

ASR Replication Preliminary - Felony

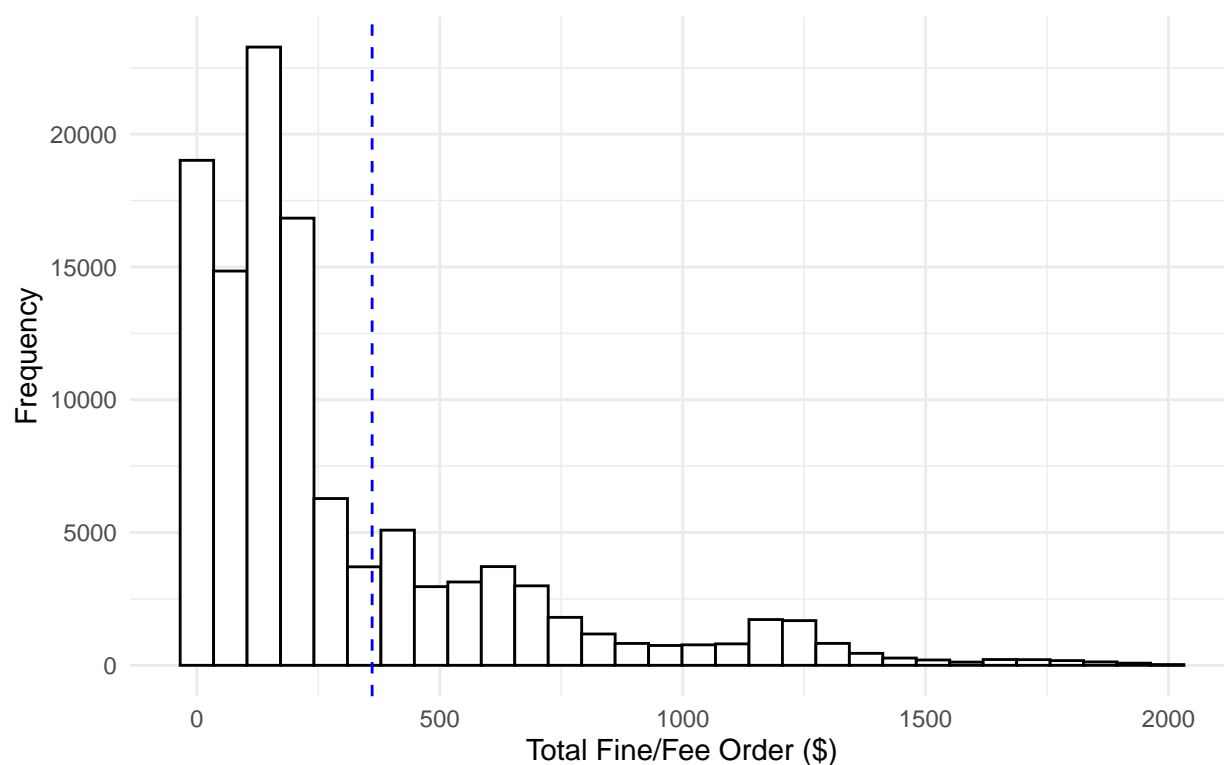
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This analysis represents a preliminary attempt to replicate and extend the Harris et. al. ASR paper. The Minnesota data is situated at the case level from 2010-2015. The full data series extends back to 2004, but VIBES data in the two most populous MN counties, Hennepin and Ramsey, are missing and inconsistent until 2010. Additionally, while data at the conviction level would be more comparable, we do not have data at the conviction level for much of the VIBES data. This analysis uses the felony only data which more closely reflects the ASR paper's use of Washington Superior Court data. We also include an extension set of mixed models to Native American populations, with hypothesized interactions with alcohol-related and hunting and fisheries violations to examine if the courtesy stigma and stereotype congruence effects found in the Black and Latino models extend to Native American populations.

Distribution of Fines and Fees

Distribution of Fine and Fee Amount < \$2000



Note: Adjusted to Jan. 2018 dollars

Descriptive Statistics

Table 1: Descriptive Statistics - Felony Data

Statistic	N	Mean	St. Dev.	Min	Pctl(25)	Pctl(75)	Max
Total Fine/Fee	114,983	360.697	3,198.583	0.000	84.750	408.100	356,515.000
Priors	120,337	9.331	9.901	0.000	2.000	13.000	166.000
Age	120,368	32.280	10.845	15	24	39	95
Male	119,306	0.803	0.398	0.000	1.000	1.000	1.000
White	114,589	0.586	0.492	0.000	0.000	1.000	1.000
Asian	114,589	0.025	0.156	0.000	0.000	0.000	1.000
Black	114,589	0.235	0.424	0.000	0.000	0.000	1.000
Hispanic	114,589	0.058	0.234	0.000	0.000	0.000	1.000
Native Am.	114,589	0.080	0.272	0.000	0.000	0.000	1.000
Other Race	114,589	0.015	0.122	0.000	0.000	0.000	1.000
Trial	120,368	0.001	0.030	0	0	0	1
Violent	117,995	0.343	0.475	0.000	0.000	1.000	1.000
Alcohol/DUI	117,995	0.067	0.250	0.000	0.000	0.000	1.000
Drug	117,995	0.275	0.447	0.000	0.000	1.000	1.000
Hunt/Fish	117,995	0.0002	0.015	0.000	0.000	0.000	1.000
Other Offense	117,995	0.314	0.464	0.000	0.000	1.000	1.000
Percent Minority	119,879	10.613	6.653	1.348	5.875	17.624	50.801
Percent Vote Republican	119,879	43.911	8.711	31.633	35.716	50.670	58.858
Percent Law and Justice	119,879	15.773	3.147	8.467	13.370	18.393	22.683

Bivariate Correlations

Table 2: Pairwise Correlations

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13
Total Fine/Fee (log)	1												
Priors	-0.01	1											
Age	0	0.02	1										
Male	0	0.08	-0.01	1									
White	0.02	-0.08	0.09	-0.05	1								
Asian	0	-0.02	-0.04	0.02	-0.19	1							
Black	-0.02	0.14	-0.04	0.09	-0.66	-0.09	1						
Hispanic	0	-0.05	-0.04	0.03	-0.3	-0.04	-0.14	1					
Native Am.	0	-0.01	-0.03	-0.08	-0.35	-0.05	-0.16	-0.07	1				
Other Race	0	-0.01	-0.02	0	-0.15	-0.02	-0.07	-0.03	-0.04	1			
Trial	0	0.01	0	0.01	-0.02	0	0.03	0	0	0	1		
Violent	-0.01	-0.03	-0.05	0.18	-0.11	-0.02	0.11	0.02	0.01	0	0.01	1	
Alcohol.DUI	0.01	-0.05	0.06	0.01	0.07	-0.01	-0.07	0	0	-0.01	0	-0.19	1
Drug	0.01	0.01	-0.01	-0.1	0.08	0.01	-0.08	0	-0.01	0	0	-0.45	-0.17
Hunt.Fish	0	-0.01	0	0.01	0.01	0	-0.01	0	0	0	0	-0.01	0
Other Offense	-0.01	0.05	0.03	-0.09	0	0.02	0.01	-0.02	0	0	-0.01	-0.49	-0.18
Percent Minority	-0.02	0.11	0	0.03	-0.36	0.07	0.33	-0.02	0.1	0.03	0.04	0.03	-0.03
Percent Vote Republican	0.01	-0.06	-0.01	-0.05	0.27	-0.06	-0.3	0.02	0	-0.02	-0.03	-0.06	0.03
Percent Law and Justice	-0.01	0	0	0.01	0.05	0.01	-0.06	-0.01	0.01	-0.01	-0.02	0.03	-0.02

Table 3 Replication

The table below presents a replication of Table 3 in Harris et. al. 2011 with data using only felony offenses. A few differences are of note: “SRA score” and “offender score”, or comparable measures, are not readily available in the MCAO data. We decided to preliminarily use the number of prior offenses as a proxy for “offender score”. Additionally, we use a more expansive offense type categorization for our Native American extensions, including alcohol-related in addition to violent and drug indicators. We run each of the models on a subset of cases consisting of all felony cases, as to make a closer comparison to the superior court data in Washington.

Table 3: Harris et. al. ASR Table 3 Replication - MCAO Felony Data

	Total Fine and Fee Order (log)			
	(1)	(2)	(3)	(4)
Black		−0.183***	−0.165***	−0.166***
Hispanic		−0.114***	−0.134***	−0.136***
Asian		−0.027	−0.010	−0.011
Native Am.		−0.179***	−0.153***	−0.154***
Other Race		−0.045	−0.026	−0.031
Male			0.096***	0.096***
log(Age)			−0.048**	−0.048**
Priors			−0.007***	−0.007***
Trial			1.226***	1.226***
Alcohol.DUI			−0.099***	−0.101***
Drug			0.541***	0.540***
Hunt.Fish			0.506	0.505
Other Offense			−0.216***	−0.218***
Percent Minority				−0.005
Percent Vote Republican				0.012
Percent Law and Justice				−0.045*
Constant	5.345***	5.383***	5.565***	5.718***
L1 Variance	3.08	3.03	2.98	2.98
L2 Variance	0.47	0.48	0.47	0.44
N	114,983	109,587	106,627	106,184

*p < .05; **p < .01; ***p < .001

Table 4: Harris et. al. ASR Table 4 Replication - MCAO Felony Data

	Total Fine and Fee Order (log)			
	(1)	(2)	(3)	(4)
Priors	-0.008***	-0.008***	-0.008***	-0.008***
Age	-0.008	-0.007	-0.005	-0.004
Male	0.124***	0.124***	0.127***	0.129***
Black	-0.161***	-0.211***	-0.243***	-0.175***
Trial	1.235***	1.231***	1.220***	1.192***
Violent	0.084***	0.084***	0.031*	-0.135***
Percent Black	-0.137***	-0.138***	-0.138***	-0.152***
Percent Vote Republican	0.001	0.001	0.001	0.0004
Percent Law and Justice	-0.031	-0.031	-0.031	-0.031
Black*Percent Black		0.007*		
Black*Violent			0.203***	
Violent*Percent Black				0.042***
Constant	5.954***	5.950***	5.965***	6.028***
L1 Variance	3.01	3.01	3.01	3.01
L2 Variance	0.37	0.38	0.37	0.37
N	106,184	106,184	106,184	106,184

*p < .05; **p < .01; ***p < .001

Table 5: Harris et. al. ASR Table 5 Replication - MCAO Felony Data

	Total Fine and Fee Order (log)			
	(1)	(2)	(3)	(4)
Priors	-0.009***	-0.009***	-0.009***	-0.009***
Age	-0.004	-0.004	-0.004	-0.003
Male	0.128***	0.128***	0.127***	0.131***
Hispanic	-0.076**	-0.077	-0.088**	-0.077**
Trial	1.227***	1.227***	1.227***	1.223***
Drug	-0.045***	-0.045***	-0.048***	0.146***
Percent Hispanic	0.005	0.005	0.005	0.016
Percent Vote Republican	0.015	0.015	0.015	0.015
Percent Law and Justice	-0.051*	-0.051*	-0.051*	-0.050*
Hispanic*Percent Hispanic		0.0001		
Hispanic*Drug			0.044	
Drug*Percent Hispanic				-0.040***
Constant	5.365***	5.365***	5.365***	5.303***
L1 Variance	3.02	3.02	3.02	3.01
L2 Variance	0.45	0.45	0.45	0.45
N	106,184	106,184	106,184	106,184

*p < .05; **p < .01; ***p < .001

Table 6: Native American Interactions - MCAO Felony Data

	Total Fine and Fee Order (log)			
	(1)	(2)	(3)	(4)
Priors	−0.008***	−0.008***	−0.008***	−0.008***
Age	−0.043*	−0.043*	−0.043*	−0.043*
Male	0.119***	0.120***	0.120***	0.120***
Native Am.	−0.111***	−0.091***	−0.088***	−0.111***
Trial	1.230***	1.230***	1.230***	1.230***
Alcohol.DUI	0.656***	0.656***	0.684***	0.679***
Percent NA	0.015	0.018	0.015	0.016
Percent Vote Republican	0.017	0.017	0.017	0.017
Percent Law and Justice	−0.051*	−0.051*	−0.052*	−0.051*
Native Am.*Percent NA		−0.005		
Native Am.*Alcohol.DUI			−0.342***	
Alcohol.DUI*Percent NA				−0.014**
Constant	5.340***	5.331***	5.339***	5.339***
L1 Variance	2.99	2.99	2.99	2.99
L2 Variance	0.44	0.44	0.44	0.44
<i>N</i>	106,184	106,184	106,184	106,184

*p < .05; **p < .01; ***p < .001