Election Administration and UOCAVA Voting: The State and New Metrics

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Abstract

Under the general framework of efforts to improve election administration in the United States in the aftermath of the debacle in Florida in 2000, Election Assistance Commission was established to prevent a repeat of administrative failures. The resulting federally-mandated data accumulation has afforded an unprecedented insight into the effect of election administration on the achievement of democratic ideals of competition and representation, namely for the electorate to be able to cast their ballot and their choice to be recorded correctly. The present study has three aims: First, the extant state of the knowledge regarding voting from abroad will be assessed and updated with the most recent data. Second, the pioneering multivariate analyses with the emerging data will be extended using the latest data. Third, new and more vigorous multivariate analysis will be offered making use of the new metrics that finally became available in 2018. The enduring problems with data collection will also briefly be illustrated. Therefore, the contribution of this study is in building a framework by extending the studies using the same kind of metrics, establishing a baseline and then taking the explanation one step further with the new metrics. The findings suggest that the new metrics do afford a higher level of explanatory power over the effect of election administration with respect to key outcomes in voting from abroad.

Introduction

Elections represent the "essential democratic institution" (Riker 1966). We may go into discussions regarding the certain types of democracies as indeed we can now conceive of regimes on a continuum. The fact that countries can be positioned on a continuum from closed authoritarian regimes to liberal democracies and the transitions between the regime types enable us to discuss the level of democracy of a country (Lindberg 2009, Schedler 2006). The *sine qua non* of the determination of this level has to do with the institution of elections. With the protracted transitions of the Fourth Wave of democratization and the realization that many of the newly democratizing countries were not following the same patterns observed over the Third Wave of democratization led to the abandonment of the transition paradigm (Carothers 2002). Dahl argues in his influential work on democratic theory that the ideal type of democracy is unattainable and he terms the achievable target as "polyarchy" which translates to electoral democracy (Dahl 1971). As a result of these advances, the question of translating electorate choice into representation occupies a center stage now more than ever.

The importance of elections lead to examinations of how well they run in terms of contestation and representation. A gap of representation was shown to lead to apathy and lower turnout levels with direct consequences for the legitimacy of the electoral enterprise (Norris 2011). During the last decade a significant literature emerged around the questions of the integrity of elections and their management

(for instance, Norris 2014, 2015, 2016, 2017, Norris et al. 2015, Birch 2012). On the other hand, especially in the aftermath of the debacle in Florida in the 2000 presidential elections brought the issue of representation and contestation to the fore in American politics. On the one hand, the current design is evaluated as to whether the compound majority as devised by the Jeffersonian vision in 1803 can be restored as to produce a majority winner in each election (Foley 2000). On the other hand, this debacle resulted in the establishment of Election Assistance Commission in 2002 (Burden and Stewart 2014). Soon afterwards, the EAC started administering the Election Administration and Voting Survey (EAVS) in 2004 as the sole source of data on election administration in the United States. This allows the mandated report on the Uniformed and Overseas Absentee Voting Act (UOCAVA) voters to be compiled (Hall 2014). As part of the pioneering study on election administration with the recently available data, Thad Hall reported the state of voting from abroad (Hall 2014). The present study will make use of the data released as part of the subsequent EAVS and aim to present the state of the inquiry as of the latest off-year election of 2018. The second part of the paper will deal with extending the pioneering multivariate analyses that were done in line with data availability on UOCAVA voting and update these analyses up to 2018 to see if the tentative conclusions of Hall hold. The third part of the study will discuss the new data that finally became available with the 2018 EAVS and build a more rigorous multivariate model for the relevant indicators of electoral administration as they relate to UOCAVA voting. The ongoing problems with data quality will also be briefly addressed.

1. State of Indicators

The main indicators that Hall tabulates from 2008 to 2012 are the UOCAVA ballots sent out, UOCAVA ballots submitted for counting and the percent UOCAVA ballots rejected of ballots submitted. That these are important indicators for the representation of electorate preferences is clear. Hall uses variables derived from the latter two, namely percent of UOCAVA ballots not returned and percent of UOCAVA ballots rejected in his multivariate analysis that will be addressed in the next section. His contention is that these two are issues that can be directly affected by election administration.

Table 1 extends the tabulation of UOCAVA ballots sent out by state up to 2018. We now have a clearer picture in the sense that we have now more than two reiterations of presidential elections and mid-term elections. We can discern certain trends from the table. First, it is clear that UOCAVA voting is not immune from the general apathy towards mid-term elections. For the presidential election years, the ballots sent out number in the neighborhood of one million votes. However, for the mid-term elections the total numbers are between 400,000 to 600,000. It is clear that as Hall suggests (p.141), these differences generating the representation gap are sufficient to change the results of a close election. The numbers for Florida are above the 100,000 mark for the presidential elections and the difference between presidential election and mid-term contracted to just above 20,000 for the 2018 election, which is a good sign. In order to appreciate the magnitude of these numbers, it is beneficial to remember once more that 200 ballots in Florida had caused a major breakdown of the Jeffersonian compound majority system in 2000 (Foley 2020). One last point to mention is the marked increase in the number of the ballots sent out for the mid-term elections of 2018 as compared to the elections preceding it in 2010 and 2014. As important as this baseline statistic is, an arguably more important indicator relates to the extent to which these ballots are returned. After all, there is no representation if the vote is not cast. We turn to this question in Table 2.

Table 1. UOCAVA Ballots Sent Out, By State By Year

	2008	2010	2012	2014	2016	2018
AL	9,361	4,875	5,747	2,558	4,888	924
AK	13,766	9,515	11,935	4,064	9,674	4,173
AR	6,515	1,212	2,505	562	2,455	1,540
AZ	14,332	8,080	13,221	4,409	14,761	9,754
CA	102,983	89,582	112,355	90,371	119,740	107,085
CO	16,251	10,650	24,937	19,244	38,625	28,929
CT	5,341	1,099	5,152	742	6,426	2,805
DC	2,906	1,114	2,948	830	4,158	1,273
DE	2,115	1,603	1,810	636	2,000	1,182
FL	121,395	75,268	115,114	69,490	116,674	95,002
GA	25,035	20,059	20,492	2,588	18,634	9,071
HI	3,800	563	2,995	362	3,436	894
IA	5,877	3,003	4,474	597	4,806	2,551
ID	3,679	2,042	2,730	565	3,030	1,134
IL	15,327	19,052	23,070	4,517	28,139	8,168
IN	15,420	19,052	8,194	1,335	9,928	4,244
KS	6,621	4,487	4,377	845	4,432	2,146
KY	6,576	1,452	4,412	1,190	7,690	2,561
LA	9,221	16,267	7,417	6,671	7,249	7,209
MA	16,900	2,924	10,139	2,279	23,479	9,766
MD	17,459	10,693	17,063	2,358	22,489	9,760
ME	2,095	1,347	4,479	1,029	4,821	3,034
MI	21,299	4,533	17,248	4,533	21,574	9,102
MN	15,869	3,124	13,642	2,669	15,907	8,482
MO	16,561	8,624	11,586	1,678	11,327	5,278
MS	5,660	2,767	3,862	284	3,431	1,208
MT	5,385	3,791	6,571	1,792	4,979	3,573
NC	19,109	12,648	19,869	3,276	21,447	9,310
ND	1,339	266	1,606	347	1,734	812
NE	3,352	1,798	2,346	332	2,486	933
NH	4,221	2,345	4,572	890	5,904	2,552
NJ	18,725	11,720	15,247	1,505	18,856	7,226
NM	3,271	614	4,256	643	4,201	1,874
NV	7,483	2,140	6,449	1,852	6,990	3,365
NY	83,422	54,495	56,694	50,398	46,582	77,524
OH	32,334	9,771	19,499	2,939	21,830	9,597
OK	8,368	4,847	6,683	4,575	6,848	5,588
OR	12,179	13,757	17,895	11,493	16,473	15,711
PA	40,279	23,043	28,922	7,244	30,184	12,875
RI	1,125	471	1,734	260	2,379	812
SC	12,134	1,757	8,695	1,015	8,618	3,333
SD	3,461	758	2,014	561	2,581	870
TN	18,686	4,383	15,725	2,100	13,950	5,860
TX	91,106	69,526	77,333	11,809	65,193	31,783
UT	4,859	2,940	5,150	18,504	6,959	5,668
VA	41,762	18,369	33,257	1,675	14,710	21,111
VT	2,546	776	1,918	461	2,763	1,476
WA	61,934	52,892	72,554	67,007	100,994	89,248
WI	10,102	4,077	2,122	1,845	9,259	5,335
WV	4,194	798	9,450	474	2,271	841
WY	1,710	913	1,920	551	1,162	569

Source: EAC EAVS 2008-2018.

Table 2. UOCAVA Ballots Submitted for Counting, By State By Year

	2008	2010	2012	2014	2016	2018
AL	6,486	1,125	2,351	13,996	84,712	41,798
AK	12,103	5,083	10,596	6,831	23,090	15,738
AR	4,863	596	2,138	544	5,253	2,717
AZ	9,171	2,643	9,445	367	3,369	642
CA	69,823	25,208	63,193	268	1,608	731
CO	13,289	4,548	17,363	25,802	81,167	49,762
CT	-	690	4,563	2,500	13,534	6,037
DC	1,350	321	2,400	192	2,658	894
DE	1,722	603	1,750	542	3,791	1,849
FL	97,278	30,459	87,661	415	2,571	885
GA	17,229	4,031	13,415	2,056	-	5,882
HI	2,375	371	2,018	1,205	9,057	3,390
IA	4,760	1,446	5,009	686	3,727	1,924
ID	3,085	1,184	2,524	766	4,162	1,465
IL	5,722	7,140	-	1,078	4,207	1,631
IN	8,145	1,878	7,195	1,621	19,438	8,019
KS	5,296	1,398	4,131	1,314	16,842	6,637
KY	5,236	1,101	3,842	800	4,224	2,419
LA	6,538	2,165	4,785	3,459	16,877	6,859
MA	13,931	1,975	8,348	1,713	12,193	6,076
MD	14,419	3,713	14,461	994	8,362	3,448
ME	2,092	659	3,336	154	2,108	847
MI	16,444	3,219	13,733	1,188	4,231	2,914
MN	12,091	2,125	11,374	2,353	17,422	7,643
MO	13,785	3,403	9,920	294	1,500	812
MS	1,232	629	3,279	230	2,026	773
MT	3,640	1,535	4,532	709	5,184	2,131
NC	13,137	2,913	15,718	-	15,276	-
ND	1,018	183	1,325	443	3,354	1,598
NE	2,713	646	2,003	1,023	6,039	2,934
NH	3,462	1,237	4,007	17,316	42,179	32,341
NJ	12,811	2,933	10,827	1,951	17,593	7,531
NM	1,706	603	2,891	785	4,487	1,689
NV	4,675	1,638	6,110	3,792	12,615	7,581
NY	54,220	22,303	39,214	2,638	22,788	3,392
OH	27,469	3,869	15,709	190	1,915	-
OK	6,672	1,432	5,790	689	6,862	2,445
OR	-	4,813	11,749	394	1,803	763
PA	31,970	8,125	20,033	1,342	11,004	4,516
RI	-	302	1,158	6,474	45,350	21,099
SC	8,943	1,277	6,753	7,811	3,844	2,304
SD	2,933	617	1,607	1,538	11,962	15,743
TN	15,434	3,117	12,911	420	2,650	1,311
TX	69,837	17,863	41,804	18,848	57,243	38,952
UT	3,219	823	3,612	1,205	6,632	3,603
VA	29,258	3,737	27,812	318	1,738	720
VT	2,155	495	333	301	905	414
WA	45,302	21,049	47,521	67,007	100,994	89,248
WI	7,570	1,573	1,681	1,845	9,259	5,335
WV	3,199	510	6,765	474	2,271	841
WY	1,328	472	1,533	551	1,162	569

Source: EAC EAVS 2008-2018.

Table 2 extends the tabulation of the UOCAVA ballots submitted for counting by state up to 2018. This is arguably a more important indicator and therefore the raw differences between the ballots sent out and the ballots returned will be illustrative regarding the level of representation achieved in the elections. The difference between the figures in Table 1 and Table 2 make up the not returned ballot count and this is one of the two dependent variables utilized by Hall and in this study. For the presidential election years, the percent of ballots not returned is 28.1% for 2008, 31.1% for 2012 and 20% for 2016. There is an even more marked trend for the off-year elections. In 2010, the percent of ballots not returned is 65.9%, in 2014 it goes down to 50% and in 2018 there is a further drop to 34.5%. In the case of the mid-term elections, it is true that the number of ballots sent out and returned are lower than that of 2010, but further reduction in the percentage of ballots not returned for 2018, when the raw numbers reached their levels of 2010 makes this trend a significant one. The journey does not end here, it is important for the votes that are submitted to be counted and this is the question that we turn to in Table 3.

Table 3 extends the tabulation of the percent of UOCAVA ballots rejected of ballots submitted up to 2018. Although there is variation in the percentages reported by the states, a trend that can be seen is that in the period of 2008 to 2018 covering more than 2 electoral cycles, the figures for both presidential elections and mid-term elections show a general decline in the percent of rejected ballots. It is worth noting that for 2018, three states have not reported (filled in the relevant sections of the EAVS) the percent of rejected ballots. These states are Illinois, New Jersey and Rhode Island. I will demonstrate a more acute shortcoming after I present the multivariate models with the new metrics.

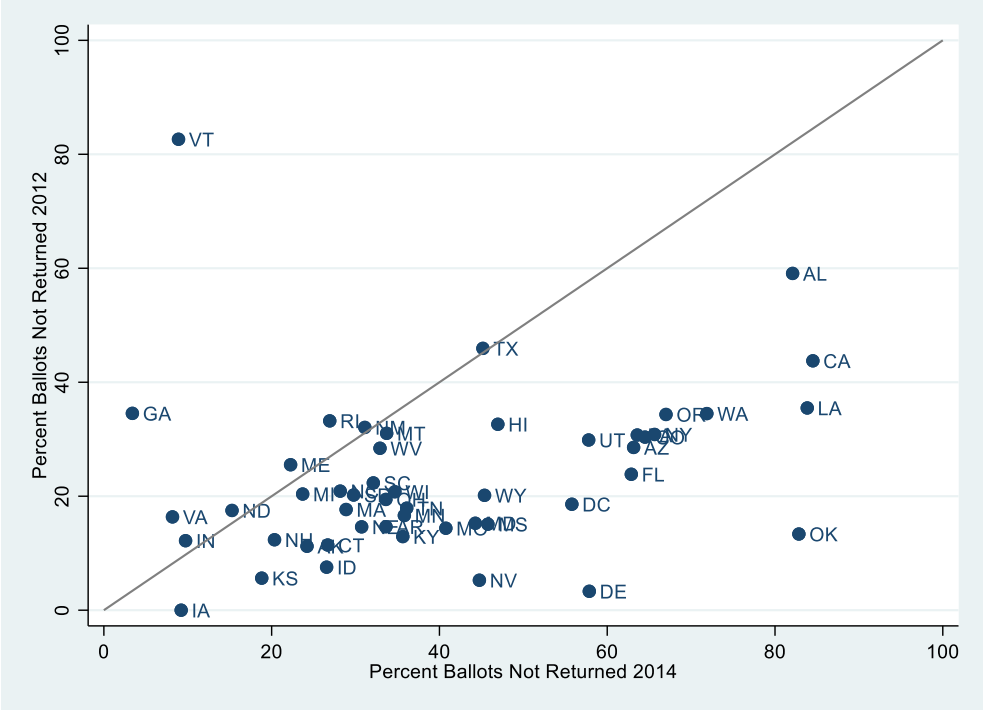

Figure 1. Relationship between UOCAVA ballot return rates, 2012 and 2014.
Source: 2012 and 2014 EAC EAVS.

Table 3. Percent UOCAVA Ballots Rejected of Ballots Submitted, By State By Year

	2008	2010	2012	2014	2016	2018
AL	-	19.02	4.93	3.93	4.13	1.27
AK	4.30	4.25	8.25	5.03	8.43	2.51
AR	5.86	4.19	8.75	2.14	10.74	12.05
AZ	1.91	3.56	0.95	3.38	2.77	0.70
CA	5.67	4.47	8.47	11.54	4.68	6.57
CO	5.81	2.99	3.65	1.79	1.62	2.05
CT	-	3.30	0.96	1.84	1.83	1.18
DC	-	10.90	1.50	14.99	5.25	2.80
DE	7.38	4.31	9.77	1.49	4.17	1.37
FL	2.38	4.11	3.09	3.78	3.28	6.59
GA	2.26	4.71	2.40	42.84	8.14	5.63
HI	0.71	6.20	0.00	12.50	2.60	1.12
IA	8.13	3.73	5.93	5.90	5.70	2.38
ID	12.77	20.95	13.59	10.12	14.86	6.67
IL	2.98	4.58	-	2.38	-	-
IN	28.39	6.82	20.58	7.22	1.97	1.56
KS	10.10	3.58	5.69	1.75	1.23	0.52
KY	-	7.45	8.09	10.18	4.30	13.24
LA	6.91	10.12	4.28	6.40	6.35	9.56
MA	7.39	7.95	0.50	0.68	0.95	0.66
MD	8.57	15.54	11.23	9.21	7.62	2.97
ME	5.59	5.01	7.94	3.00	3.98	2.98
MI	9.05	8.85	7.52	2.66	2.56	1.59
MN	6.36	7.34	7.63	6.54	7.80	12.69
MO	4.61	7.70	3.86	2.72	1.64	6.35
MS	10.96	25.17	3.11	2.60	0.90	0.00
MT	6.71	3.78	0.99	1.26	0.78	0.34
NC	7.94	8.38	0.90	0.85	1.32	0.44
ND	2.26	0.55	1.36	1.36	3.27	3.08
NE	7.85	11.61	4.59	5.65	4.69	4.66
NH	4.36	4.28	7.34	7.76	4.94	6.48
NJ	2.94	4.53	1.44	-	1.07	-
NM	2.11	19.02	7.44	4.29	0.27	3.57
NV	12.86	12.39	4.34	6.65	1.39	1.43
NY	7.66	1.82	17.11	7.96	8.74	15.24
OH	4.88	5.58	2.29	2.15	1.51	2.08
OK	5.95	8.52	5.46	5.22	5.22	3.43
OR	-	0.00	2.08	1.77	1.91	2.19
PA	0.67	1.86	1.88	1.97	2.75	11.29
RI	-	3.39	0.17	0.00	0.00	-
SC	3.09	2.04	-	0.73	0.61	0.49
SD	3.61	7.69	5.60	3.55	5.93	1.83
TN	5.38	3.85	5.91	3.65	4.33	5.07
TX	6.45	4.92	9.35	8.25	6.82	7.18
UT	4.22	2.19	1.58	9.99	4.58	1.30
VA	7.78	0.77	1.65	7.93	6.32	9.45
VT	5.99	9.26	6.91	2.14	4.87	9.23
WA	-	1.30	1.10	1.40	2.19	1.51
WI	3.92	12.08	6.96	5.48	0.65	9.10
WV	5.34	7.29	0.18	2.52	1.21	0.97
WY	3.16	1.88	3.26	3.32	2.32	6.04

Source: EAC EAVS 2008-2018.

In order to extend the analysis of Hall up to 2018, the next items to analyze are comparisons of the percentage of ballots not returned in presidential and nonpresidential election years. Figure 1 graphically represents the changes for 2012 and 2014. In 2012, only four states had a percentage of ballots not returned more than 40 percent; and in 2014, almost 40% of the states had a ballot nonreturn rates of more than 40%.

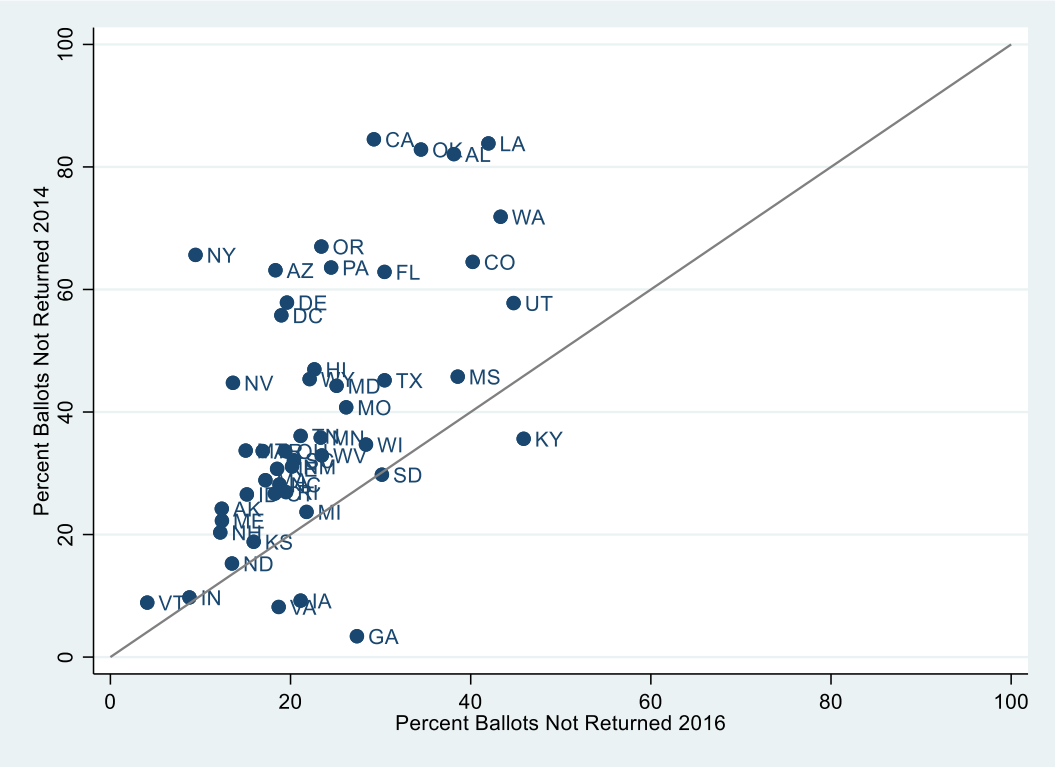

Figure 2. Relationship between UOCAVA ballot return rates, 2014 and 2016.
Source: 2014 and 2016 EAC EAVS.

When Figure 1 and 2 are evaluated together, the effect of the election year becomes apparent. The number of states which had a percentage of ballot nonreturn in excess of 40% is down to 4 for 2016, a presidential election year. All that remains is to compare the election years 2016 with 2018. This is presented in Figure 3. Here, we see that the number of states which had a percentage of ballots not returned over 40% make up 25% of the total number of the states for 2018. This points to almost a 15% decrease in the number of states with a nonreturn rate of over 40% as compared to the analogous election year of 2014. It is important to realize that the trend we are seeing here and saw before in the Tables 1 to 3 precludes us to reach a relatively easy conclusion that the dynamics of presidential and mid-term election years are fundamentally different. The fact that we are seeing a divergence in the rates between these election years points out another dynamic that can have an effect on both types of elections. This type of reasoning is facilitated by the fact that we are dealing with a smaller subset of the electorate and the issues that affect this electorate are arguable more uniform than for the entire electorate. The outlook of the UOCAVA voter on presidential and midterm election might be different or changing. The convergence we are seeing may be due to more efficient ways of keeping track of and communicating with these voters. We will be analyzing this in the third part of this paper. On the other hand, the rate of undeliverable ballots would really help in any

interpretation of these preliminary findings (Hall 2014, p.161), but this an area with serious data quality issues as will be discussed in the end of the study.

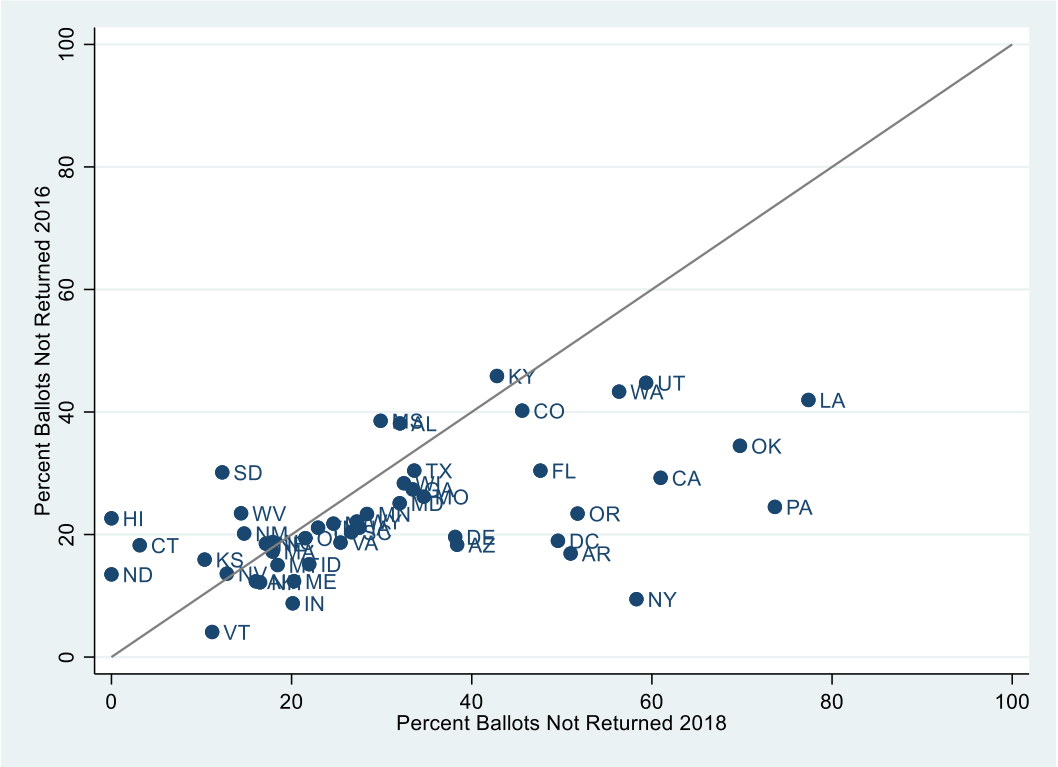

Figure 3. Relationship between UOCAVA ballot return rates, 2016 and 2018.
Source: 2016 and 2018 EAC EAVS.

The next factor to analyze in this vein is the percent ballots rejected. Figure 4 shows that the majority of states are clustered at less than 10% of UOCAVA ballots rejected. We see that Wisconsin, Indiana, New York, Idaho, Maryland saw a decrease in rejection rates. On the other hand, we see that Kentucky, California, Virginia, Hawaii, District of Colombia have all registered an increase in rejection rates. The outlier here is Georgia which has registered more than a tenfold increase in rejection rates. Figure 5 also has most of the states clustered at less than 10%ballot rejection rate. In that respect, the comparison between 2012 and 2014 is similar to that between 2014 and 2016. South Dakota, Alaska, Minnesota, Arkansas, New York and Idaho registered an increase in rejection rates from 2014 to 2016, whereas Hawaii, District of Columbia, California, Kentucky Utah, New Hampshire, Indiana, Nevada, Wisconsin, and New Mexico saw a decrease from 2014 to 2016. Figure 6 will round up the comparison of the ballot rejection rates. Comparing the rejection rates between 2016 and 2018, we see that the majority of cases continue to be clustered around 10%, but with a higher spread compared to the previous scatterplots. Considering the reference line of y=x, we see that 17 states have a higher rate of ballot rejection in 2018 compared to 2016 and 12 states have a lower ballot rejection rate in 2018.

The foregoing analysis of the scatterplots for the ballot rejection rates has demonstrated that this issue does not follow the same trajectory with the ballot return rates and the variations we see in the states in between election years point to non-standardized election administration practices. This mostly has to do with the transit time of ballots and other materials (Hall 2014, p.162). In order to

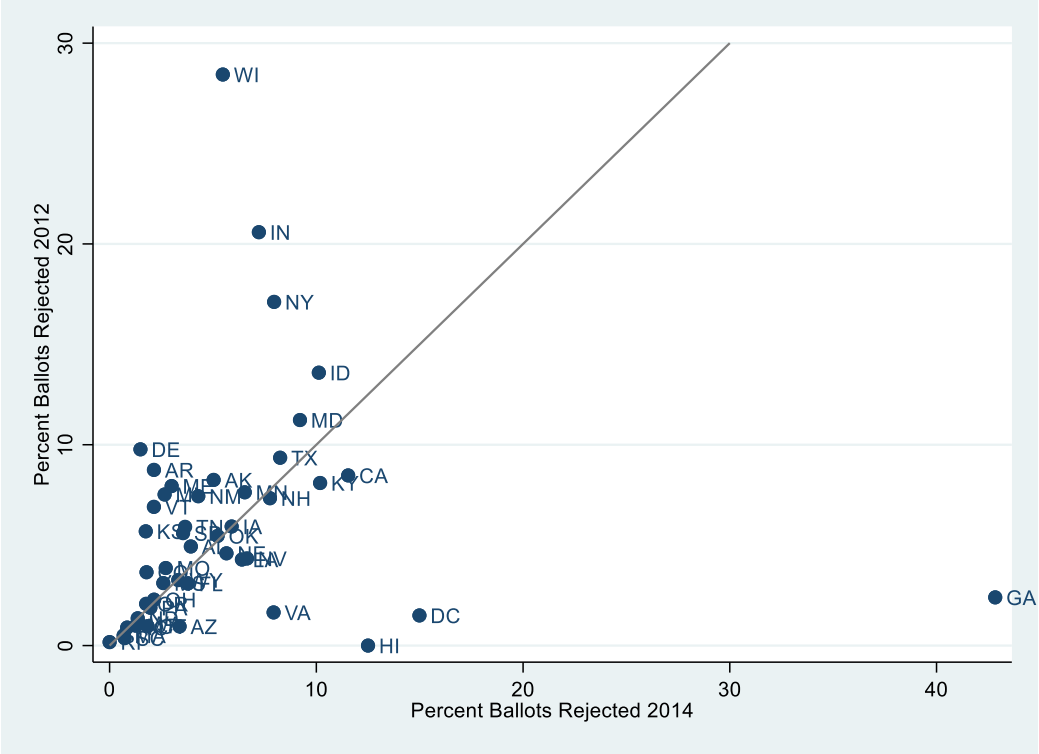

Figure 4. Relationship between UOCAVA ballot rejection rates, 2012 and 2014
Source: 2012 and 2014 EAC EAVS.

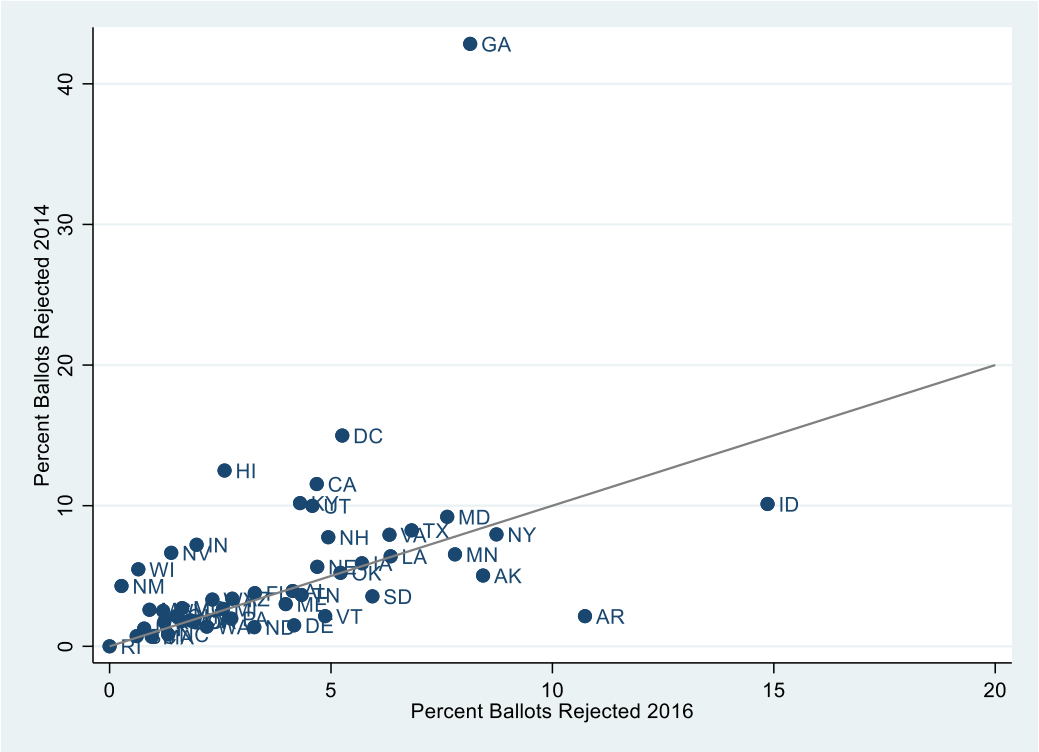

Figure 5. Relationship between UOCAVA ballot rejection rates, 2014 and 2016.
Source: 2014 and 2016 EAC EAVS.

delve into this explanation, we need to extend the discussion to a comparison of the ballot return rates and ballot rejection rates between UOCAVA voters and absentee (domestic) voters in the same jurisdiction. We will turn to this question with Figure 7 and 8.

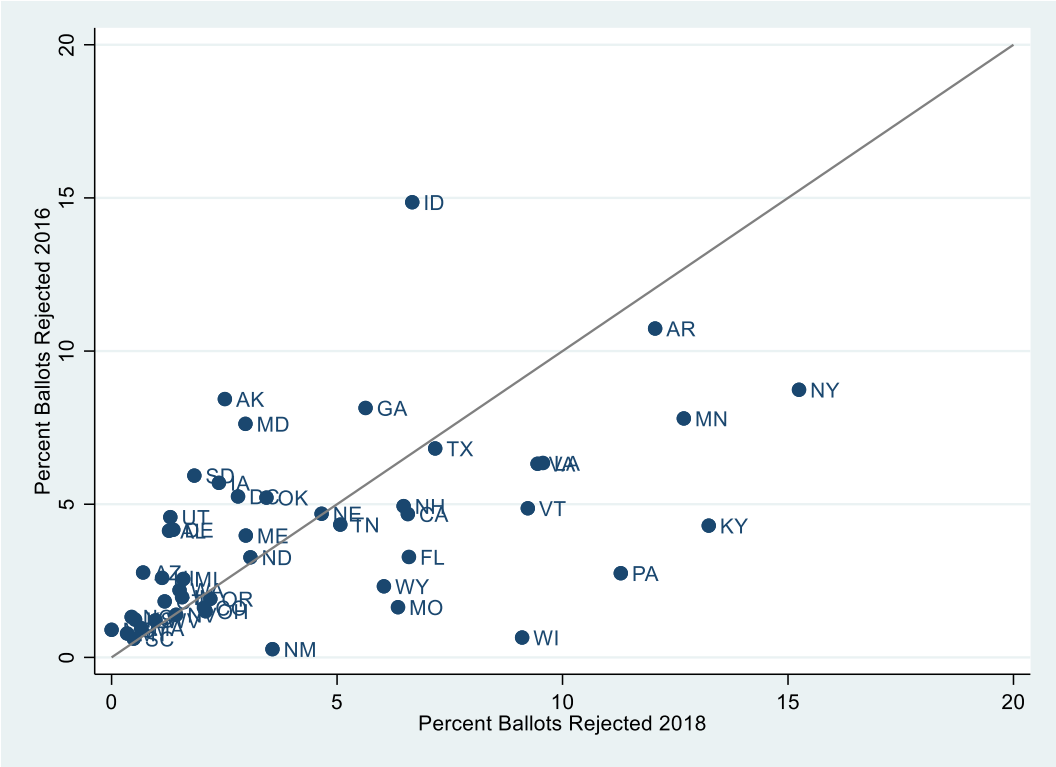

Figure 6. Relationship between UOCAVA ballot rejection rates, 2016 and 2018.
Source: 2016 and 2018 EAC EAVS.

In Figure 7, four scatterplots present a comparison of UOCAVA and absentee ballot rates in four elections: Two presidential election years of 2012 and 2016, and two mid-term election years of 2010 and 2014. In the upper left quadrant, we see a comparison for 2012. Out of the 51 states, only Iowa, Delaware, Alaska, Oklahoma, Nevada, Kansas and District of Columbia have higher absentee ballot nonreturned rates than nonreturned UOCAVA ballot rates. For the 2016 presidential election year, depicted in the scatterplot on the lower left quadrant, we see a similar pattern. For 2014, only New York, Alaska, Nevada, and District of Columbia had higher absentee ballot nonreturn rates. When we turn to the mid-term election years illustrated by the two scatterplots on the right quadrants, we see that for 2014 only Iowa, Alaska and Georgia registered higher absentee ballot nonreturn rates. The same observation is replicated for the 2018 election. We can see that only North Carolina, Nevada, Connecticut, North Dakota, and Hawaii had higher absentee ballot rejection rates. Another observation is that in many cases the rate of nonreturned traditional by mail ballots is below 10%, whereas the corresponding rate for the UOCAVA nonreturn rate is above 20% and reaching above 60% in some cases. The difference is clear and it should be noted that the same trends can be seen in both the presidential and off-year elections, therefore we need to look beyond the usual explanation of the different dynamics of these two election years.

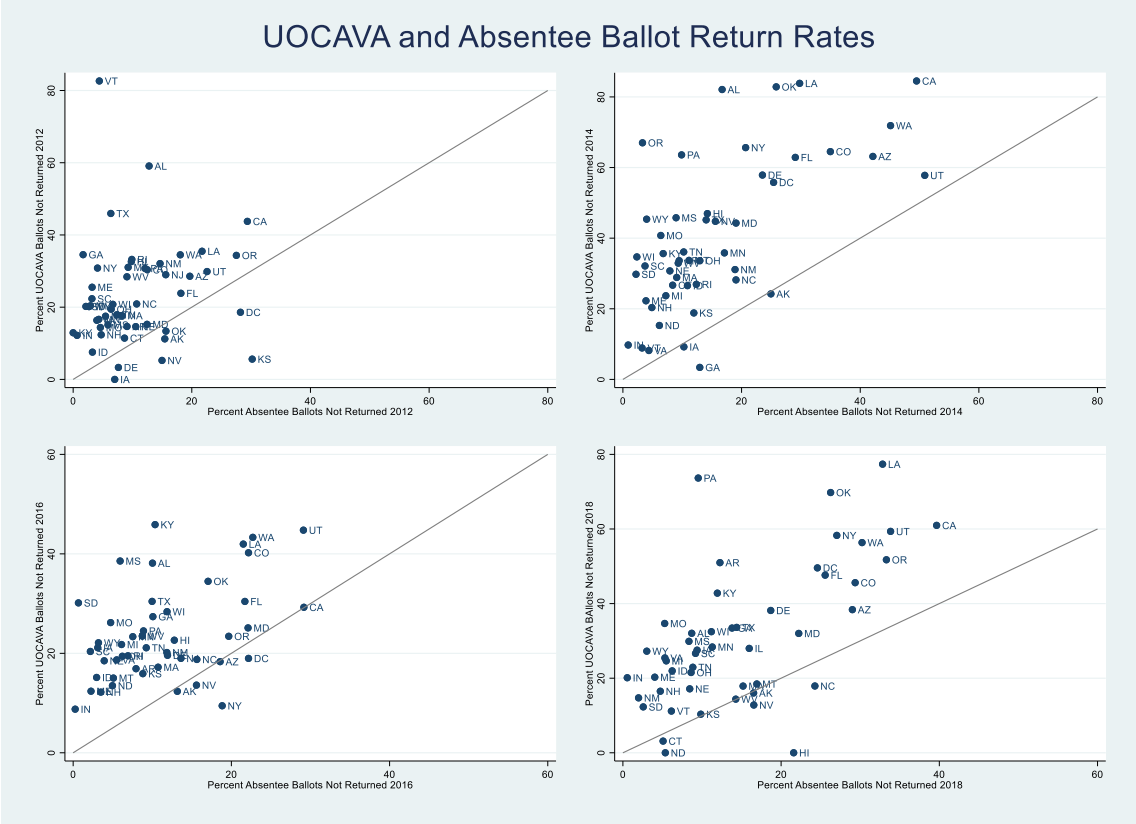

Figure 7. Comparison of UOCAVA and absentee ballot return rates, 2012-2018.
Source: 2012-2018 EAC EAVS.

In Figure 8, four scatterplots compare the ballot rejection rates of traditional absentee voters with UOCAVA voters over the same time frame of two presidential elections and two mid-term elections. As with the ballot return rates, the rejection rate is skewed toward the UOCAVA voters over the four elections. For 2012, there were only two states (Louisiana and Kentucky) that had traditional absentee ballot rejection rates of 5% or above, whereas the corresponding count for the UOCAVA ballot rejection stood at 21 states. In the lower left quadrant, we see a similar situation with the presidential election year of 2016. In that year, only four states had an absentee ballot rejection rate of equal to or over 5%, whereas 15 states had UOCAVA ballot rejection rates of equal to or over 5%. When we look at the scatterplots on the right quadrant, we can see that like the ballot return rates, the dynamic here seems to be operating out of the bounds of the different dynamics of off-year elections. Therefore, we can claim that UOCAVA voters are more likely to have a rejected ballot than absentee voters (Hall 2014, p.163).

To sum up, the first part extended the descriptive analyses of the indicators offered back in 2014 with new data up to 2018. We can see that the trends in the ballot return rates for UOCAVA voters compared to traditional absentee voters are following a similar trend that was first reported upon the first availability of data. A similar conclusion holds for UOCAVA ballot rejection rates compared to absentee voter rejection rates. The extension of raw numbers for the indicators pointed to an improvement in indicators towards 2016-2018.

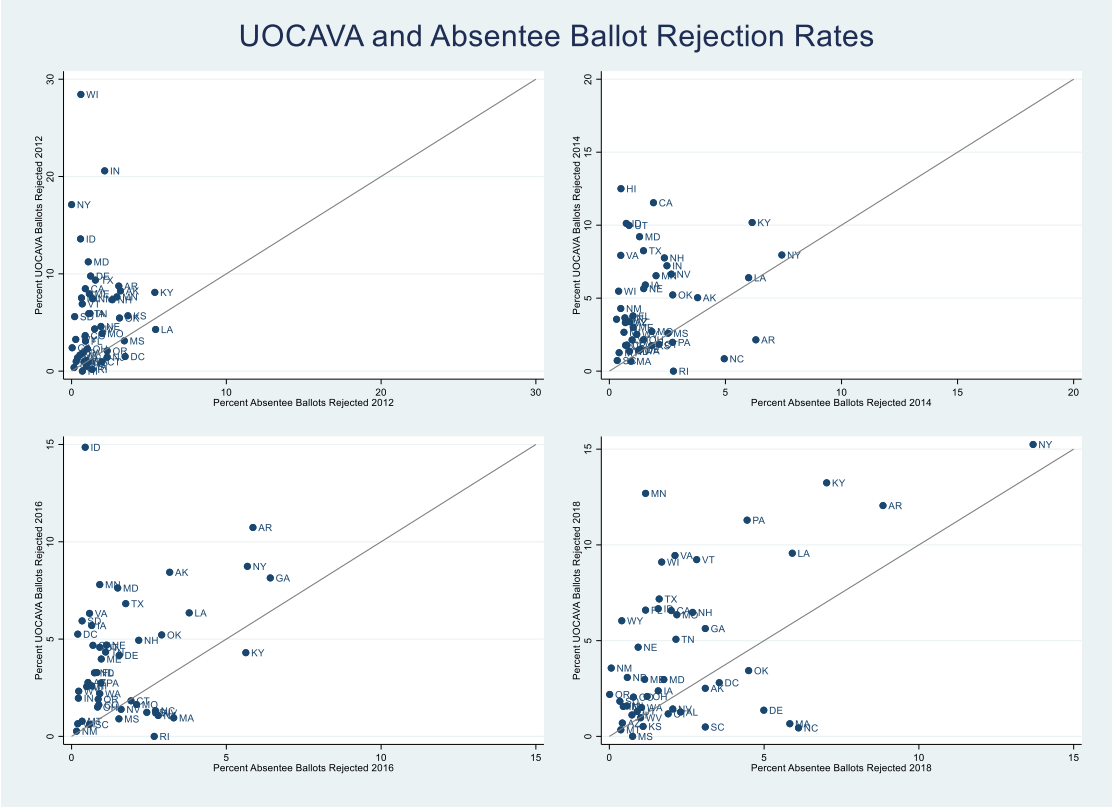

Figure 8. Comparison of UOCAVA and absentee ballot rejection rates, 2012-2018.
Source: 2012-2018 EAC EAVS.

A multivariate analysis of this trend will be explored in the third part. In the second part, we turn to an extension of the statistical analysis that was carried out using the limited data that became available with the EAVS of 2008. An extension up to 2018 using the same models will help us see if the tentative conclusion using the limited metrics hold.

2. State of Metrics

The two dependent variables that were used in the early statistical analysis about the effects of election administration on voting from abroad are the percentage of ballots not returned and the percent of ballots rejected. Following earlier practice and to ensure comparability and ext6ension logged versions of the dependent variables have been utilized. The analyses have been extended to 2018 with the same models to see if the preliminary conclusions with the limited metrics[1] available at the time. The metrics that are used in these models are total voters in state, voter registration system (top-down, hybrid and bottom-up), and registration and ballot facility scores. The data for the metrics come from the EAVS and the supplement to EAVS known until 2018 as the Statutory Overview Survey and since 2018 known as the Election Administration Policy Survey. In both models for the ballot return and rejection rates, the tables include the original results for comparison. For the registration and ballot facility scores, previously a composite score from eight dimensions were created and used. In the extension

[1] I use metrics here to refer to the explanatory variables.

that is offered here, simpler versions were created and used using 4 dimensions for each.[2] The four dimensions utilized for the registration facility and ballot facility scores are as follows: Additional ID requirement, possibility of registration via email, possibility of online registration, possibility of requesting ballot by email for the registration facility score and receiving ballot by email, online return of ballot, return of ballot by email as well as whether the UOCAVA vote is counted/reported in a way to assure complete confidentiality for the ballot facility score.

Table 4. Analysis of Ballots Not Returned, 2008-2018

	2008	2010	2012	2014	2016	2018
Total Voters in State (millions)	0.019 (0.011)	**0.044 (0.015)**	**0.051 (0.016)**	0.021 (0.020)	**0.021 (0.011)**	**0.053 (0.014)**
Registration Facility Score	**-0.072 (0.034)**	-0.055 (0.036)	0.063 (0.071)	0.056 (0.154)	0.012 (0.100)	0.129 (0.112)
Ballot Facility Score	0.042 (0.028)	0.032 (0.033)	-0.175 (0.100)	0.118 (0.127)	0.097 (0.092)	0.105 (0.150)
Hybrid Voter Registration	0.216 (0.126)	0.064 (0.156)	0.167 (0.160)	**0.364 (0.205)**	0.216 (0.135)	0.026 (0.294)
Bottom-Up Voter Registration	-0.208 (0.114)	**-0.310 (0.153)**	-0.259 (0.175)	0.270 (0.204)	**-0.354 (0.140)**	-0.124 (0.209)
Constant	3.268	3.959	2.918	3.124	2.832	2.453
N	39	46	48	49	49	47
R^2	0.175	0.274	0.182	0.136	0.162	0.162

Dependent variable is logged percentage of ballots not returned. For the voter registration variable, the omitted category is Top-Down registration. Robust standard errors are reported in parentheses.

Source: EAC EAVS 2008-2018, Hall (2014).

Table 4 presents the ballot return rate model up to 2018. The results for the years 2008 and 2010 were first reported by Hall (2014, pp.159-160). The extension shows that for the years 2012, 2016 and 2018 we see a significant effect of size as represented by the total number of voters in a state. As the population increases, so does the percentage of ballots not returned. The registration and ballot facility score do not show any significance. We see that a hybrid voter registration system meant an increase in the rate of ballots not returned compared to the base category of top-down registration for 2014 and for 2010 and 2016 elections we see that bottom-up registration system lowered the percentage of ballots not returned. The metrics are quite limited and this is evidenced by the relatively lower explanatory power they provide for the variation in the dependent variable. For the period between 2012 and 2018, this model is able to explain between 13.6% and 18.2% of the variation in the ballot nonreturn rates. Therefore, we can report that we do not see a discernible trend except the one for the population size which conforms to studies on scale and turnout (Remmer 2010).

[2] The Statutory Overview Surveys and the 2018 Election Administration Survey were used to code the simpler metrics for the facility scores. As these surveys are carried out after the elections, they are a valuable source for the actual implementation of various dimensions of election administration.

Table 5. Analysis of Ballots Rejected, 2008-2018

	2008	2010	2012	2014	2016	2018
Total Voters in State (millions)	-0.031 (0.028)	0.010 (0.03)	0.030 (0.032)	0.024 (0.026)	0.021 (0.018)	**0.037** **(0.019)**
Ballot Facility Score	-0.024 (0.072)	**-0.150** **(0.070)**	0.048 (0.289)	-0.181 (0.196)	-0.227 (0.167)	**-1.140** **(0.235)**
Constant	1.803	2.42	1.157	1.481	1.25	3.58
N	36	41	49	48	48	49
R^2	-0.02	0.10	0.02	0.04	0.05	0.45

Dependent variable is logged percentage of ballots rejected. Robust standard errors are reported in parentheses.
Source: EAC EAVS 2008-2018, Hall (2014).

Table 5 presents the ballot rejection rate model up to 2018. Except for 2012, the ballot facility score has a coefficient in the expected direction and after 2010, it is significant in 2018 suggesting a higher ballot facility score results in a lower probability of ballots being rejected. For 2018, population also shows significance. The relatively high explanatory power of this model (45%) will be further analyzed with the addition of new metrics in the next section.

3. New Metrics

As discussed above, the transmission of ballots as well as documentation with UOCAVA voters seems to be a major problem affecting the performance metrics of voting from abroad. An important metric to gauge the effectiveness of electoral administration in terms of pointing areas that can be rectified by direct administrative intervention would be the data on the form of transmission and return of ballots. Although these two were included in the documentation of the EAVS for the years 2014 and 2016, they were finally included in the actual administration in 2018. Another important variable of administration effectiveness would be the number of ballots returned as undeliverable as this would shed light on certain areas of improvement for election bodies and officials, like registration and record keeping. As mentioned above, there is a problem of data quality with the latter variable. 2018 was the first year of reporting for this variable, however as Table 8 at the end of this section will illustrate, these data are not consistent enough yet to include in multivariate analyses. The new variables that are added in the multivariate analysis to get a higher explanatory power, then, are: percent of ballots transmitted by post, email, and other means (fax, online) and percent of ballots returned by post, email, and other means (fax, online). Table 6 presents the new models for the ballots not returned and Table 7 analyzes the correlates of rejected ballots.

In Table 6, five models are offered. In the first model, percent of ballots transmitted by post is the only new variable and we can immediately see an increase R-square from 16% to 30%. The results of the first model suggest that easiness in registration leads to a higher probability of a ballot not being returned and the percent of ballots transmitted by post is related to a higher probability of ballots not being returned. These findings show that the data on undeliverable ballots would be a great complementary variable for such a analysis. Starting with the second model, the ballot facility score is not included due to multicollinearity. The second model adds percent of ballots transmitted by email

and other means and in both instances, we see that these are associated with a lower probability of ballots not being returned. The third model has one new variable which shows the percentage of

Table 6. Analysis of Ballots Not Returned, New Metrics, 2018

	I	II	III	IV	V
Total Voters in State (millions)	**0.038**	**0.031**	**0.033**	0.011	0.014
	(0.015)	**(0.015)**	**(0.015)**	(0.015)	(0.013)
Registration Facility Score	**0.194**	0.160	**0.225**	**0.260**	**0.281**
	(0.108)	(0.125)	**(0.119)**	**(0.130)**	**(0.109)**
Ballot Facility Score	0.125				
	(0.143)				
Hybrid Voter Registration	0.054	0.037	-0.037	0.004	-0.009
	(0.261)	(0.267)	(0.297)	(0.184)	(0.177)
Bottom-Up Voter Registration	-0.137	-0.141	-0.152	-0.182	-0.042
	(0.222)	(0.256)	(0.263)	(0.329)	(0.152)
Percent of Ballots Transmitted by Post	**0.010**				
	(0.005)				
Percent of Ballots Transmitted by Email		**-0.010**			-0.002
		(0.005)			(0.005)
Percent of Ballots Transmitted by Other Means		**-0.012**			**-0.042**
(Fax, Online)		**(0.007)**			**(0.006)**
Percent of Ballots Returned by Post			0.003		
			(0.002)		
Percent of Ballots Returned by Email				**-0.006**	-0.004
				(0.003)	(0.004)
Percent of Ballots Returned by Other Means				**0.017**	**0.017**
(Fax, Online)				**(0.008)**	**(0.006)**
Constant	**1.986**	**3.502**	**2.435**	**2.760**	**2.813**
N	42	34	36	26	25
R^2	0.30	0.26	0.20	0.39	0.66

Dependent variable is logged percentage of ballots not returned. For the voter registration variable, the omitted category is Top-Down registration. Robust standard errors are reported in parentheses.

Source: EAC EAVS 2018.

ballots returned by post. This variable has a positive coefficient but it is not significant. The next model shows significant coefficients for percent of ballots returned by email which means this is associated with a lower probability of ballots not being returned and percent of ballots returned by other means which means it is linked to a higher probability of ballots not being returned. Finally, the fifth model shows that ballots transmitted by other means is associated with a lower percentage of ballots not returned and ballots returned by the same means points to a higher percentage of ballots not being returned. In this last model, R-square is 66%. An interesting finding is the positive effect of registration facility score on the rate of ballots not returned. When controlled for the new variables, this finding suggests that an easier registration system does not necessarily result in a higher ballot return rate. A word of caution is in order regarding all these findings. Although the utility of new

metrics have been amply demonstrated, we see that the N falls to 25 in the last model pointing to missing data. Therefore, the results are tentative and an extension with less missing data in the future will make it possible to have more robust relationships.

Table 7. Analysis of Ballots Rejected, New Metrics, 2018

	I	II	III	IV
Total Voters in State (millions)	**0.062**	**0.065**	0.009	0.016
	(0.028)	**(0.029)**	(0.013)	(0.015)
Registration Facility Score	-0.064	-0.002	0.222	**0.388**
	(0.231)	(0.257)	(0.195)	**(0.189)**
Ballot Facility Score	**-0.454**	-0.233		
	(0.261)	(0.518)		
Percent of Ballots Transmitted by Post	0.002			
	(0.937)			
Percent of Ballots Transmitted by Email		-0.006		
		(0.015)		
Percent of Ballots Transmitted by Other Means		-0.003		
(Fax, Online)		(0.015)		
Percent of Ballots Returned by Post			**0.019**	
			(0.004)	
Percent of Ballots Returned by Email				**-0.020**
				(0.005)
Percent of Ballots Returned by Other Means				**-0.015**
(Fax, Online)				**(0.006)**
Constant	**2.126**	1.659	-0.540	0.701
N	41	33	36	26
R^2	0.14	0.13	0.44	0.49

Dependent variable is logged percentage of ballots rejected. Robust standard errors are reported in parentheses.
Source: EAC EAVS 2018.

In Table 7, four models are offered for ballot rejection rates incorporating the new variables of transmission and return type of ballots. In model 3, we see that percent of ballots returned by post has a significant positive effect on ballot rejection rates whereas in model 4 percent of ballots returned by email and other means decrease the probability of votes being rejected. These two models reach R-squared values of 44% and 49%, respectively. The same caveat regarding the results applies here. The magnitude of the missing data is demonstrated in the models as the number of observations drop as low as 26 in the final model. Therefore, with the increase in data reporting over time, new analyses will be able to point out more robust relationships.

Finally, an important control variable addition to these models, as pointed above, would be the number of ballots returned as undeliverable. These data started to appear with 2018 as well, but the data quality of the first wave precludes the possibility of using it in any kind of analysis. For reference, the list as reported by the states in 2018 is provided in Appendix A.

Discussion and Conclusion

The foregoing descriptive and multivariate analyses present certain conclusions. First, there is a trend of improvement in key performance areas such as ballot transmission, return and rejection rates. Second, for the ballot return and rejection rates we can discern the effect of off-year elections in effect in that for the period of data availability, the ballot nonreturn rates and ballot rejection rates are higher than the levels seen in preceding presidential elections. Third, the comparison of UOCAVA voters and traditional absentee voters on ballot return and rejection rates shows that UOCAVA voters have significantly higher ballot nonreturn rates and ballot rejection rates. This points to the main problem with UOCAVA voters that the traditional absentee voters do not face. The complication has to do with the transmission of ballots to the voters, communicating with the voters as well as the return of those ballots. Fourth, the extension of the earlier multivariate models up to 2018 demonstrated that the explanatory power of these variables are limited as well as there is no discernible pattern. At best these models can be said to be presenting suggestion for the effect of election administration on the outcomes of interest. Fifth, the availability of new metrics from 2018 enable us to build better specified multivariate models and the significant coefficients of these variables like percent of ballots transmitted and returned by post, email and other means suggest the effect of electoral administration on key outcomes such as ballot return and rejection rates. The magnitude of missing data for the new variables suggest that a better coordination of data collection might be called for. This conclusion is supported by the fact that these variables were actually included in the 2014 and 2016 post-election surveys and were only included in 2018 with a lot of missing data. If the reports are not done just because they are federally mandated, but in the interest of solidifying the basic tenet of democracy, better results should be within reach. Finally, an additional control variable that would help with the explanations in the form of the number of undeliverable votes became available only in 2018 and as shown in Appendix A, the quality of the data means that normally these data should never have been published in their current state.

Hall's call from 2014 (p.164) is valid after 6 years and the passage of 3 elections. We are able to only make tentative suggestions regarding the effects of election administration for UOCAVA voting and in order for us to be able to make more robust claims and policy recommendations, we not only need to gather the data of more elections to come, but also the quality and the reporting depth of those data have to improve.

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Appendix A

Table 8. UOCAVA Ballots Returned As Undeliverable, 2018

	Undeliverable Postal	Undeliverable Email	Undeliverable Other	Total Undeliverable
AL	0	0	0	0
AK	22	-	-	22
AR	113	0	0	128
AZ	74	137	137	211
CA	2,075	1,135	1,135	3,224
CO	511	0	0	491
CT	-	-	-	-
DC	3	0	0	3
DE	3	0	0	3
FL	16,861	77	77	16,947
GA	30	19	19	49
HI	2	10	10	12
IA	-	-	-	-
ID	25	2	2	27
IL	23	1	1	24
IN	-	-	-	-
KS	-	-	-	-
KY	-	-	-	-
LA	168	4	4	173
MA	6	4	4	10
MD	0	0	0	15
ME	8	0	0	8
MI	0	0	0	0
MN	17	3	3	20
MO	-	-	-	-
MS	0	0	0	0
MT	20	0	0	26
NC	-	-	-	13
ND	0	0	0	0
NE	2	0	0	3
NH	0	0	0	0
NJ	-	-	-	-
NM	-	-	-	-
NV	18	1	1	19
NY	3,291	-	-	3,291
OH	16	0	0	16
OK	59	-	-	59
OR	-	-	-	172
PA	20	2	2	22
RI	-	-	-	-
SC	-	-	-	-
SD	91	189	189	280
TN	19	3	3	22
TX	93	69	69	162
UT	0	6	6	70
VA	-	-	-	-
VT	0	0	0	0
WA	1,062	1,035	1,035	2,097
WI	-	-	-	-
WV	20	0	0	20
WY	5	4	4	9

Source: EAC EAVS 2018.