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Proposition 47's Impact on Racial Disparity in Criminal Justice Outcomes

Technical Appendices

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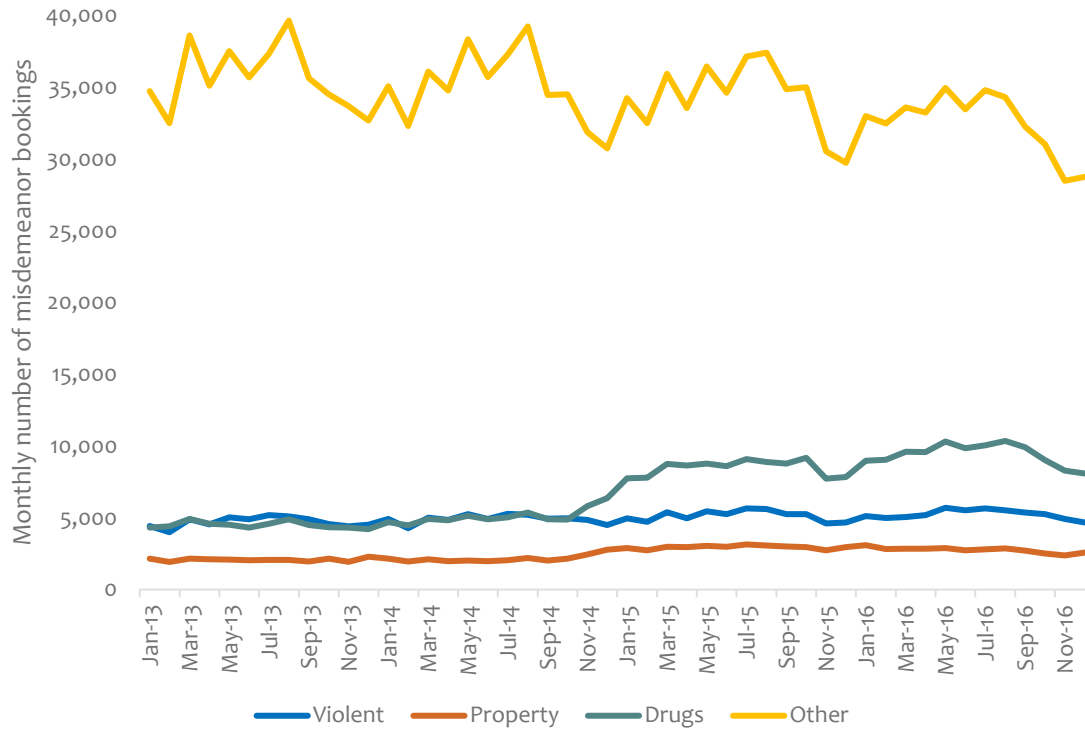
Magnus Lofstrom, Steven Raphael, and Brandon Martin
with research support from Alexandria Gumbs and Joseph Hayes

Supported with funding from Arnold Ventures

Appendix A. Additional Figures and Tables

FIGURE A1

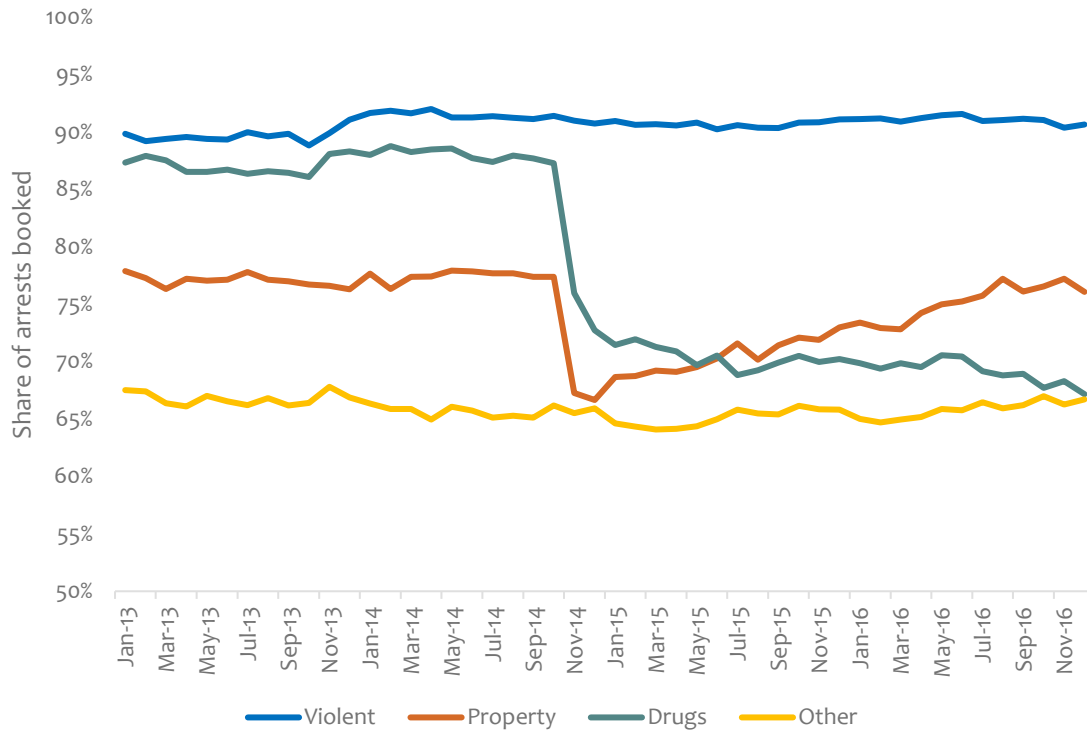
Increases in misdemeanor bookings for drug and property offense offenses somewhat offset decreases in felony bookings



SOURCE: Author calculation based on California Department of Justice’s Monthly Arrest and Citation Register, 2013–2016.

FIGURE A2

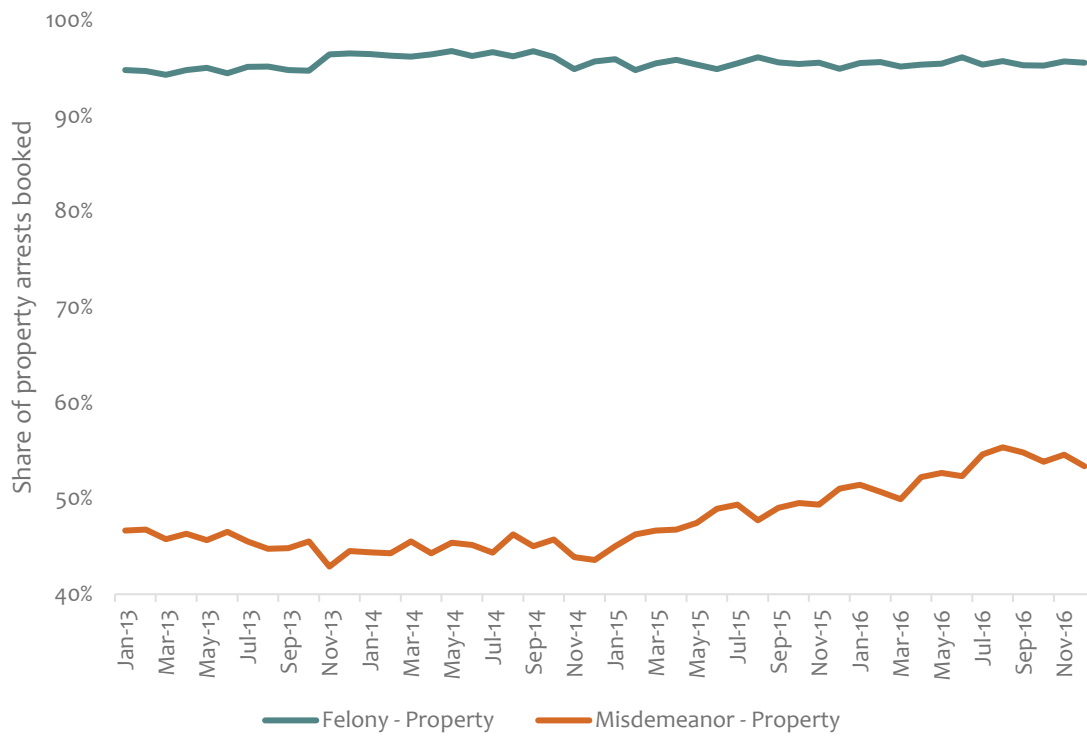
The share of arrests that leads to bookings into jail dropped notably after Prop 47.



SOURCE: Author calculation based on California Department of Justice's Monthly Arrest and Citation Register, 2013–2016.

FIGURE A3

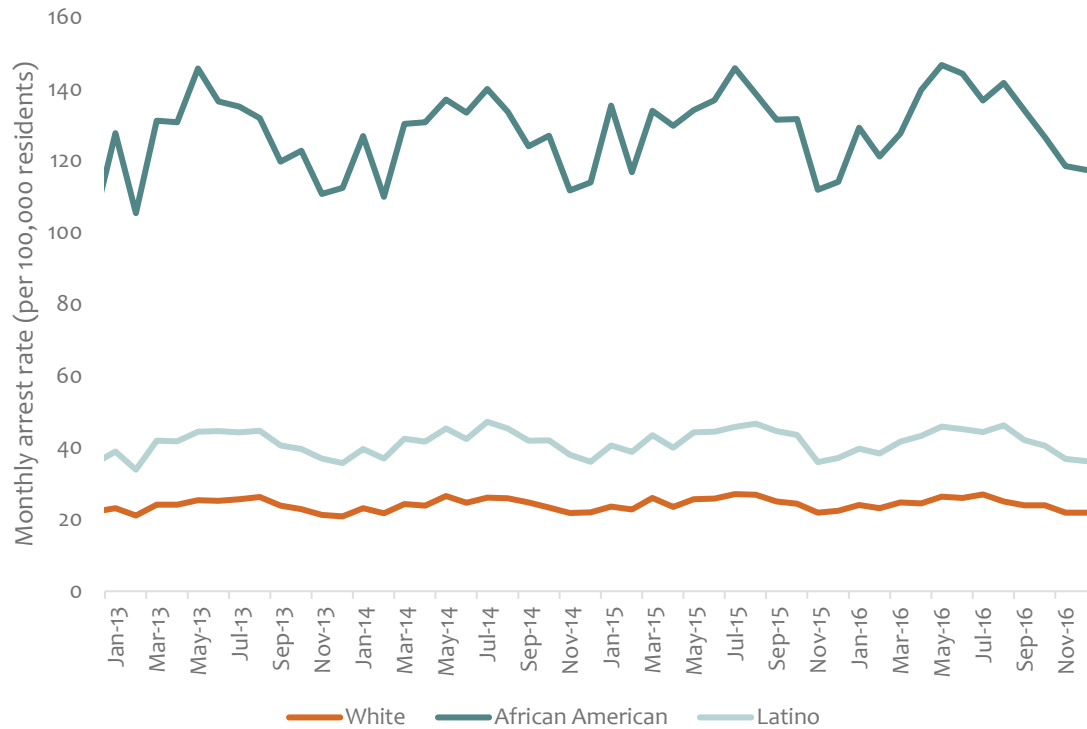
While the share of arrests for felony property offenses booked did not change much, bookings for misdemeanor property offenses started to drift upwards post-Prop 47.



SOURCE: Author calculation based on California Department of Justice’s Monthly Arrest and Citation Register, 2013–2016.

FIGURE A4

Felony arrest rates for violent/person offenses show seasonal variation but have stayed relatively stable.

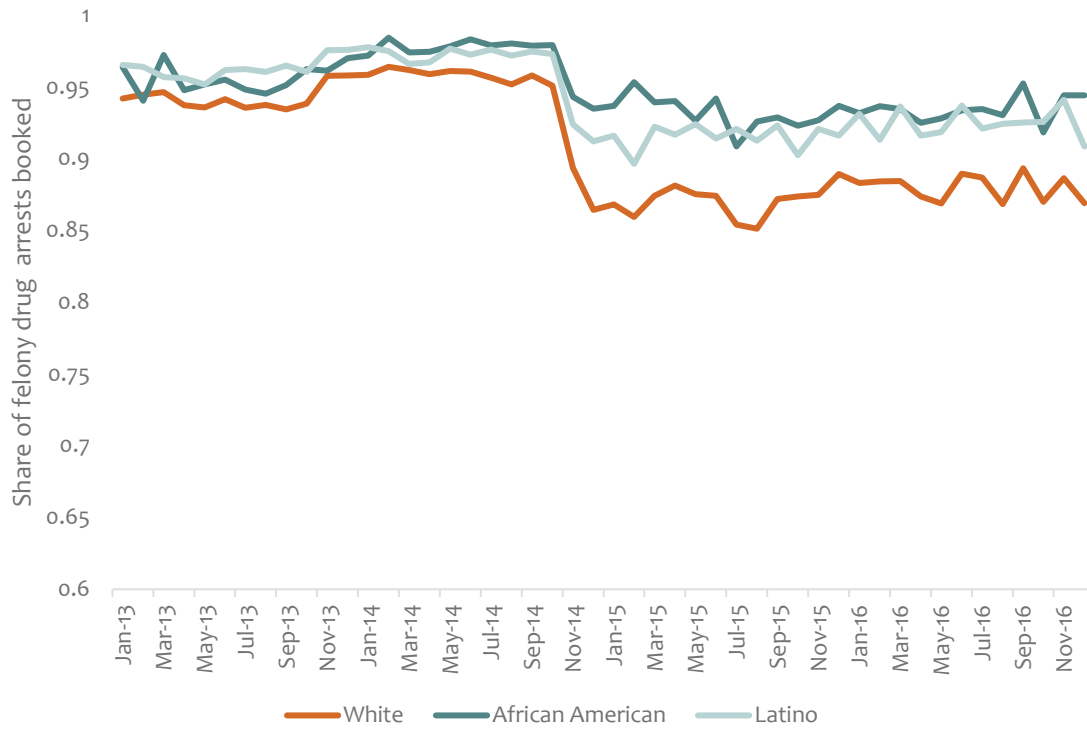


SOURCE: Author calculation based on California Department of Justice’s Monthly Arrest and Citation Register, and California Department of Finance Population Data, 2013–2016.

NOTES: Arrest rates are the number of monthly arrests made by law enforcement agencies per 100,000 residents of the relevant demographic group.

FIGURE A5

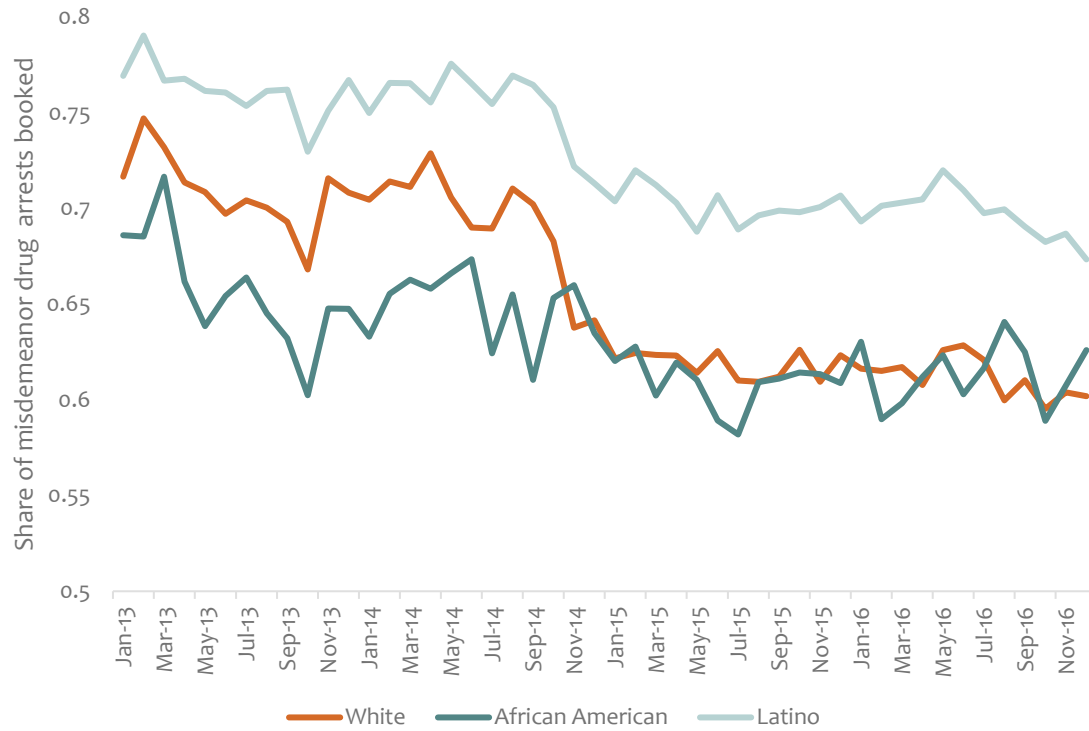
Share of Arrests Booked by Race/Ethnicity – Felony Drugs.



SOURCE: Author calculation based on California Department of Justice’s Monthly Arrest and Citation Register, 2013–2016.

FIGURE A6

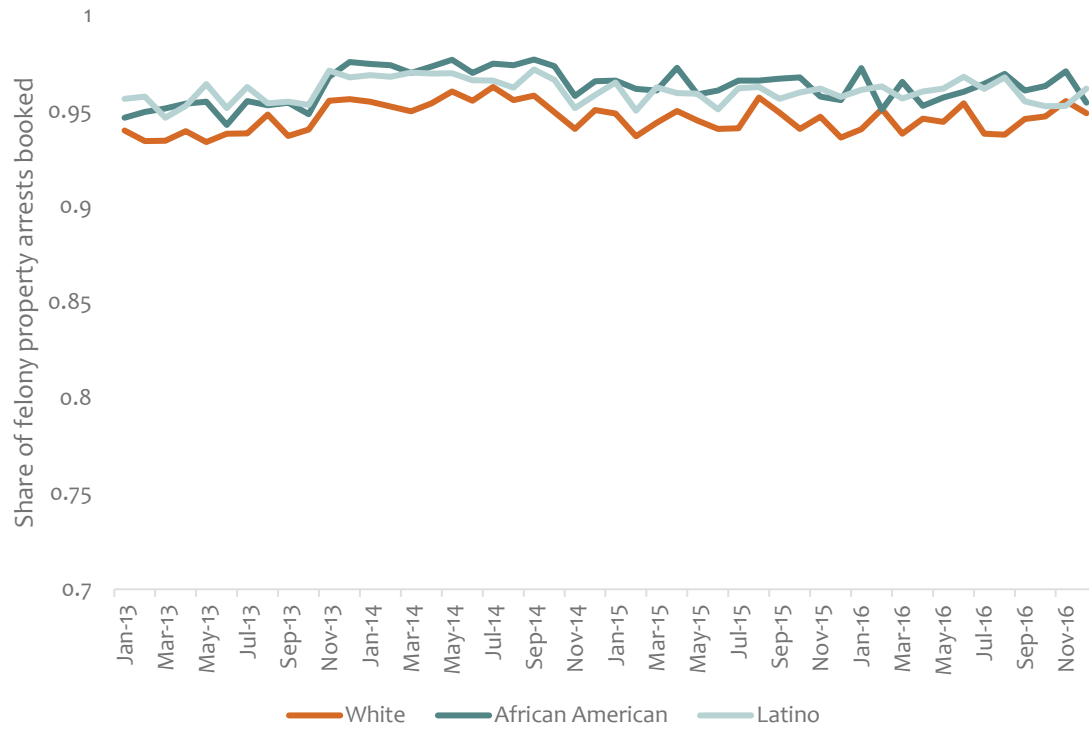
Share of Arrests Booked by Race/Ethnicity – Misdemeanor Drugs.



SOURCE: Author calculation based on California Department of Justice’s Monthly Arrest and Citation Register, 2013–2016.

FIGURE A7

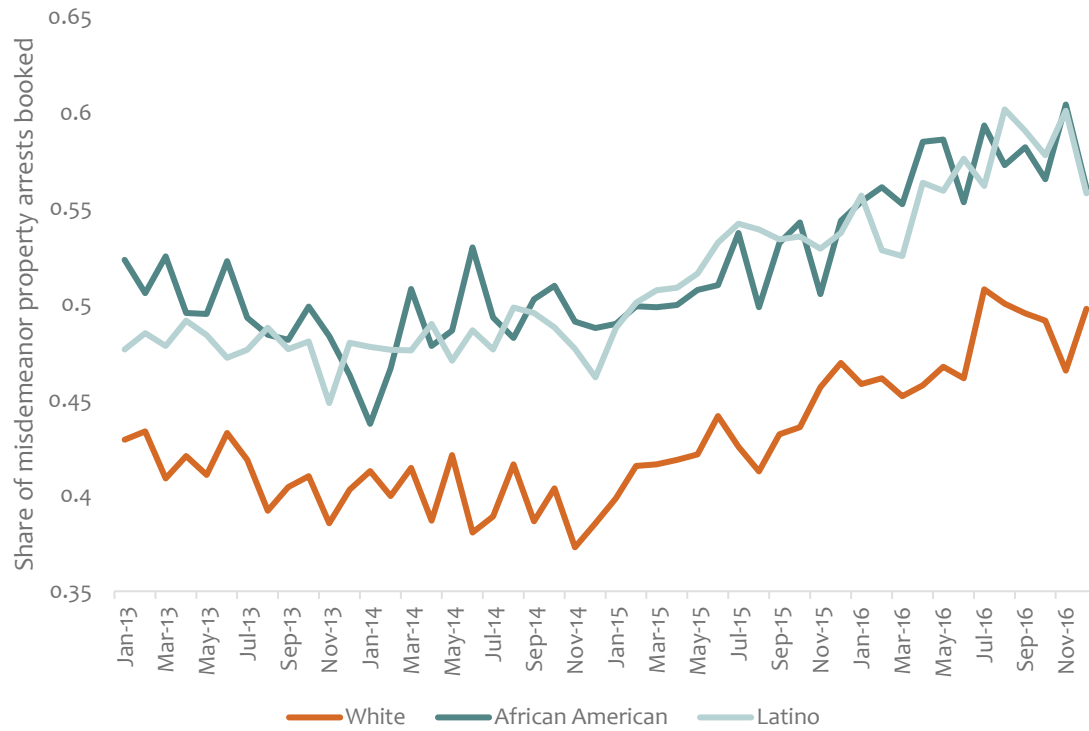
Share of Arrests Booked by Race/Ethnicity – Felony Property.



SOURCE: Author calculation based on California Department of Justice’s Monthly Arrest and Citation Register, 2013–2016.

FIGURE A8

Share of Arrests Booked by Race/Ethnicity – Misdemeanor Property.



SOURCE: Author calculation based on California Department of Justice’s Monthly Arrest and Citation Register, 2013–2016.

TABLE A1

Arrests per 100,000 by Race for the Twelve-Month Period Preceding Proposition 47 and the Twelve-Month Period Following Proposition 47.

Panel A: Felony and Misdemeanor Arrests per 100,000					
	All Arrests	Person	Property	Drug	Other
White					
Before	3,594	397	389	679	2,129
After	3,448	410	318	596	2,124
Change	-146	13	-71	-83	-5
African American					
Before	9,884	1,672	1,364	1,247	5,602
After	9,314	1,714	1,064	1,006	5,530
Change	-571	42	-300	-241	-72
Latino					
Before	4,082	526	428	624	2,503
After	3,832	540	345	523	2,424
Change	-250	14	-83	-101	-79
Panel B: Felony Arrests per 100,000					
	All Arrests	Person	Property	Drug	Other
White					
Before	1,232	221	238	414	359
After	820	227	158	116	320
Change	-412	5	-80	-299	-39
African American					
Before	4,048	1,030	909	882	1,227
After	3,085	1,033	586	323	1,143
Change	-963	3	-323	-560	-84
Latino					
Before	1,382	319	265	401	397
After	993	323	195	122	353
Change	-389	4	-70	-279	-44
Panel C: Misdemeanor Arrests per 100,000					
	All Arrests	Person	Property	Drug	Other
White					
Before	2,362	176	151	265	1,770
After	2,628	184	160	481	1,804
Change	266	8	9	216	34
African American					
Before	5,836	642	455	364	4,375
After	6,229	682	478	683	4,387
Change	393	40	23	319	11
Latino					
Before	2,700	206	163	223	2,107
After	2,839	216	149	402	2,071
Change	139	10	-14	178	-36

SOURCE: Author calculation based on California Department of Justice's Monthly Arrest and Citation Register, and California Department of Finance Population Data, 2013–2016.

NOTES: Arrest rates are the number of monthly arrests made by law enforcement agencies per 100,000 residents of the relevant demographic group.

TABLE A2

Booked Arrests per 100,000 by Race for the Twelve-Month Period Preceding Proposition 47 and the Twelve-Month Period Following Proposition 47.

Panel A: Booked Felony and Misdemeanor Arrests per 100,000					
	All Arrests	Person	Property	Drug	Other
White					
Before	2,621	348	278	576	1,419
After	2,326	357	205	394	1,370
Change	-294	9	-73	-182	-48
African American					
Before	7,532	1,488	1,069	1,086	3,889
After	6,791	1,511	755	712	3,812
Change	-742	23	-314	-374	-77
Latino					
Before	2,932	470	317	546	1,599
After	2,669	481	247	384	1,557
Change	-263	11	-70	-162	-42
Panel B: Booked Felony Arrests per 100,000					
	All Arrests	Person	Property	Drug	Other
White					
Before	1,166	211	222	395	338
After	763	216	147	99	300
Change	-403	5	-75	-295	-38
African American					
Before	3,905	993	866	859	1,188
After	2,958	999	553	300	1,106
Change	-947	7	-313	-559	-82
Latino					
Before	1,316	306	248	387	375
After	934	310	182	110	332
Change	-382	4	-65	-277	-43
Panel C: Booked Misdemeanor Arrests per 100,000					
	All Arrests	Person	Property	Drug	Other
White					
Before	1,459	138	55	182	1,084
After	1,573	142	58	297	1,077
Change	114	4	3	114	-7
African American					
Before	3,598	491	202	225	2,680
After	3,830	512	202	412	2,705
Change	232	20	0	187	25
Latino					
Before	1,595	162	68	157	1,208
After	1,724	170	64	272	1,217
Change	129	9	-4	115	9

SOURCE: Author calculation based on California Department of Justice's Monthly Arrest and Citation Register, and California Department of Finance Population Data, 2013–2016.

NOTES: Arrest rates are the number of monthly arrests made by law enforcement agencies per 100,000 residents of the relevant demographic group.

Appendix B. Empirical Strategy and Results

In this report, we investigate whether the sentencing reforms embodied in Prop47 disparately impacted gauges of criminal justice involvement among California residents from different racial/ethnic groups. We study four outcomes: arrests, bookings conditional on arrests, overall bookings, and overall incarceration rates. Here we described the data and provide a brief overview of our research strategy.

We rely on two principal data sources: the Monthly Arrest and Citation Register (MACR), and microdata from the American Community Survey (ACS).

The MACR data includes micro-level records on all recorded arrests and citations occurring in the state of California. The dataset includes the arrest date, arrest status (booked, cited, or other), arrest disposition, and various demographic characteristics of the arrestee, the most serious charge, and the arresting agency. Lofstrom et al (2019b) provide detailed description and discussion of the MACR data, including its limitations.

The ACS is a large household survey conducted each year by the U.S. Census Bureau. The survey collects information on both non-institutionalized as well as institutionalized residents of the state. We use the ACS to generate estimates of group and year-specific incarceration rates.

We use data from the California Department of Finance (CA DOF) to generate population estimates. CA DOF Demographics and Research Unit, is tasked with publishing the state's official annual population estimates at the state, county and city levels. These estimates are benchmarked on the decennial Census' population statistics, and then utilize a variety of state administrative sources to estimate changes during the intercensal years. While the available race/ethnicity categories of the data are White, African American, American Indian, Asian/Pacific Islander, and Latino, we limit our analysis to whites, Latinos and African Americans in this report.

Our basic strategy to estimate the magnitude of the impact of Prop 47 on arrests and bookings, we present pre-post Prop 47 comparisons of overall arrest and booking rates by racial/ethnic group (see Lofstrom et al, 2019c for additional disaggregation by gender and age). We aggregate arrests into person, property, drug, and the catch all other arrests crossed with whether the arrests are felony or misdemeanor.

The Effect of Proposition 47 on Bookings Conditional on Arrest

The handling of an actual arrest varies largely based on the severity of the underlying offense, but also to some degree on the discretion exercised by the arresting officer. A booked arrest results in a jail admission. Individuals may bail out immediately or at a later date or be released via some other avenue (for example, non-financial release, or based on a risk assessment). Prop 47 certainly impacted the number of bookings (as is evidenced in Figure 3). The extent to which changes in bookings varies by race will depend on how African American, Latino, and white arrests are distributed across offense categories, and the degree to which each group's arrests are reclassified from felony to misdemeanor as a result of the proposition.

We test for differential impacts of Prop 47 on the likelihood that an arrest is booked. Define $Booked_{ijk}$ as a dummy variable equal to one if arrest i , made by law enforcement agency j , for offense k is booked. Define $Prop47_{ijk}$ as equal to one for arrests occurring in November 2014 or later and zero otherwise. Using arrests between November 2013 and December 2016, we estimate various versions of the following model:

(1)

$$Booked_{ijk} = \alpha + \beta' Race_{ijk} + \gamma Prop47_{ijk} + \delta' Race_{ijk} Prop47_{ijk} + \theta_j + \lambda_k + \eta_{ijk}$$

where $Race_{ijk}$ is a vector of race/ethnicity dummies with conforming parameter vector β , γ measures the pre-post Prop 47 change in booking rates for the racial group omitted from the race dummy vector, δ is a parameter vector measuring the differential effect of Prop 47 for the different racial/ethnic groups contained in the vector $Race_{ijk}$, θ_j and λ_k are law enforcement agency and offense fixed effects, respectively, and η_{ijk} is a mean-zero error term.

We focus on two key specifications of equation (1): the model without offense fixed effects and the model inclusive of offense fixed effects. Beginning with the first specification, suppose that a dummy variable for African Americans is the first element of the vector $Race_{ijk}$ and that whites are the omitted racial/ethnic category. The estimate of the corresponding parameter β_1 measures the African American-white difference in booking rates for the pre-Prop 47 period. The sum of the parameters β_1 and δ_1 measures the African American-white difference in booking rate in the post-Prop 47 period. Thus, δ_1 represents the pre-post 47 change in the African American-white disparity in booking rates. Estimating the model omitting the offense fixed effects provides an overall assessment of the effect of the policy change on relative booking rates for different groups.

To the extent that the reclassification of offenses drives relative changes in booking rates, adding offense-specific fixed effects to the specification should knock out the race-specific estimates of Prop 47 – i.e., γ for whites, and $\gamma + \delta_1$ for African Americans. Specifically, the legislation should cause a shift in distribution of offenses across categories. For example, some felony larceny arrests will now be classified as misdemeanor larceny arrests. In addition, many felony drug arrests will be classified as misdemeanor drug arrests. To the extent that such changes in the composition of arrest differ by race and ethnicity, controlling for offenses should drive the parameter estimates in the vector δ to zero. On the other hand, the shift in the distribution of offenses away from offenses where the discretion to book is lesser towards offenses where the discretion to book is greater may alter disparities by race and ethnicity to the extent that officers exercise discretion in a manner that favors one group over another.

We estimate various specifications of equation (1) with the key contrast being the specifications with and without fixed effects. We present model estimates in Tables B1 and B2.

TABLE B1

Linear Probability Models of the Likelihood an Arrest is Booked (Conditional Bookings Probability).

	(1)	(2)	(3)	(4)
African American	0.033*** (0.012)	-0.012 (0.010)	0.009 (0.006)	0.005 (0.005)
Latino	-0.003 (0.025)	-0.038*** (0.012)	0.000 (0.005)	-0.001 (0.005)
Prop47	-0.054*** (0.008)	-0.051*** (0.008)	-0.017*** (0.004)	-0.017*** (0.004)
African American*Prop47	0.020** (0.008)	0.020*** (0.007)	0.007* (0.004)	0.009* (0.005)
Latino*Prop47	0.037*** (0.006)	0.034*** (0.006)	0.011** (0.005)	0.013*** (0.005)
Constant	0.741*** (0.025)	0.827*** (0.016)	0.522*** (0.084)	0.561*** (0.068)
County Fixed Effects	No	Yes	Yes	No
Offense Fixed Effects	No	No	Yes	Yes
LEA Fixed Effects	No	No	No	Yes
N	4,226,084	4,226,084	4,226,084	4,226,084
R-squared	0.004	0.071	0.425	0.485

NOTES: Standard errors clustered around counties in parentheses. * Estimate statistically significant at the ten percent level of confidence. ** Estimate statistically significant at the five percent level of confidence. *** Estimate statistically significant at the one percent level of confidence.

TABLE B2

Linear Probability Models of the Likelihood an Arrest is Booked (Conditional Bookings Probability) by Offense Category.

	Felony Arrests			Misdemeanor Arrests		
	<i>Violent</i>	<i>Property</i>	<i>Drugs</i>	<i>Violent</i>	<i>Property</i>	<i>Drugs</i>
African American	0.007 (0.007)	0.004 (0.005)	-0.001 (0.012)	-0.014 (0.016)	0.013 (0.020)	0.001 (0.017)
Latino	0.000 (0.002)	-0.002 (0.002)	-0.010** (0.004)	-0.002 (0.010)	0.012 (0.023)	0.000 (0.011)
Prop47	-0.002 (0.002)	-0.010*** (0.003)	-0.106*** (0.019)	-0.004 (0.004)	0.001 (0.010)	-0.031** (0.013)
African American*Prop47	0.003 (0.003)	-0.001 (0.003)	0.034*** (0.010)	-0.011 (0.007)	0.007 (0.012)	0.002 (0.019)
Latino*Prop47	-0.000 (0.001)	0.000 (0.003)	0.027*** (0.008)	0.004 (0.004)	0.005 (0.014)	0.020 (0.016)
Constant	0.984*** (0.008)	0.955*** (0.015)	0.946*** (0.006)	0.395*** (0.071)	0.548*** (0.026)	0.404*** (0.027)
N	391,115	237,624	237,173	238,166	207,395	432,858
R-squared	0.162	0.129	0.117	0.137	0.234	0.213

NOTES: Standard errors clustered around counties in parentheses. All models include offense, and law enforcement fixed effects. * Estimate statistically significant at the ten percent level of confidence. ** Estimate statistically significant at the five percent level of confidence. *** Estimate statistically significant at the one percent level of confidence.



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