

Appendix

2024-08-15

Figure 1 - Normalized RMSE of Successive Imputations: MICE vs missForest

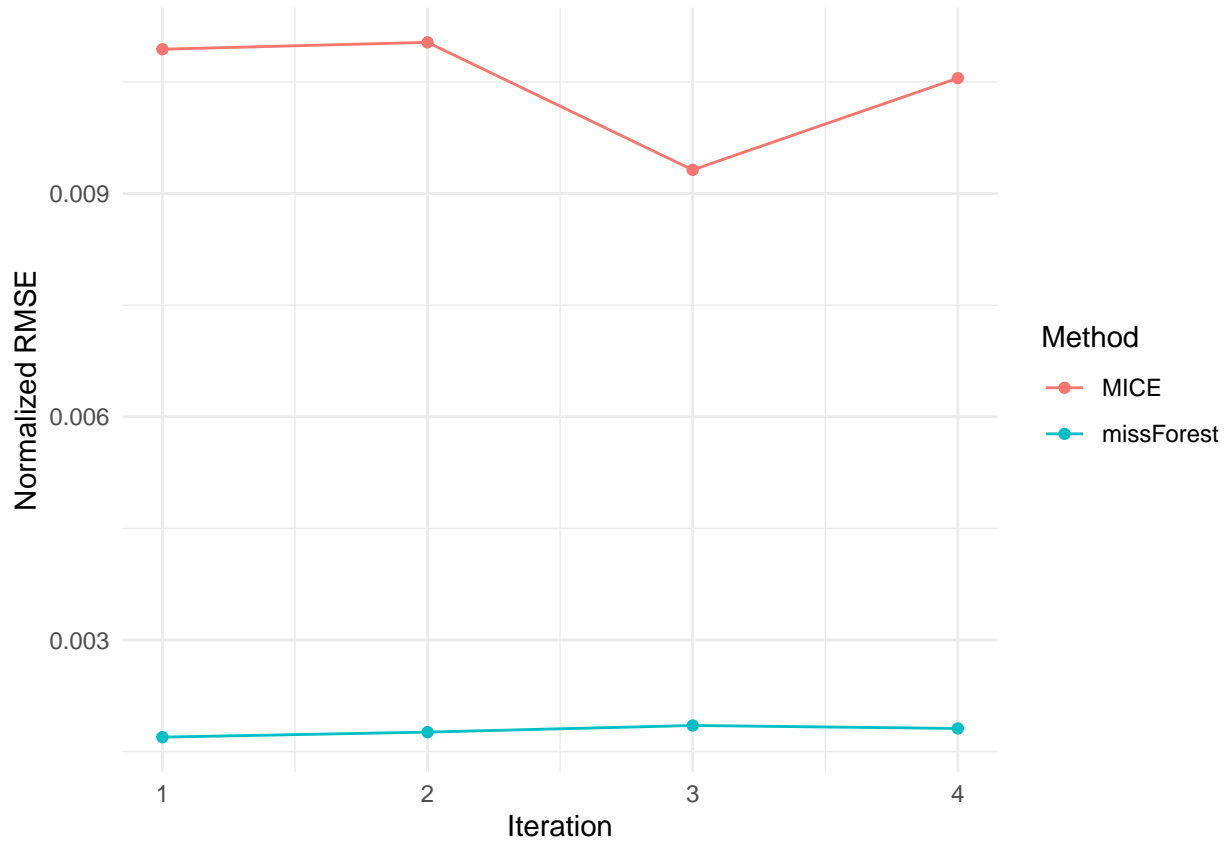


Figure 2 - Peaceful Analysis: Comparison of Means for Removed vs. Unremoved Rows

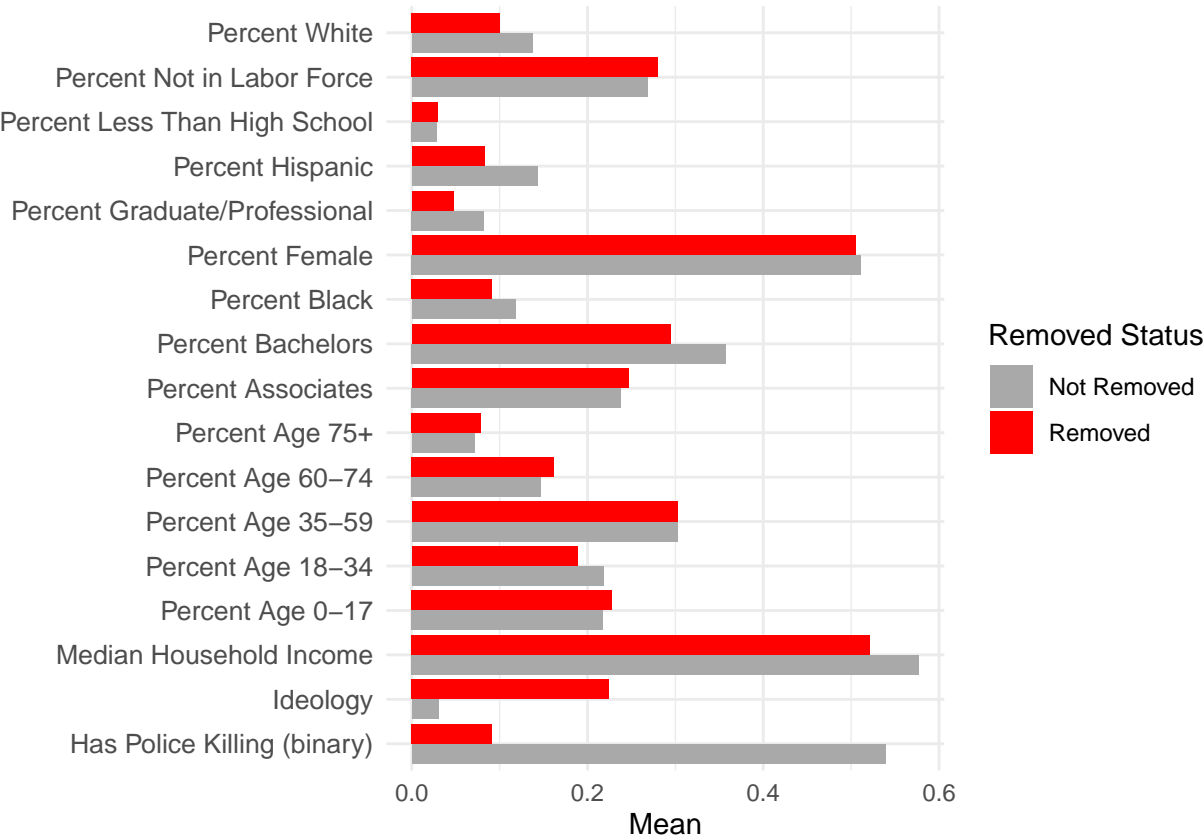


Figure 3 - Violent Analysis: Comparison of Means for Removed vs. Not Removed Rows

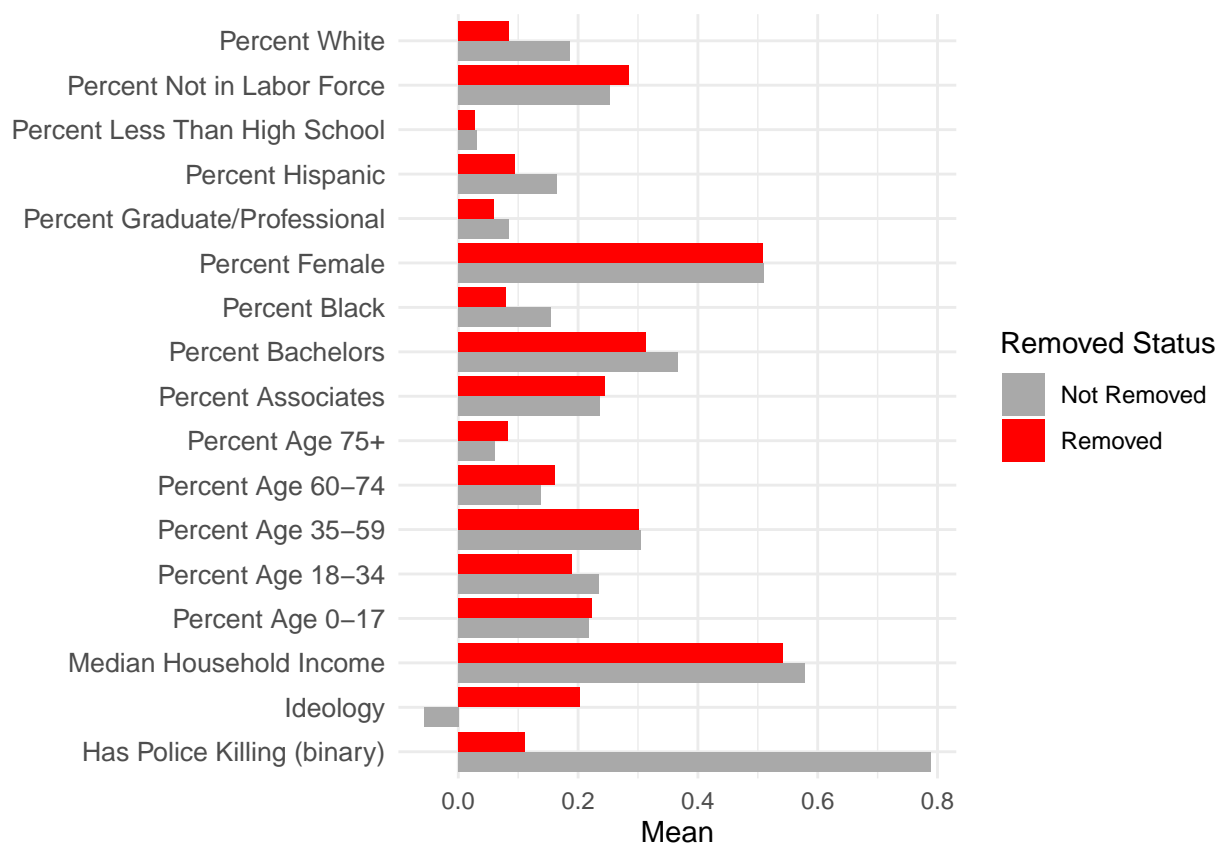


Table 1 - Parallel Trends Analysis: Peaceful Protests

Variable	Estimate	Std_Error	t_value	P_Value
(Intercept)	15.5587372	0.0527532	294.9343139	0.0000000
peaceful_protest	-0.0119216	0.0746043	-0.1597971	0.8730440
factor(year)2013	0.7477877	0.0746043	10.0233817	0.0000000
factor(year)2016	0.7778053	0.0746043	10.4257389	0.0000000
factor(year)2020	-0.0063526	0.0746043	-0.0851504	0.9321435
factor(year)2021	0.3903093	0.0746043	5.2317240	0.0000002
peaceful_protest:factor(year)2013	-0.0208152	0.1055065	-0.1972887	0.8436054
peaceful_protest:factor(year)2016	0.0326360	0.1055065	0.3093271	0.7570787
peaceful_protest:factor(year)2020	0.0283797	0.1055065	0.2689853	0.7879462
peaceful_protest:factor(year)2021	0.1290626	0.1055065	1.2232672	0.2212558

Table 2 - Parallel Trends Analysis: Violent Protests

Variable	Estimate	Std_Error	t_value	P_Value
(Intercept)	15.5784223	0.0575487	270.6996622	0.0000000
violent_protest	0.0885109	0.0996773	0.8879740	0.3745874
factor(year)2013	0.7662896	0.0813862	9.4154736	0.0000000
factor(year)2016	0.8443862	0.0813862	10.3750535	0.0000000
factor(year)2020	0.0282785	0.0813862	0.3474611	0.7282561
factor(year)2021	0.7341787	0.0813862	9.0209241	0.0000000
violent_protest:factor(year)2013	0.0002940	0.1409650	0.0020860	0.9983357
violent_protest:factor(year)2016	-0.0556769	0.1409650	-0.3949694	0.6928784
violent_protest:factor(year)2020	-0.0152302	0.1409650	-0.1080426	0.9139652
violent_protest:factor(year)2021	1.0876345	0.1409650	7.7156335	0.0000000

Table 3 - Summary Statistics: Comparing Imputed vs. Original Data

Statistic: 2019 Budget	Imputed	Original	Statistic: 2020 Budget	Imputed	Original
Min.	0	0	Min.	0	0
1st Qu..25%	1,198,611	780,958	1st Qu..25%	1,221,075	809,000
Median	9,793,087	3,500,000	Median	9,261,240	3,617,880
Mean	30,896,253	32,079,766	Mean	28,975,636	29,699,647
3rd Qu..75%	22,484,042	20,000,000	3rd Qu..75%	23,239,634	20,701,825
Max.	6,476,471,967	6,476,471,967	Max.	5,500,000,000	5,500,000,000
Statistic: 2021 Budget			Statistic: 2021 Budget		
	Imputed	Original		Imputed	Original
Min.	0	0	Min.	0	0
1st Qu..25%	1,283,054	1,414,839	1st Qu..25%	1,283,054	1,414,839
Median	3,821,763	6,950,699	Median	3,821,763	6,950,699
Mean	26,685,921	36,472,230	Mean	26,685,921	36,472,230
3rd Qu..75%	17,958,907	25,817,561	3rd Qu..75%	17,958,907	25,817,561
Max.	5,400,000,000	5,400,000,000	Max.	5,400,000,000	5,400,000,000

Table 4 - Comparison of Treatment and Control Group: Peaceful Protests Pre-Matching

Variable	Control Mean	Treatment Mean	Control Std Dev	Treatment Std Dev	Control Percentage	Treatment Percentage
Ideology	0.13534	0.03527	0.23186	0.19073	NA	NA
Percent Female	0.50821	0.51027	0.04428	0.02556	NA	NA
Percent Age 0-17	0.22361	0.21724	0.05782	0.04708	NA	NA
Percent Age 18-34	0.22564	0.24563	0.07183	0.07806	NA	NA
Percent Age 35-59	0.30276	0.30222	0.04993	0.04245	NA	NA
Percent Age 60-74	0.16874	0.15974	0.05697	0.04483	NA	NA
Percent Age 75+	0.07913	0.07510	0.04038	0.03098	NA	NA
Percent Black	0.12381	0.13027	0.18372	0.16112	NA	NA
Percent White	0.73250	0.68859	0.21632	0.19201	NA	NA
Percent Hispanic	0.12735	0.16415	0.16876	0.17801	NA	NA
Percent Less Than High School	0.02992	0.02951	0.02813	0.02292	NA	NA
Percent Associates	0.06203	0.05809	0.02647	0.01916	NA	NA
Percent Bachelors	0.11275	0.13311	0.06105	0.05911	NA	NA
Percent Graduate/Professional	0.06600	0.08733	0.05226	0.05805	NA	NA
Percent Not in Labor Force	0.31867	0.31035	0.08506	0.06684	NA	NA
Median Household Income	64923.32172	71223.57915	27699.92930	29207.43906	NA	NA
Has Police Killing	NA	NA	NA	NA	0.2917716	0.5393258

Table 5 - Comparison of Treatment and Control Group: Violent Protests Pre-Matching

Variable	Control Mean	Treatment Mean	Control Std Dev	Treatment Std Dev	Control Percentage	Treatment Percentage
Ideology	0.13812	-0.12897	0.21034	0.17760	NA	NA
Percent Female	0.50866	0.51015	0.04190	0.01339	NA	NA
Percent Age 0-17	0.22287	0.21312	0.05717	0.03292	NA	NA
Percent Age 18-34	0.22496	0.27931	0.07335	0.06331	NA	NA
Percent Age 35-59	0.30246	0.30357	0.04966	0.03136	NA	NA
Percent Age 60-74	0.16913	0.14397	0.05599	0.02377	NA	NA
Percent Age 75+	0.08046	0.06004	0.03934	0.01493	NA	NA
Percent Black	0.11464	0.20300	0.17645	0.16127	NA	NA
Percent White	0.73910	0.57930	0.20906	0.15729	NA	NA
Percent Hispanic	0.13241	0.18253	0.17304	0.16222	NA	NA
Percent Less Than High School	0.02946	0.03205	0.02736	0.02076	NA	NA
Percent Associates	0.06171	0.05460	0.02567	0.01231	NA	NA
Percent Bachelors	0.11532	0.14483	0.06211	0.04681	NA	NA
Percent Graduate/Professional	0.06901	0.09746	0.05539	0.04508	NA	NA
Percent Not in Labor Force	0.32078	0.28371	0.08334	0.03689	NA	NA
Median Household Income	66464.80652	69700.01835	28969.06545	23187.94572	NA	NA
Has Police Killing	NA	NA	NA	NA	0.2936297	0.8853211

Table 6 - DID Analysis with Pre-Matched Data: Peaceful Protests

Variable	Estimate	Std_Error	t_value	P_Value
(Intercept)	15.5241185	0.0404295	383.9798247	0.0000000
peaceful_protest	0.0226972	0.0726645	0.3123557	0.7547797
time	-0.4466830	0.0571760	-7.8124257	0.0000000
peaceful_protest:time	0.9660549	0.1027632	9.4007897	0.0000000

Table 7 - DID Analysis with Pre-Matched Data: Violent Protests

Variable	Estimate	Std_Error	t_value	P_Value
(Intercept)	15.5115019	0.0349234	444.158323	0.000000
violent_protest	0.1554314	0.0982386	1.582181	0.113654
time	-0.4325217	0.0493891	-8.757433	0.000000
violent_protest:time	2.2543349	0.1389304	16.226359	0.000000

Table 8 - Comparison of Treatment and Control Group: Peaceful Protests Post-Matching

Variable	Control Mean	Treatment Mean	Control Std Dev	Treatment Std Dev	Control Percentage	Treatment Percentage
Ideology	0.02548	0.03527	0.22578	0.19073	NA	NA
Percent Female	0.51231	0.51027	0.03669	0.02556	NA	NA
Percent Age 0-17	0.21811	0.21724	0.05139	0.04708	NA	NA
Percent Age 18-34	0.21838	0.21780	0.05514	0.05966	NA	NA
Percent Age 35-59	0.30294	0.30222	0.04629	0.04245	NA	NA
Percent Age 60-74	0.14640	0.14747	0.03856	0.03767	NA	NA
Percent Age 75+	0.07113	0.07201	0.03417	0.02807	NA	NA
Percent Black	0.12290	0.11370	0.13441	0.12779	NA	NA
Percent White	0.14056	0.13381	0.14941	0.15503	NA	NA
Percent Hispanic	0.14461	0.14192	0.14112	0.13712	NA	NA
Percent Less Than High School	0.02885	0.02884	0.02390	0.02186	NA	NA
Percent Associates	0.23844	0.23748	0.04481	0.04112	NA	NA
Percent Bachelors	0.35854	0.35632	0.08423	0.07838	NA	NA
Percent Graduate/Professional	0.08183	0.08238	0.05195	0.05129	NA	NA
Percent Not in Labor Force	0.26791	0.26904	0.05725	0.04982	NA	NA
Median Household Income	0.57746	0.57680	0.12013	0.11775	NA	NA
Has Police Killing	NA	NA	NA	NA	0.5383895	0.5393258

Table 9 - Comparison of Treatment and Control Group: Violent Protests Post-Matching

Variable	Control Mean	Treatment Mean	Control Std Dev	Treatment Std Dev	Control Percentage	Treatment Percentage
Ideology	-0.02194	-0.12897	0.18438	0.17760	NA	NA
Percent Female	0.50978	0.51015	0.02329	0.01339	NA	NA
Percent Age 0-17	0.22101	0.21312	0.04257	0.03292	NA	NA
Percent Age 18-34	0.22964	0.24515	0.04396	0.04808	NA	NA
Percent Age 35-59	0.30551	0.30357	0.03707	0.03136	NA	NA
Percent Age 60-74	0.13866	0.13429	0.02750	0.02067	NA	NA
Percent Age 75+	0.06268	0.05821	0.01933	0.01401	NA	NA
Percent Black	0.14286	0.17644	0.14834	0.12750	NA	NA
Percent White	0.17856	0.20167	0.18241	0.14191	NA	NA
Percent Hispanic	0.16615	0.15933	0.15020	0.12553	NA	NA
Percent Less Than High School	0.03158	0.03135	0.02479	0.01974	NA	NA
Percent Associates	0.23762	0.23217	0.03799	0.02638	NA	NA
Percent Bachelors	0.36225	0.37559	0.07554	0.06137	NA	NA
Percent Graduate/Professional	0.08096	0.09218	0.04693	0.04031	NA	NA
Percent Not in Labor Force	0.25426	0.24934	0.04183	0.02863	NA	NA
Median Household Income	0.57983	0.57699	0.10998	0.09776	NA	NA
Has Police Killing	NA	NA	NA	NA	0.7408257	0.8853211

Table 10 - DID Analysis with Post-Matched Data: Peaceful Protests

Variable	Estimate	Std_Error	t_value	P_Value
(Intercept)	15.5587372	0.0586305	265.3692242	0.0000000
peaceful_protest	-0.0119216	0.0829161	-0.1437785	0.8856821
time	0.3903093	0.0829161	4.7072805	0.0000026
peaceful_protest:time	0.1290626	0.1172611	1.1006433	0.2711140

Table 11 - DID Analysis with Post-Matched Data: Violent Protests

Variable	Estimate	Std_Error	t_value	P_Value
(Intercept)	15.5784223	0.0614394	253.5573834	0.0000000
violent_protest	0.0885109	0.1064162	0.8317423	0.4056304
time	0.7341787	0.0868885	8.4496666	0.0000000
violent_protest:time	1.0876345	0.1504953	7.2270347	0.0000000