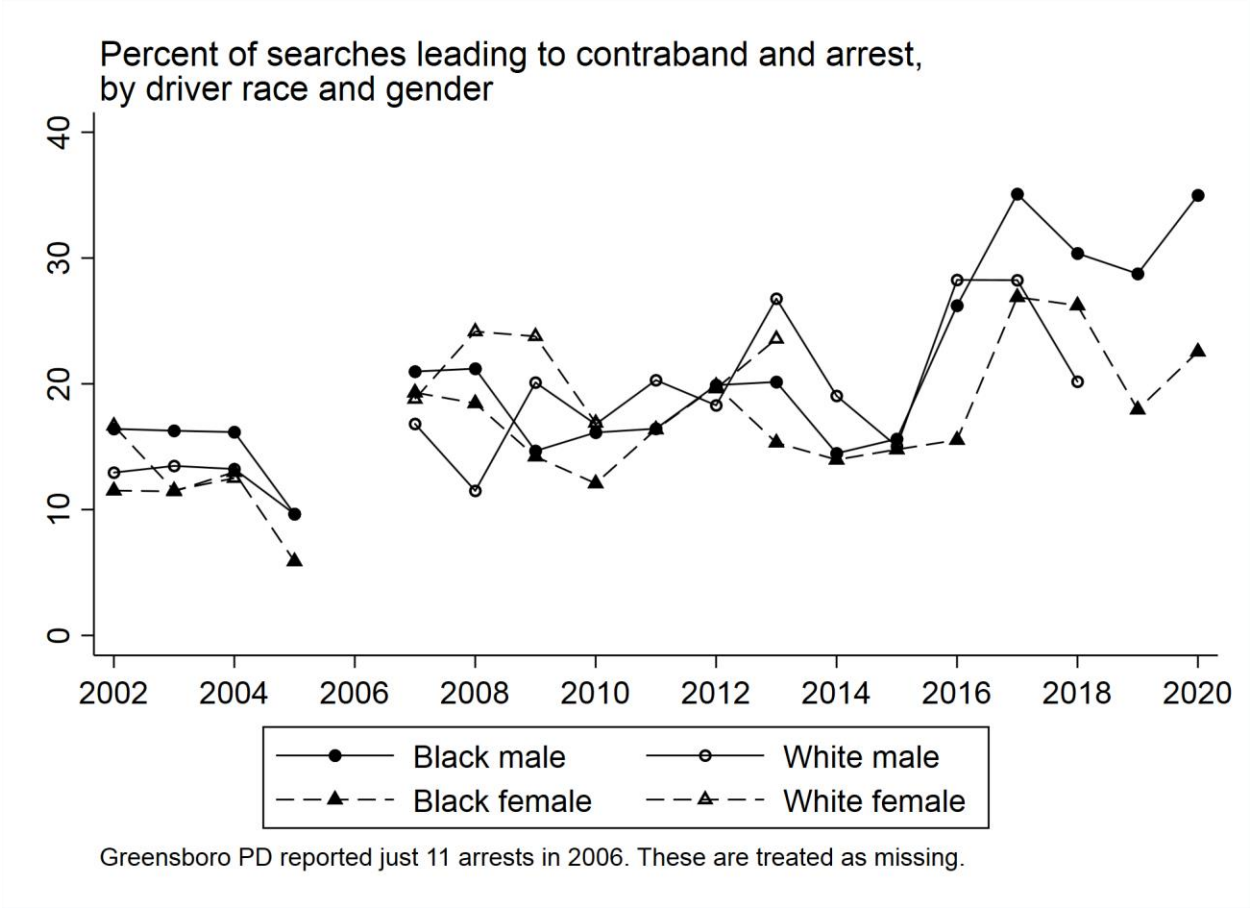

Percent safety-related stops, by driver race and gender
80
70
60
50
40
2002
2004
2006
2008
2010
2012
2014
2016
2018
2020
Black male
White male
Black female
White female


Percent of stops leading to search, by driver race and gender
0
5
10
15
2002
2004
2006
2008
2010
2012
2014
2016
2018
2020
Black male
White male
Black female
White female



Greensboro PD reported just 11 arrests in 2006. These are treated as missing.


Percent of searches leading to contraband, by driver race and gender
20
30
40
50
60
70
2002
2004
2006
2008
2010
2012
2014
2016
2018
2020
Black male
White male
Black female
White female



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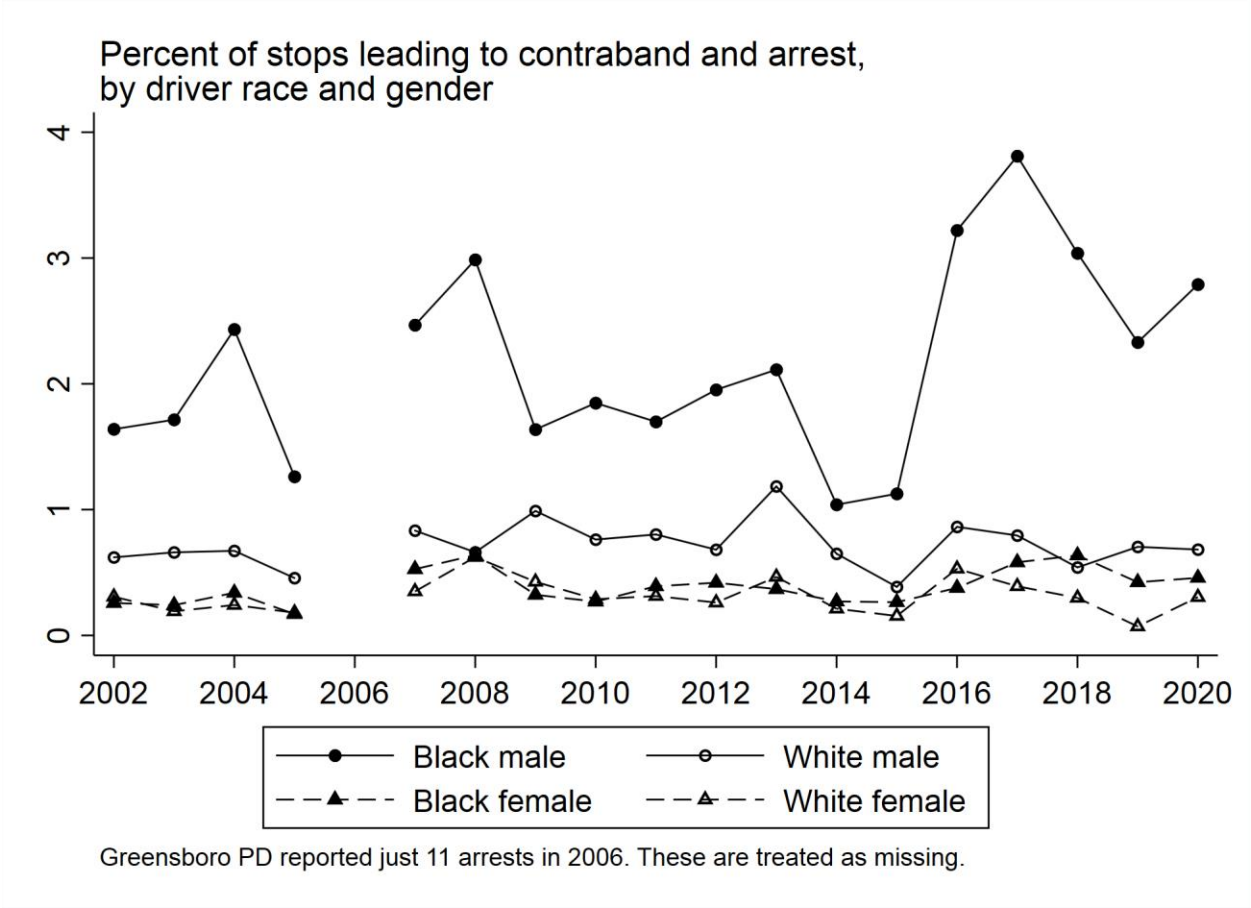

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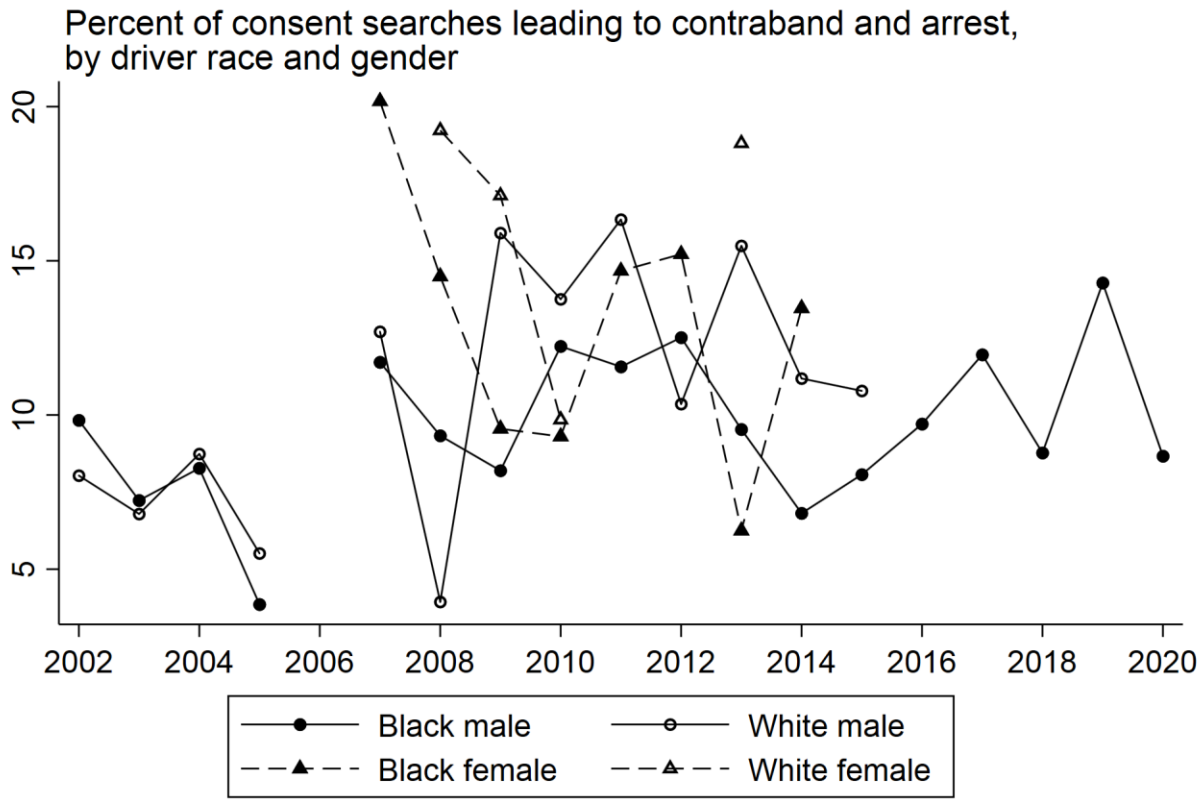

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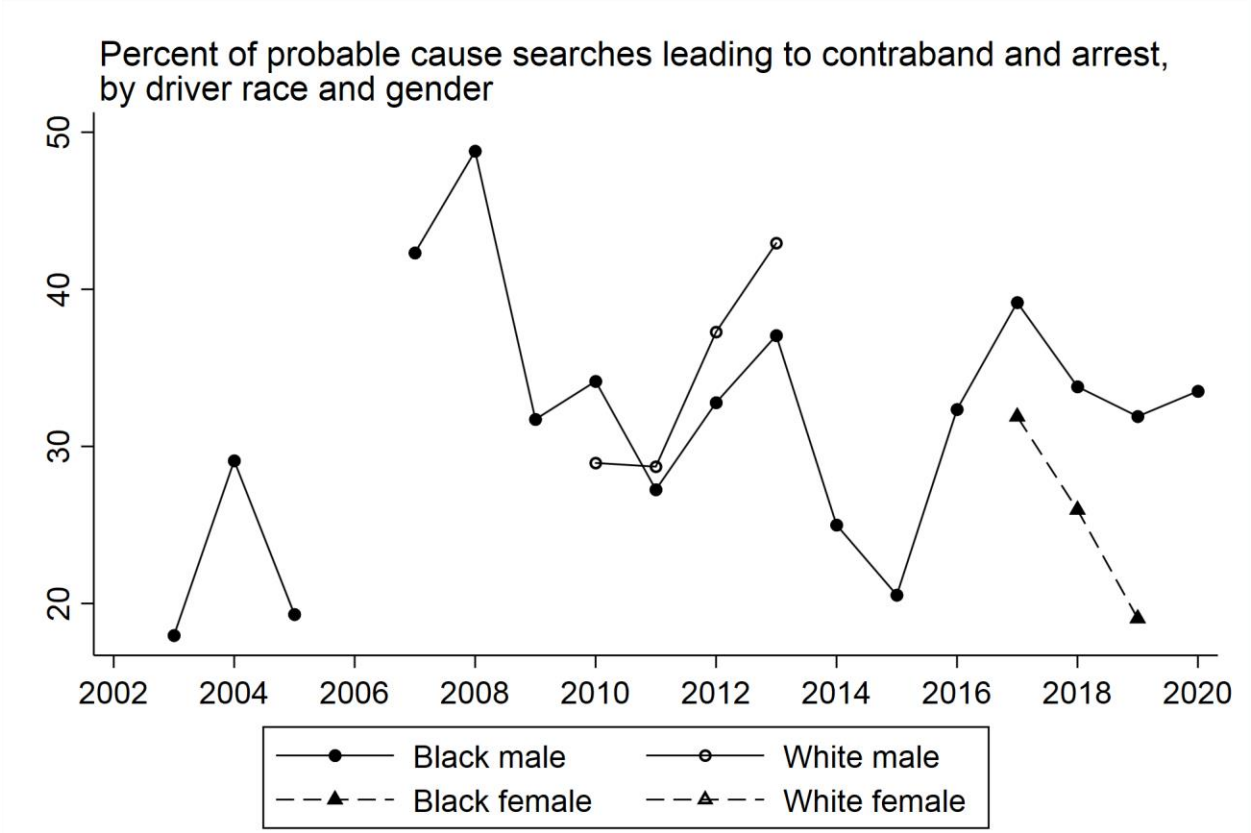

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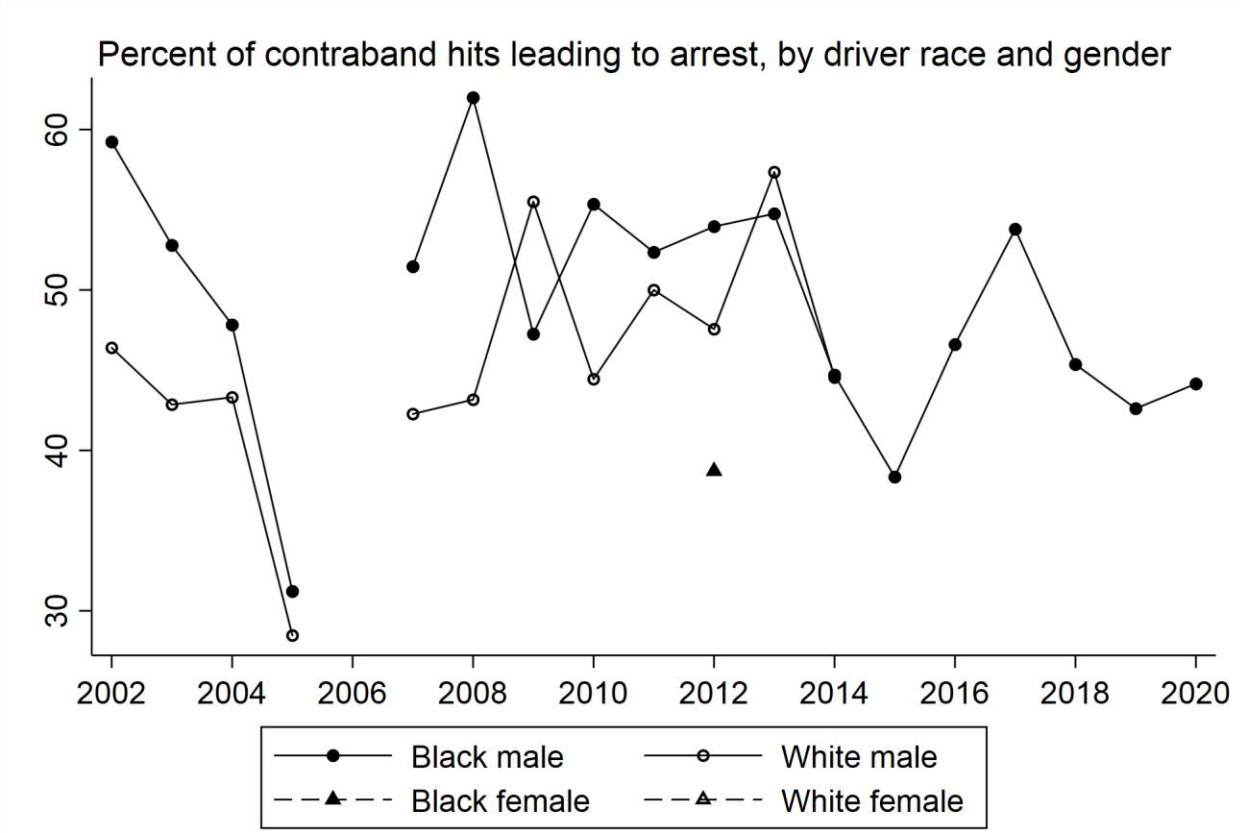

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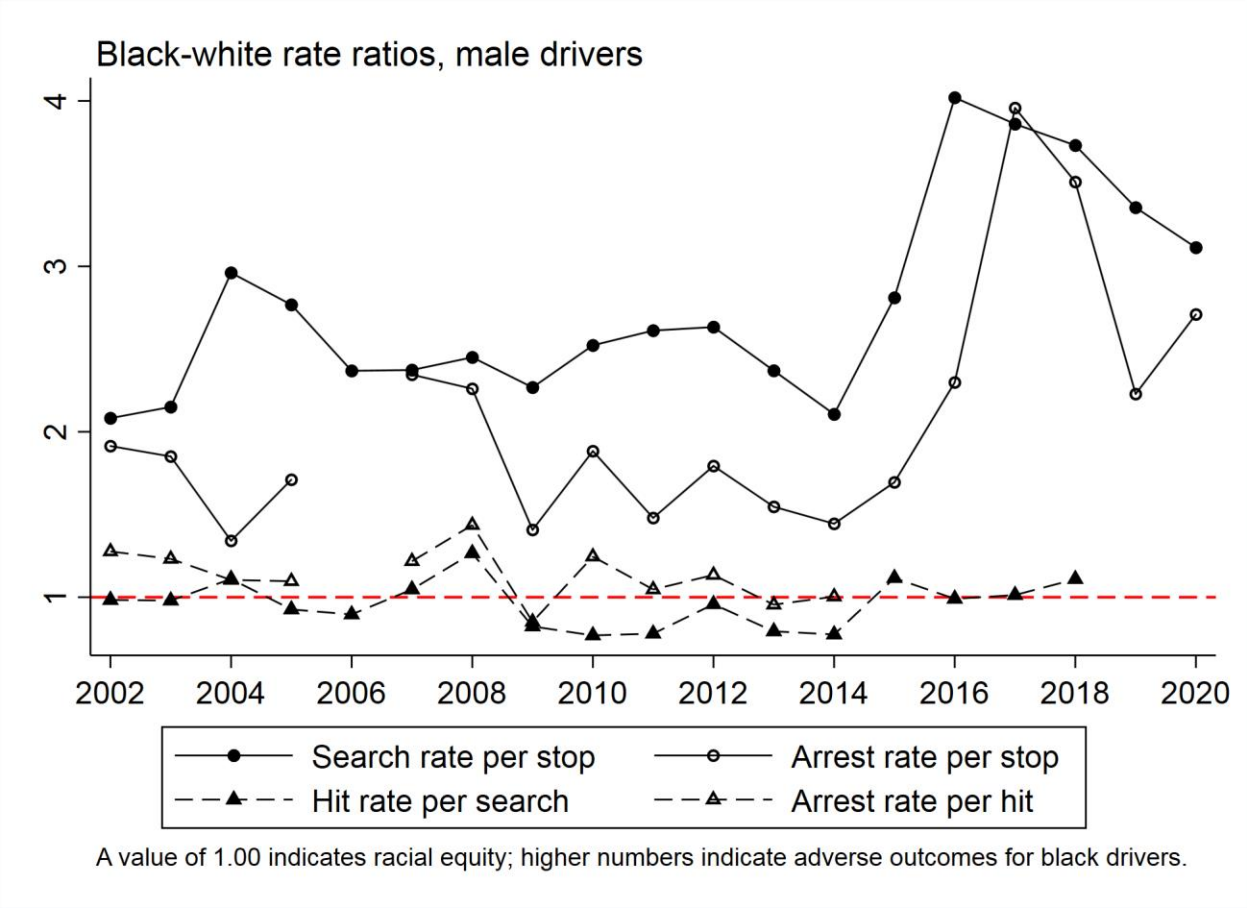
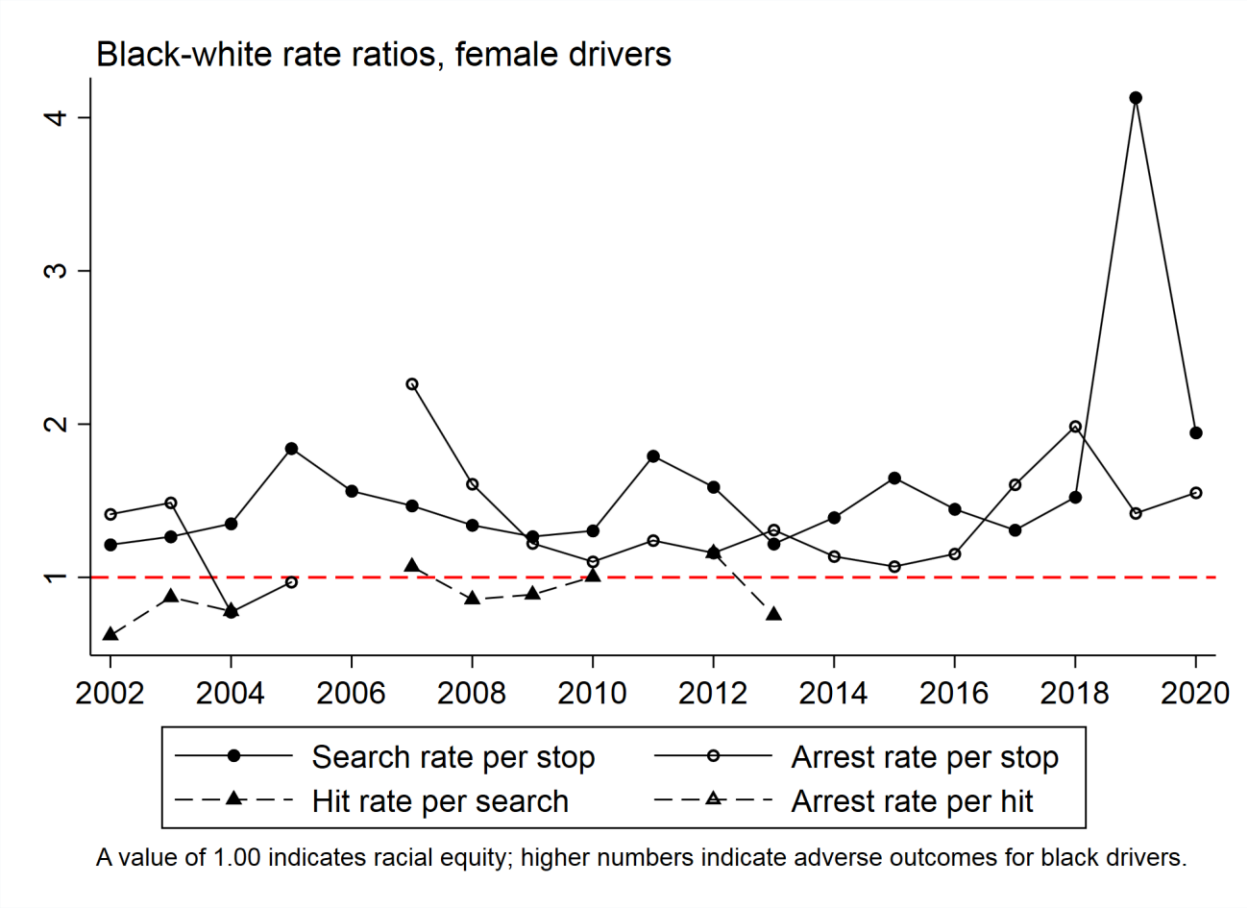


A value of 1.00 indicates racial equity; higher numbers indicate adverse outcomes for black drivers.



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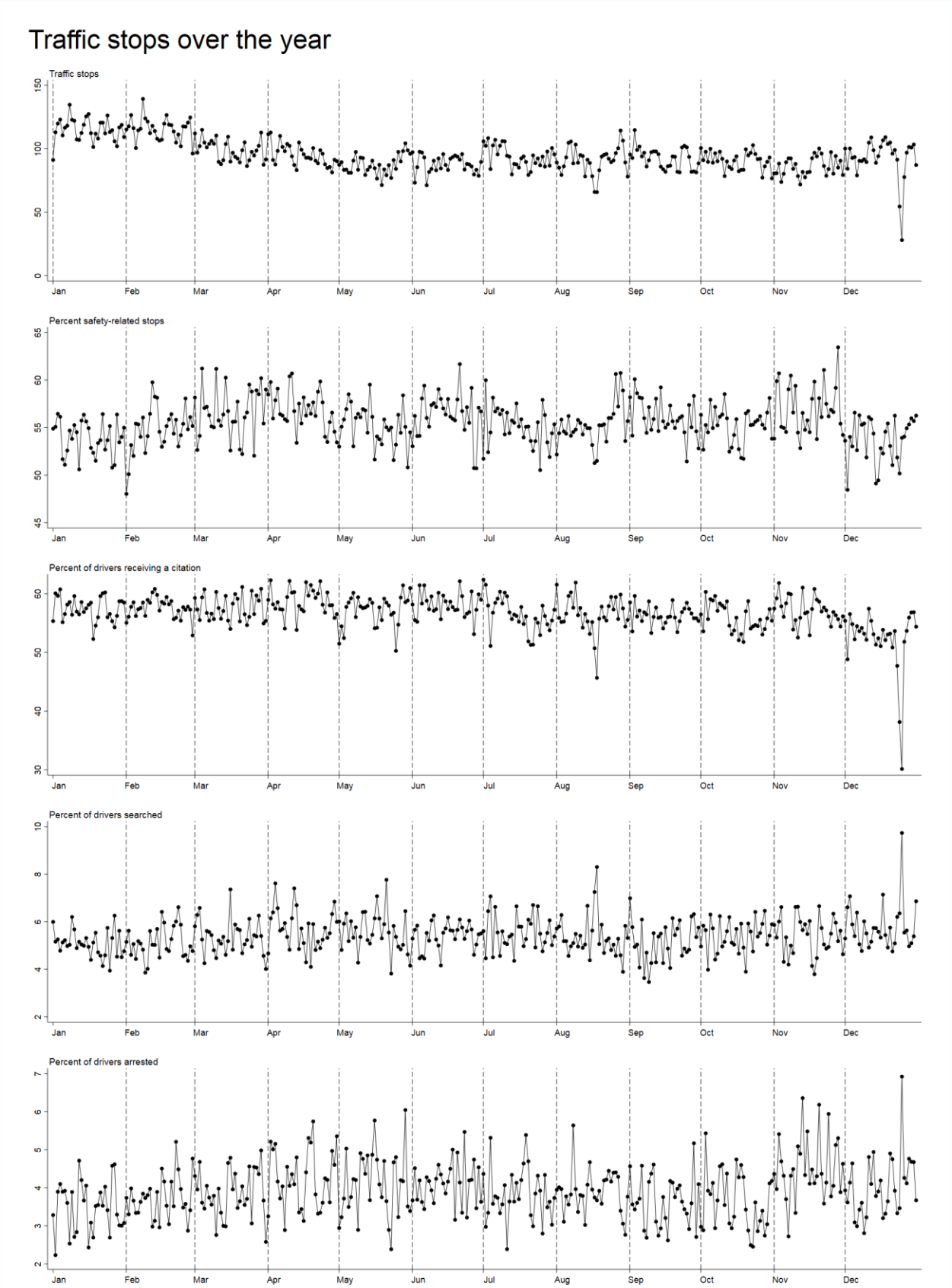
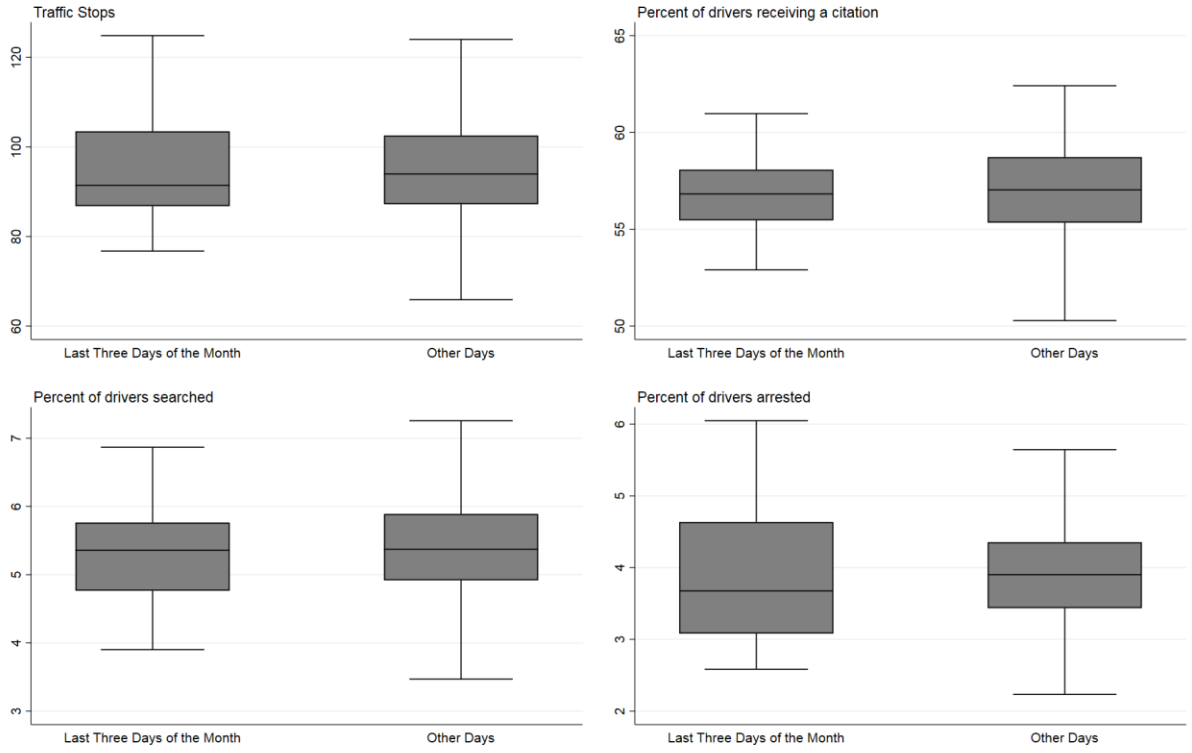
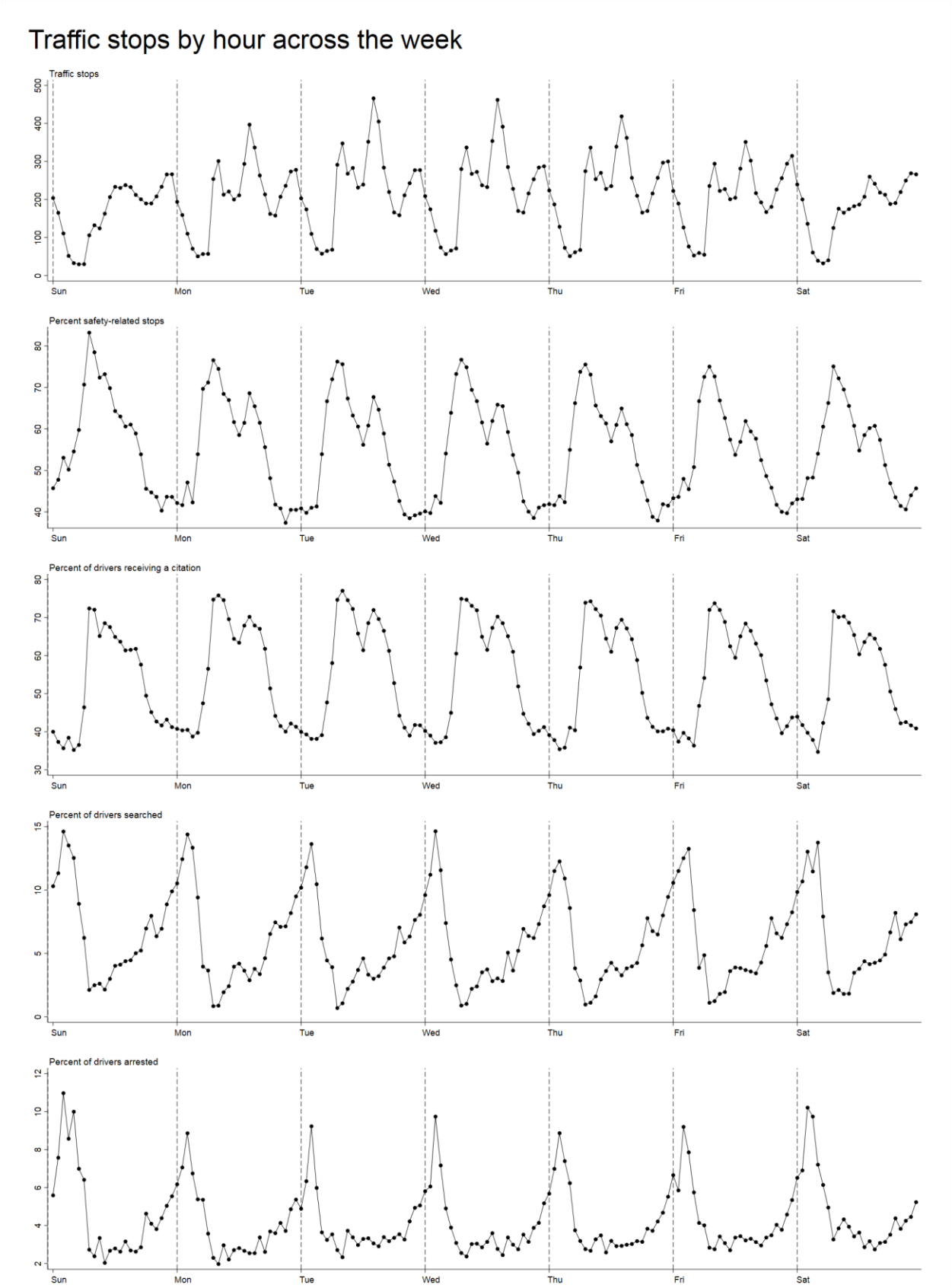
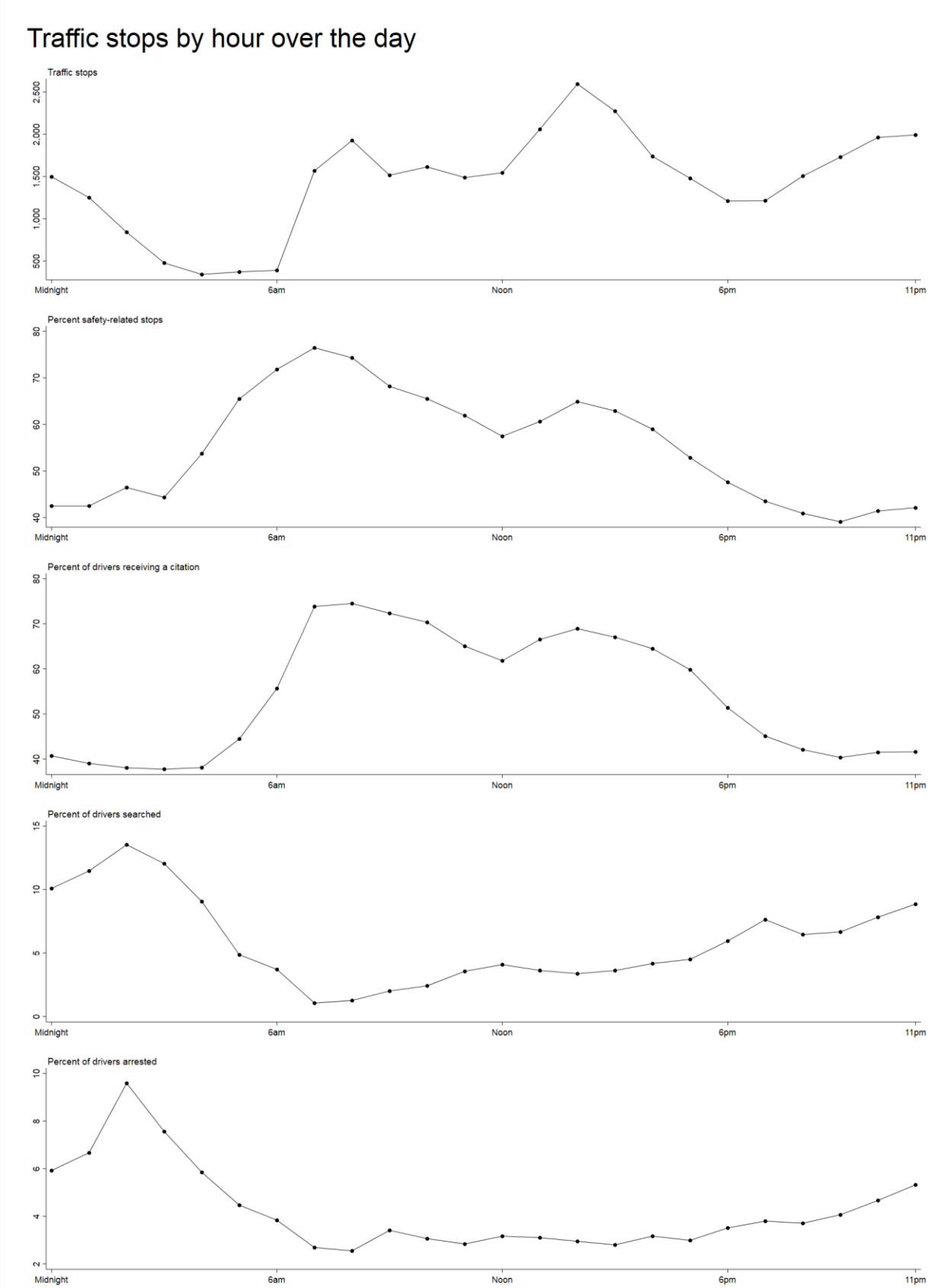

Traffic stops over the year
Traffic stops
0
50
100
150
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Percent safety-related stops
45
50
55
60
65
Percent of drivers receiving a citation
30
40
50
60
Percent of drivers searched
2
4
6
8
10
Percent of drivers arrested
2
3
4
5
6
7

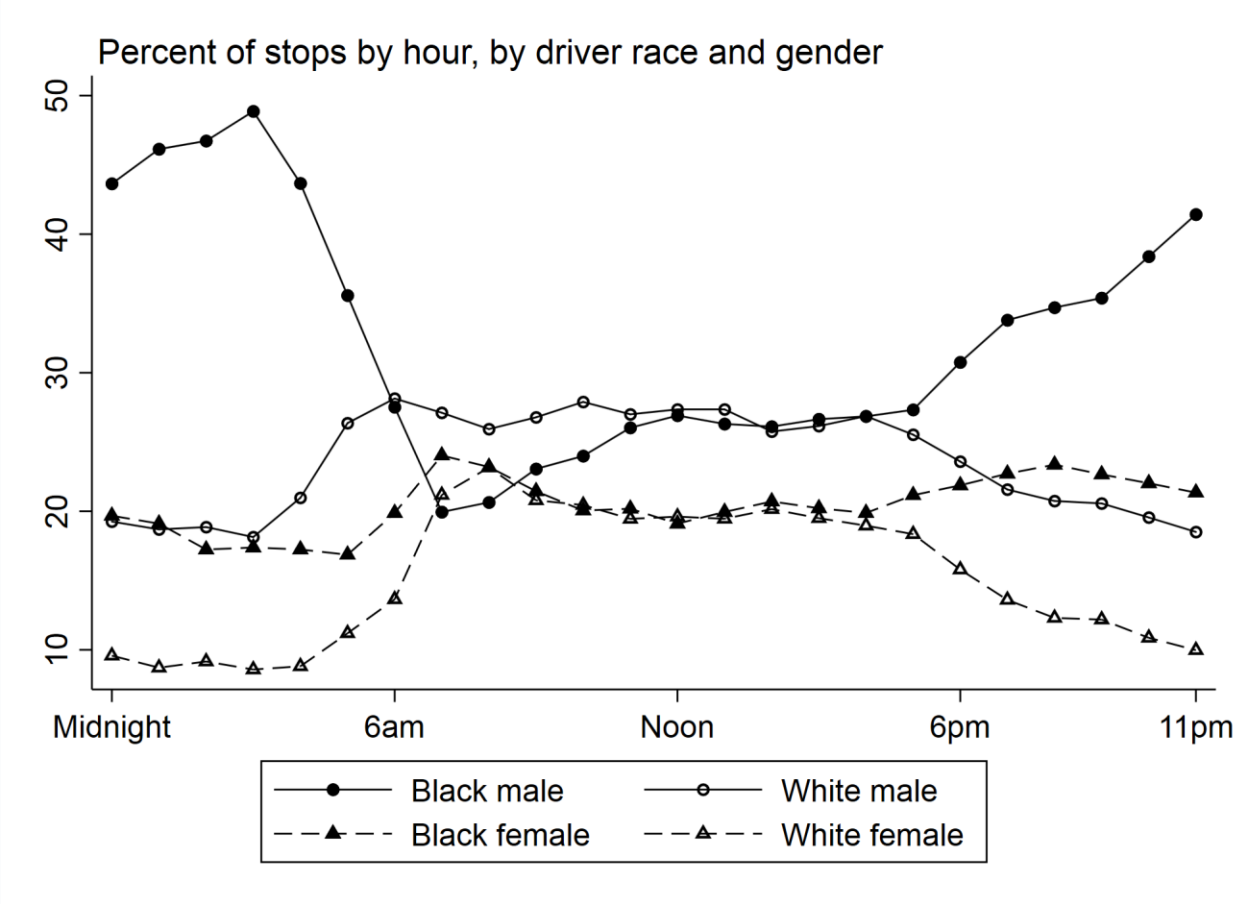
Testing the 'end-of-month quota' hypothesis

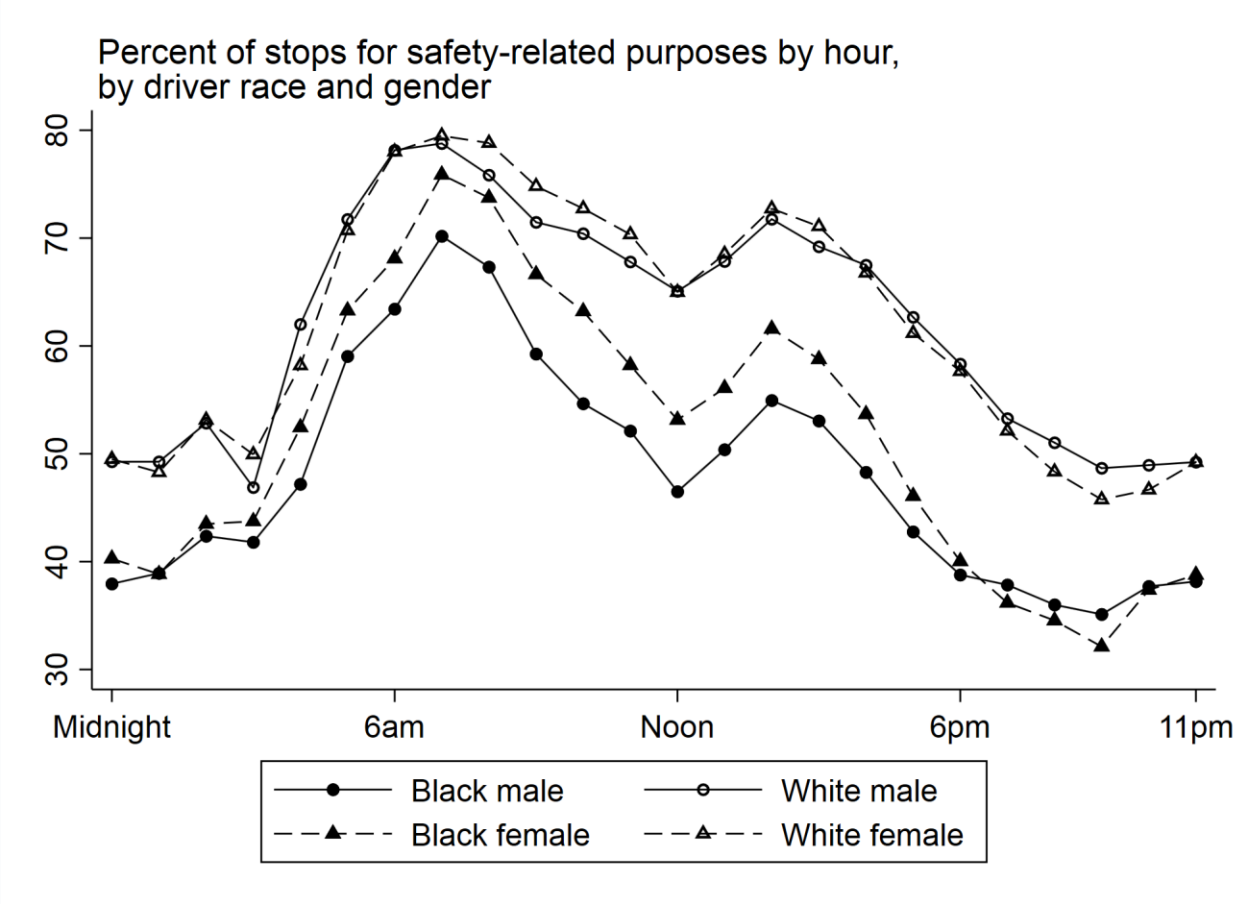


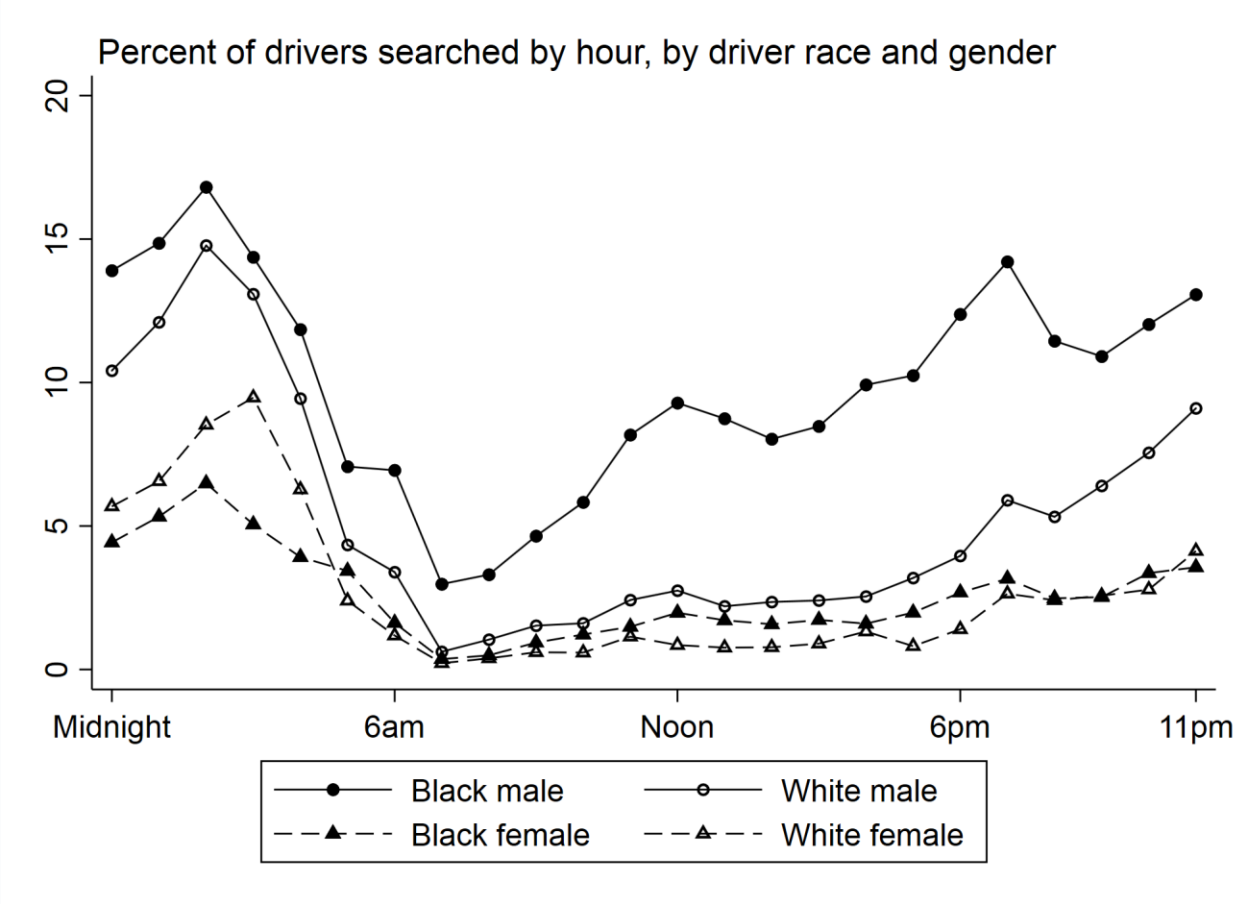
Central line shows median value; shaded area shows 25th to 75th percentiles; vertical lines show the range of contiguous values. None of the four comparisons shows a significant difference, state-wide.

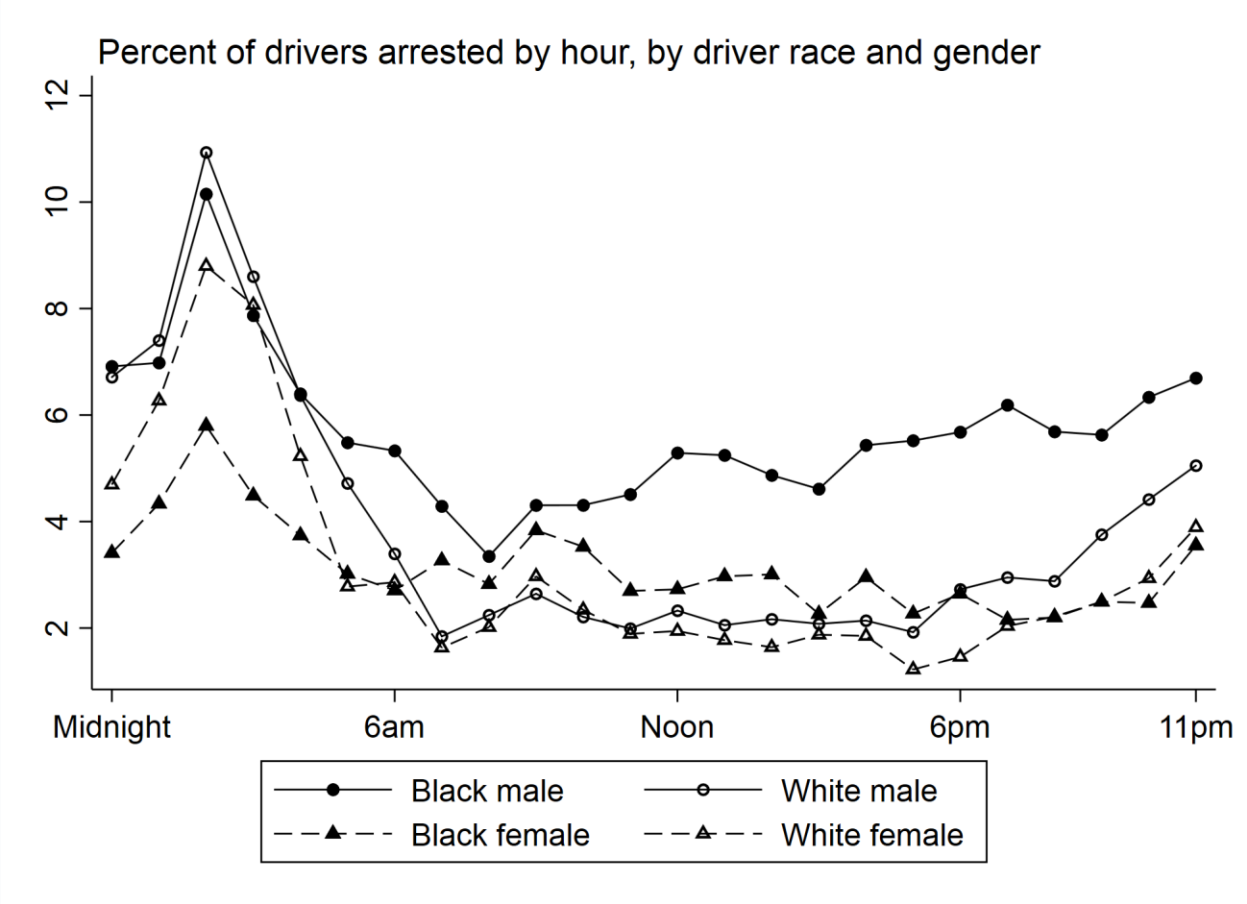

Traffic stops by hour across the week
Traffic stops
0
100
200
300
400
500
Sun
Mon
Tue
Wed
Thu
Fri
Sat
Percent safety-related stops
40
50
60
70
80
Sun
Mon
Tue
Wed
Thu
Fri
Sat
Percent of drivers receiving a citation
30
40
50
60
70
80
Sun
Mon
Tue
Wed
Thu
Fri
Sat
Percent of drivers searched
0
5
10
15
Sun
Mon
Tue
Wed
Thu
Fri
Sat
Percent of drivers arrested
2
4
6
8
10
12
Sun
Mon
Tue
Wed
Thu
Fri
Sat


Traffic stops by hour over the day
Traffic stops
500
1,000
1,500
2,000
2,500
Midnight
6am
Noon
6pm
11pm
Percent safety-related stops
40
50
60
70
80
Midnight
6am
Noon
6pm
11pm
Percent of drivers receiving a citation
40
50
60
70
80
Midnight
6am
Noon
6pm
11pm
Percent of drivers searched
0
5
10
15
Midnight
6am
Noon
6pm
11pm
Percent of drivers arrested
2
4
6
8
10
Midnight
6am
Noon
6pm
11pm


Percent of stops by hour, by driver race and gender
50
40
30
20
10
Midnight
6am
Noon
6pm
11pm
Black male
White male
Black female
White female


Percent of stops for safety-related purposes by hour,
by driver race and gender
80
70
60
50
40
30
Midnight
6am
Noon
6pm
11pm
Black male
White male
Black female
White female


Percent of drivers searched by hour, by driver race and gender
0
5
10
15
20
Midnight
6am
Noon
6pm
11pm
Black male
White male
Black female
White female


Percent of drivers arrested by hour, by driver race and gender
2
4
6
8
10
12
Midnight
6am
Noon
6pm
11pm
Black male
White male
Black female
White female