

Addendum to TSAR #10: Arrests Outcome Reanalysis

During the development of TSQR 20 on arrests, MCSO identified additional arrests that were not analyzed in TSAR 10. In TSAR 10 we utilized a data set that identified N = 1,212 arrests during the 2024 traffic stop year. For TSQR 20, MCSO identified an additional 155 traffic stops where drivers were cited with criminal violations, but for which deputies did not indicate that an arrest was made in the VSCF. Each of these stops included a “cite and release/no custodial” arrest. MCSO also identified three traffic stops that were identified as an arrest in the data, but for which no arrest was made. Thus, during 2024, there were a total of N = 1,364 arrests during traffic stops made by MCSO deputies.

Considering the changes in the 2024 data following TSQR 20, MCSO wished to reevaluate the TSAR results utilizing the TSAR 10 methodology while using a more accurate account of the arrests that were made in 2024. The arrest variable is utilized in many different models in the TSAR analyses. The variable is used as a matching/control variable for all analyses of stop length.

- 3 Baseline PSM Models
- 9 Alternative PSM Models
- 3 Linear Regression Models

The arrest variable is used for all analyses of arrests as an outcome variable.

- 3 Baseline PSM Models
- 3 PSM Models for Booked arrests compared to all other stops
- 3 PSM Models for Non-Warrant arrests compared to all other stops
- 3 PSM Models for Arrests, including special assignments as a matching variable
- 3 PSM Models for Booked arrests, compared to cite and release arrests

Below, we provide TSAR 10 results for comparison and note any changes in statistical significance for these models.

Stop Length

Table 1: PSM Stop Length Analysis, Baseline Analysis

TSAR 10 Data	Difference (in minutes)	t-statistic	Statistically significant?
Hispanic v. White Drivers	0.23	1.67	No
Black v. White Drivers	0.52	2.32	Yes
Minority v. White Drivers	0.10	0.92	No
TSQR 20 Data			
Hispanic v. White Drivers	0.27	2.00	Yes
Black v. White Drivers	0.46	2.25	Yes
Minority v. White Drivers	0.19	1.67	No

In comparing results from TSAR 10 we identified one additional statistically significant difference in stop length when utilizing the revised TSQR 20 data for analysis. Specifically, the difference in stop length between Hispanic and White drivers in TSAR 10 was reported as 0.23 minutes (13.8 seconds) and was not statistically significant. Using data from the TSQR 20 we found that the difference between Hispanic and White drivers was 0.27 minutes (16.2 seconds) and was statistically significant.

**Addendum to TSAR #10: Arrests
Outcome Reanalysis**

Table 2: PSM Stop Length Analysis, All Stops

TSAR 10 Data	Difference (in minutes)	t-statistic	Statistically significant?
Hispanic v. White Drivers	1.24	1.27	No
Black v. White Drivers	-0.91	-0.68	No
Minority v. White Drivers	1.04	1.29	No
TSQR 20 Data			
Hispanic v. White Drivers	1.75	1.90	No
Black v. White Drivers	-1.84	-1.44	No
Minority v. White Drivers	1.27	1.53	No

Utilizing all stops, we found no statistically significant differences in stop length using TSQR 10 data. Results were similar when utilizing TSQR 20 data and we found no statistically significant differences.

Table 3: PSM Stop Length Analysis, Including Special Assignments as a Matching Variable, Extended stops removed

TSAR 10 Data	Difference (in minutes)	t-statistic	Statistically significant?
Hispanic v. White Drivers	1.24	1.27	No
Black v. White Drivers	-0.91	-0.68	No
Minority v. White Drivers	1.04	1.29	No
TSQR 20 Data			
Hispanic v. White Drivers	0.16	1.22	No
Black v. White Drivers	0.42	2.19	Yes
Minority v. White Drivers	0.26	2.19	Yes

We identified two changes in the analysis of stop length when using TSQR 20 arrest data when compared to the results of TSAR 10. We identified no statistically significant differences in stop length for any groups in TSAR 10. In contrast, we identified statistically significant differences in stop length between Black and White drivers. In this case, stop lengths of Black drivers averaged 0.42 minutes (25.2 seconds) longer than stops of White drivers. Likewise, we identified statistically significant differences in stop length between Minority and White drivers when using TSQR 20 data. Stops of Minority drivers were 0.26 minutes (15.6 seconds) longer, on average than stops of White drivers.

Table 4: PSM Stop Length Analysis, Including ETSIs as matching variables

TSAR 10 Data	Difference (in minutes)	t-statistic	Statistically significant?
Hispanic v. White Drivers	1.24	1.27	No
Black v. White Drivers	-0.91	-0.68	No

**Addendum to TSAR #10: Arrests
Outcome Reanalysis**

Minority v. White Drivers	1.04	1.29	No
TSQR 20 Data			
Hispanic v. White Drivers	1.75	1.90	No
Black v. White Drivers	-1.84	-1.44	No
Minority v. White Drivers	1.27	1.53	No

Utilizing all stops, with ETSIs employed as additional matching variables analyses of stop length in TSAR 10 and when using TSQR 20 arrest data were similar and identified no statistically significant differences in stop length.

Table 5: Regression Stop Length Analysis, Including ETSIs as matching variables

TSAR 10 Data	Difference (in minutes)	t-statistic	Statistically significant?
Hispanic v. White Drivers	-0.10	-0.20	No
Black v. White Drivers	-0.29	-0.43	No
Minority v. White Drivers	0.13	0.31	No
TSQR 20 Data			
Hispanic v. White Drivers	-0.11	-0.22	No
Black v. White Drivers	-0.20	-0.31	No
Minority v. White Drivers	0.13	0.33	No

When analyzing stop length using regression analysis results for the TSQR 10 and data from the TSQR 20, results were similar and there was no statistically significant difference in stop length for any group.

Arrests

Table 6: Arrests, Baseline Analysis

TSAR 10 Data	Difference (percentage points)	t-statistic	Statistically significant?
Hispanic v. White Drivers	3.86	6.51	Yes
Black v. White Drivers	3.08	2.94	Yes
Minority v. White Drivers	3.05	5.30	Yes
TSQR 20 Data			
Hispanic v. White Drivers	2.53	3.68	Yes
Black v. White Drivers	3.19	3.08	Yes
Minority v. White Drivers	3.03	4.98	Yes

**Addendum to TSAR #10: Arrests
Outcome Reanalysis**

For the baseline analyses of arrests, we identified similar results when comparing TSAR 10 results with those using data from TSQR 20.

Table 7: Arrests, Booked Arrests, Compared to All Other Stops

TSAR 10 Data	Difference (percentage points)	t-statistic	Statistically significant?
Hispanic v. White Drivers	0.34	1.66	No
Black v. White Drivers	0.00	0.00	No
Minority v. White Drivers	0.00	0.00	No
TSQR 20 Data			
Hispanic v. White Drivers	-0.08	-0.32	No
Black v. White Drivers	0.31	0.95	No
Minority v. White Drivers	0.00	0.00	No

For analyses of booked arrests when compared to all other stops, we identified similar results when comparing TSAR 10 results with those using data from TSQR 20.

**Addendum to TSAR #10: Arrests
Outcome Reanalysis**

Table 8: Arrests, Non-Warrant Arrests Compared to All Other Stops

TSAR 10 Data	Difference (percentage points)	t-statistic	Statistically significant?
Hispanic v. White Drivers	2.89	5.09	Yes
Black v. White Drivers	5.21	2.40	Yes
Minority v. White Drivers	4.76	5.44	Yes
TSQR 20 Data			
Hispanic v. White Drivers	2.44	3.45	Yes
Black v. White Drivers	2.77	2.76	Yes
Minority v. White Drivers	3.02	5.73	Yes

For analyses of non-warrant arrests when compared to all other stops, we identified similar results when comparing TSAR 10 results with those using data from TSQR 20.

**Addendum to TSAR #10: Arrests
Outcome Reanalysis**

Table 9: Arrests, Including Special Assignments as Matching Variables

TSAR 10 Data	Difference (percentage points)	t-statistic	Statistically significant?
Hispanic v. White Drivers	2.75	4.61	Yes
Black v. White Drivers	0.31	0.31	No
Minority v. White Drivers	0.24	0.35	No
TSQR 20 Data			
Hispanic v. White Drivers	2.89	4.28	Yes
Black v. White Drivers	1.00	0.91	No
Minority v. White Drivers	0.49	0.76	No

For analyses of arrests when using special assignments as matching variables, we identified similar results when comparing TSAR 10 results with those using data from TSQR 20.

Table 10: Booked Arrests, compared to cite and release arrests

TSAR 10 Data	Difference (percentage points)	t-statistic	Statistically significant?
Hispanic v. White Drivers	-4.55	-1.11	No
Black v. White Drivers	-3.73	0.93	No
Minority v. White Drivers	-5.82	-1.61	No
TSQR 20 Data			
Hispanic v. White Drivers	-1.64	-0.48	No
Black v. White Drivers	-3.91	-0.94	No
Minority v. White Drivers	-4.80	-1.29	No

For analyses of booked arrests compared to cite and release arrests, we identified similar results when comparing TSAR 10 results with those using data from TSQR 20.