ASR Replication Preliminary - Felony

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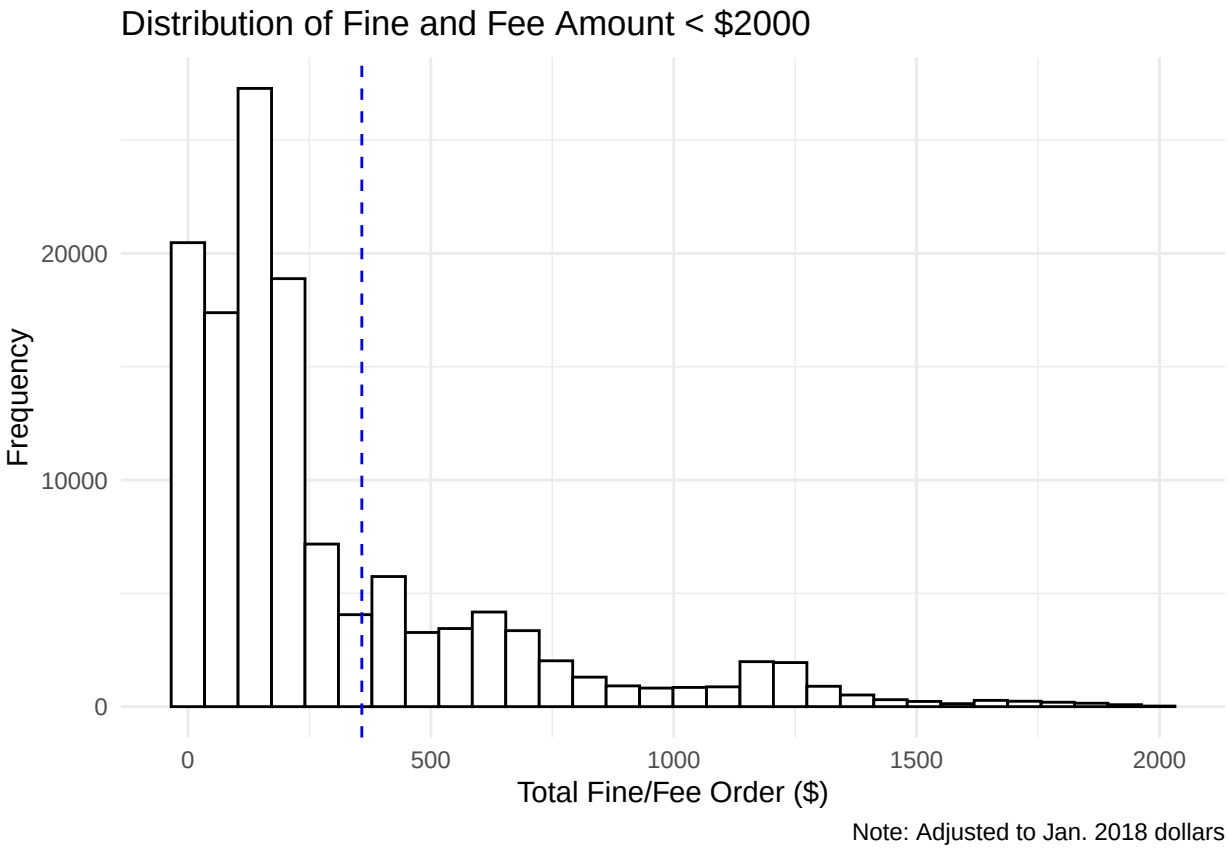
This analysis represents a preliminary attempt to replicate and extend the Harris et. al. ASR paper. The Minnesota data is situated at the case level from 2010-2015. The full data series extends back to 2004, but VIBES data in the two most populous MN counties, Hennepin and Ramsey, are missing and inconsistent 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 extention set of mixed models to Native American populations, with hypothesized interactions with alcohol-related and hunting and fisheries violations to examine if the courtesty stigma and steretype congruence effects found in the Black and Latino models extend to Native American populations.

Distribution of Fines and Fees



Descriptive Statistics

Table 1: Descriptive Statistics - Felony Data

Statistic	N	Mean	St. Dev.	Min	Pctl(25)	Pctl(75)	Max
Total Fine/Fee	130,021	358.015	3,018.529	0.000	85.020	408.100	356,515.000
Severity (Conv.)	100,048	3.925	2.166	1.000	2.000	5.000	12.000
Crim. Hist. Pts.	100,048	2.017	2.033	0.000	0.000	3.000	6.000
Age	135,712	32.440	10.850	15	24	39	95
Male	134,584	0.803	0.397	0.000	1.000	1.000	1.000
White	129,270	0.585	0.493	0.000	0.000	1.000	1.000
Asian	129,270	0.025	0.157	0.000	0.000	0.000	1.000
Black	129,270	0.236	0.425	0.000	0.000	0.000	1.000
Hispanic	129,270	0.057	0.233	0.000	0.000	0.000	1.000
Native Am.	129,270	0.081	0.273	0.000	0.000	0.000	1.000
Other Race	129,270	0.015	0.122	0.000	0.000	0.000	1.000
Trial	135,712	0.001	0.028	0	0	0	1
Violent	133,235	0.345	0.475	0.000	0.000	1.000	1.000
Alcohol/DUI	133,235	0.067	0.250	0.000	0.000	0.000	1.000
Drug	133,235	0.276	0.447	0.000	0.000	1.000	1.000
Hunt/Fish	133,235	0.0002	0.015	0.000	0.000	0.000	1.000
Other Offense	133,235	0.312	0.463	0.000	0.000	1.000	1.000
Percent Minority	135,712	10.626	6.674	1.348	5.899	17.624	50.801
Percent Vote Republican	135,712	43.852	8.726	31.633	35.716	50.648	58.858
Percent Law and Justice	135,712	15.757	3.141	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												
Severity (Conv.)	0.03	1											
Crim. Hist. Pts.	-0.02	-0.02	1										
Age	0	0.01	0.18	1									
Male	0	0.13	0.18	-0.01	1								
White	0.02	-0.08	-0.08	0.09	-0.05	1							
Asian	-0.01	-0.01	-0.02	-0.04	0.02	-0.19	1						
Black	-0.02	0.09	0.11	-0.04	0.09	-0.66	-0.09	1					
Hispanic	0	0.05	-0.03	-0.04	0.03	-0.29	-0.04	-0.14	1				
Native Am.	0	-0.03	0.02	-0.03	-0.08	-0.35	-0.05	-0.17	-0.07	1			
Other Race	0	0.01	-0.01	-0.02	0	-0.15	-0.02	-0.07	-0.03	-0.04	1		
Trial	0	0.04	0.01	0	0.01	-0.02	0	0.03	0	0	0	1	
Violent	-0.01	0.34	-0.02	-0.05	0.18	-0.11	-0.02	0.11	0.02	0.01	0	0.01	1
Alcohol.DUI	0.02	0.15	-0.04	0.06	0.01	0.07	-0.01	-0.07	0	0	-0.01	0	-0.19
Drug	0.01	-0.09	-0.03	-0.01	-0.1	0.08	0	-0.09	-0.01	-0.01	-0.01	0	-0.45
Hunt.Fish	0	-0.01	0	0	0.01	0.01	0	-0.01	0	0	0	0	-0.01
Other Offense	-0.01	-0.35	0.06	0.03	-0.09	0	0.02	0.01	-0.02	0	0	-0.01	-0.49
Percent Minority	-0.02	0.06	0.05	0	0.03	-0.36	0.08	0.33	-0.02	0.1	0.03	0.04	0.04
Percent Vote Republican	0.02	-0.07	-0.04	-0.01	-0.05	0.27	-0.06	-0.3	0.02	0	-0.02	-0.03	-0.06
Percent Law and Justice	-0.01	-0.03	0.02	0	0.01	0.05	0.01	-0.06	-0.01	0.01	-0.01	-0.02	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 redily available in the MCAO data. We include a criminal history score and severity score from the Minnesota Sentencing Guidelines Commission data, which judges will use in sentencing in MN. 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. Question: In the ASR paper, there are two offense type binary measures which are described as the following: "Drug Offense is a dummy equal to 1 for drug offenses, Other Offense is a dummy equal to 1 for nondrug offenses". What is the referent in the ASR model? For now, I have left non-drug offenses as the referent.

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

	Total Fine and Fee Order (log)			
	(1)	(2)	(3)	(4)
Severity Score (Conv.)			0.010***	0.010***
Crim. Hist. Pts.			−0.124***	−0.124***
Ln Age			0.106***	0.106***
Male			0.129***	0.129***
Black		−0.178***	−0.161***	−0.161***
Hispanic		−0.117***	−0.153***	−0.153***
Asian		−0.026	−0.048	−0.048
Native Am.		−0.182***	−0.165***	−0.164***
Other Race		−0.015	0.018	0.019
Trial			0.927***	0.927***
Drug			0.012	0.012
Percent Minority				−0.005
Percent Vote Republican				0.004
Percent Law and Justice				−0.043
Constant	5.359***	5.396***	5.133***	5.601***
L1 Variance	3.04	2.98	2.83	2.83
L2 Variance	0.46	0.47	0.49	0.47
Level 1 N	130021	123977	90852	90852
Level 2 N	87	87	87	87
N	130,021	123,977	90,852	90,852

*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)
Severity Score (Conv.)	0.010***	0.010***	0.010***	0.010***
Crim. Hist. Pts.	−0.125***	−0.125***	−0.125***	−0.125***
Ln Age	0.115***	0.115***	0.118***	0.118***
Male	0.137***	0.137***	0.140***	0.142***
Black	−0.129***	−0.123***	−0.185***	−0.136***
Trial	0.925***	0.925***	0.915***	0.903***
Violent	−0.027*	−0.026*	−0.064***	−0.169***
Percent Black	−0.125***	−0.125***	−0.125***	−0.134***
Percent Vote Republican	−0.006	−0.006	−0.006	−0.006
Percent Law and Justice	−0.029	−0.029	−0.029	−0.029
Black*Percent Black		−0.001		
Black*Violent			0.133***	
Violent*Percent Black				0.026***
Constant	5.961***	5.962***	5.971***	6.023***
L1 Variance	2.83	2.83	2.83	2.83
L2 Variance	0.41	0.41	0.41	0.41
Level 1 N	90852	90852	90852	90852
Level 2 N	87	87	87	87
N	90,852	90,852	90,852	90,852

*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)
Severity Score (Conv.)	0.008**	0.008**	0.008**	0.008**
Crim. Hist. Pts.	−0.127***	−0.127***	−0.127***	−0.127***
Ln Age	0.129***	0.129***	0.129***	0.130***
Male	0.129***	0.129***	0.129***	0.131***
Hispanic	−0.097***	−0.022	−0.104***	−0.097***
Trial	0.917***	0.917***	0.916***	0.915***
Drug	0.019	0.019	0.018	0.101***
Percent Hispanic	0.002	0.005	0.002	0.008
Percent Vote Republican	0.007	0.007	0.007	0.007
Percent Law and Justice	−0.047*	−0.047*	−0.047*	−0.047*
Hispanic*Percent Hispanic		−0.012		
Hispanic*Drug			0.024	
Drug*Percent Hispanic				−0.017***
Constant	5.367***	5.359***	5.368***	5.338***
L1 Variance	2.83	2.83	2.83	2.83
L2 Variance	0.47	0.47	0.47	0.47
Level 1 N	90852	90852	90852	90852
Level 2 N	87	87	87	87
N	90,852	90,852	90,852	90,852

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

Table 6: Native American Interactions - MCAO Felony Data

	Total Fine and Fee Order (log)			
	(1)	(2)	(3)	(4)
Severity Score (Conv.)	−0.001	−0.001	−0.001	−0.001
Crim. Hist. Pts.	−0.123***	−0.123***	−0.123***	−0.123***
Ln Age	0.092***	0.092***	0.092***	0.092***
Male	0.117***	0.117***	0.117***	0.117***
Native Am.	−0.120***	−0.098***	−0.103***	−0.120***
Trial	0.931***	0.932***	0.931***	0.931***
Alcohol.DUI	0.466***	0.466***	0.488***	0.487***
Percent NA	0.013	0.016	0.013	0.014
Percent Vote Republican	0.009	0.009	0.009	0.009
Percent Law and Justice	−0.048*	−0.048*	−0.048*	−0.048*
Native Am.*Percent NA		−0.006		
Native Am.*Alcohol.DUI			−0.260**	
Alcohol.DUI*Percent NA				−0.012*
Constant	5.422***	5.412***	5.423***	5.422***
L1 Variance	2.82	2.82	2.82	2.82
L2 Variance	0.47	0.47	0.47	0.47
Level 1 N	90852	90852	90852	90852
Level 2 N	87	87	87	87
N	90,852	90,852	90,852	90,852

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