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TITLE   **Report on Registration Systems in American Elections**

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EXECUTIVE SUMMARY
Report on Registration Systems in American Elections

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The Voter Registration System is essential for the management of precincts, handling of ballots, authentication of voters, and communications with voters.

The Registration system is massive, with 191.8 million records and 130.3 million voters.

The Registration system is decentralized, managed by 8,000 different local election offices as well as 50 state offices and used at 186,000 different precincts on Election Day.   Decentralized use of the lists is a necessity of running elections at many different precincts and through county offices.

One size likely does not fit all.   Half of all registration records are maintained by the 160 most populous counties. The other half of all registration records are maintained by the remaining 2900 counties.   States should continue to help counties with the maintenance of lists through the statewide systems.

The decentralization of lists has traditionally made it difficult to make a full accounting of the performance of the election system that would allow local election offices to gauge how well they are doing.   Complete reporting of voter registrations, turnout at the precinct and election office level would improve the ability of election offices to diagnose where problems arise and for offices to see what other counties are doing well. That would aid in the identification of best practices developed among the counties.

New database technologies have created the opportunity to manage lists more efficiently and accurately.   Private firms have emerged to apply these technologies to develop national voter registration lists.   The technologies developed by these firms could be used by election offices to improve many aspects of lists and minimize potential errors in lists.

Over the past decade the states have moved rapidly to the adoption of new ways of managing lists.   Most notably, 17 states now provide for on-line voter registration, and 11 states now provide for Same Day Registration. These reforms reflect an effort to give voters more control over their own records

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1. Function of Registration System

Voter registration systems are the backbone of election administration in the United States today. These lists facilitate the operation of elections at the precinct level, communications by election officials and candidates and parties with voters, and auditing of election results.

The most salient use of the voter registration lists is to authenticate a person at the polling place or election office, or in response to a request for an absentee ballot. The voter registration list is the official list against which poll workers and election officials check identifying information, including name, address, and age. However, registration lists are integral to the entire election administration process. Local election officials also use voter registration:

- To set up precincts and to assign voters to voting locations. The lists inform election officials how many people are likely to vote in a given area and, thus, which clusters of people might constitute a precinct.

- To communicate with voters. Election offices use registration lists to inform voters of the location of their polling places and the dates of upcoming elections, and to distribute voter pamphlets.

- To distribute ballots. In states with Vote-By-Mail, for "permanent absentee voters," or for military personnel the information on the voter registration list is the address to which ballots are sent.

- To audit elections. Large discrepancies between the numbers of votes cast and the numbers recorded as voting on registration lists indicates a problem in administration or counting. Some states audit individual records.

Accurate voter lists, then, are essential to the management of elections. The quality of the list can affect the ability of people to vote, the ability of election offices to detect problems, and the ability of courts and others monitoring elections to detect election fraud, such as double voting.

Voter registration lists are also vitally important to political campaigns. Every state makes the lists available to candidates and parties, and the candidates and parties use the lists to identify and communicate with likely supporters. Political firms and organizations accumulate state and local lists into national databases. They maintain these lists, making continual updates, and merge them with other information about voters so as to improve voter contact and targeting. In this way, accurate voter lists can facilitate participation.

It is worth keeping in mind that the registration system in the United States evolved gradually over time. Some counties and states did not have registration as late as the 1970s. North Dakota does not require registration for purposes of

voting. It is possible to hold elections without a conventional registration list.   But, most election officers rely heavily on the registration databases to manage elections, and a high quality registration system improves the ability to administer elections and communicate with voters.

2. Scale and Scope of the Voter Registration System

A. How Many Registered Voters Are There?

Voter registration in the United States is a massive, decentralized database that encompasses most adult American citizens.   A few basic statistics convey the magnitude of the registration system. There are

- 217.6 million citizens over age 18 as of 2012,

- 191.8 million registration records on the voter rolls as of June, 2013, and

- 179.0 million "active" registration records.[1]

B. Decentralization to Counties and Town Offices and to Precincts

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[1] Even though North Dakota does not require registration for voting, it does maintain a list of people who have voted. That list is included in these totals. Source: Downloaded by authors from the Catalist Database, June 24, 2013. The EAC has just released its biennial voter registration report. That report, based on reports from the states, lists 194.2 million registrations, of which 170.4 were active, for the November 2012 election.

The voter registration systems are highly decentralized, in both their management and use. There is no official national list of registered voters, though, the parties and political organizations have developed them. Voter registration lists are maintained by local election offices to manage local, state, and federal elections. Since 2006, states have maintained statewide voter registration systems, as required by the Help America Vote Act. Most statewide voter registration systems aggregate county lists and registration records, so the counties remain responsible for the quality of registration records.

The use of the lists is decentralized because the election system is disaggregated into many distinct precincts. Precincts have traditionally been the place where voting happens, and that is still true for roughly 75 percent of voters nationwide. Precincts often correspond to neighborhoods or sufficiently small numbers of people that it is possible to process all of the voters in a single day. We know of no study of the optimal number of precincts for a given state in order to optimize the management of Election Day.

The fact that many elections are run at the same time makes a large number of precincts unavoidable. Each precinct corresponds to a unique ballot, a combination of specific offices and ballot measures on which the residents of a given area vote. For example, Precinct 1 in a city might correspond to the 3rd district in the School Board, the 2nd District in the City Council, the 14th State House district, the 6th State Senate district, the 2nd Congressional District, and Water District A. Precinct 2 might correspond to a different combination of districts. The need to create unique ballots for each combination of races creates a need for many

different precincts.   Vote centers, such as in Colorado and Indiana, can reduce the number of polling stations, but not the number of ballot styles. The registration lists are essential for making sure that each voter uses the correct ballot, and the lists must be prepared for the appropriate precinct.

The lists are distributed to precincts to verify voters at polling places on Election Day.   The lists are also used in the local election office to verify the authenticity of absentee ballot requests and submissions and to determine which absentee and early voters ought to receive which ballots. There are approximately

- 8,000 election offices (at the county-level in most states and town-level in New England states, Michigan, and Wisconsin) and

- 186,000 precincts in the United States.

- That translates into roughly 1,000 registrants per precinct, and with 130.3 million voters in the 2012 election, roughly 800 voters per precinct.

The decentralization of lists reflects the way elections are run in the United States, but decentralization makes it difficult to gain a comprehensive picture of the election administration systems.   A complete reporting of total registered voters, active registered voters, and total ballots cast at the precinct level would facilitate measurement of election performance and help local election offices see where there may be localized problems with registration lists or with voting.   This would also make it possible for jurisdictions that have problems to see what is occurring in other jurisdictions of similar size or demographic make-up and, thus, to identify which local election offices might have practices that could be emulated.

C. Statewide Registration Lists

Statewide registration lists were required by the Help America Vote Act, and as of 2012 every state had such a list. Some states implemented the law as simple aggregations of county and municipal lists. These are called bottom-up statewide lists. Other states created more integrated systems in which the state lists include checks for duplicate records and other issues and then the state lists are redistributed to the local offices. These are called top-down lists.

The introduction of statewide lists is a significant change in the degree of decentralization of the registration systems. It provides the states the ability to help the counties and towns with the management of lists. Some states have used these lists to help counties track people who have moved within the state and to determine obsolete records.

D. Variation

There is considerable variation in the population size of jurisdictions that manage elections, and thus in the magnitude and complexity of the registration systems that they maintain.

i. One size likely doesn't fit all.

Half of all registration records in the United States are maintained by the 160 most populace counties. The other half of all records are maintained by the other 2900 counties (or the towns and cities in those counties).   Very different record management systems and software are required for the most populous jurisdictions and for the jurisdictions with relatively small populations or lists.

ii.   A small number of counties have extremely large registration databases.

According to figures maintained by the firm Catalist, the five election jurisdictions with the largest registration lists are

Los Angeles, California	4,685,640
Cook County, Illinois	3,301,237
Maricopa County, Arizona	2,196,705
Harris County, Texas	1,905,119
Orange County, California	1,643,667

The ten most populous counties in the United States manage a combined 27.1 million registration records. These offices account for less that one-tenth of one percent of all election offices in the United States, but they manage 14 percent of all registration records.

iii.   Most of the county registration systems in the United States are modest or small-sized lists. The distribution of lists across counties by size is shown in Table 1.   A third of all counties have fewer than 10,000 registrants, and 47 counties have lists with fewer than 1,000 registration records. A large number of towns in New England and Wisconsin similarly have small populations and small registration lists. In these locales, lists are typically managed as part of other services within town or

county administration, such as the recorder of deeds.   The registration list is very much a part-time activity. High tech solutions may tax the capacity of these offices.

Table 1. Number of Registrants and Counties by Size of Registration List			
Size of List	Number of Counties	Average Number of Registrants	Number of All Registrants
Fewer than 10,000 Names	1,055	5,125	5,406,875
10,000 to 50,000 Names	1,373	22,666	31,199,828
50,000 to 200,000 Names	490	97,298	47,676,054
200,000 to 1,000,000 Names	197	506,960	81,301,151
More than 1,000,000 Names	15	1,744,970	26,174,550
Source: Compiled by Authors from Catalist Registration Database, June 24, 2013			

v. Management of statewide registration lists presents an opportunity for the development of software for secure list-management and distribution. Most statewide lists have a couple of million records, and the largest state registration lists (California 18.0 million records, Texas' 13.0 million records, and Florida's 12.5 million records) present challenging problems of managing very large databases.

E. National Lists

No government entity maintains and manages a national voter registry. However, political organizations and firms, such as Catalist and DataTrust, have

aggregated the municipal, county, and state data files into national voter registration lists.

These organizations primarily use the lists to conduct get-out-the-vote activities and have developed fairly sophisticated technologies for measuring the quality of the lists. The technologies developed by these organizations might be of immediate use to states and some local election offices in improving there voter registration lists.

It is difficult to obtain information about the size and quality of voter registration lists. EAC provides a biennial snapshot of the lists, based on county reports. The data maintained by private firms provides the most comprehensive picture. These firms assess list quality, as well as list size, using methods that are comparable across jurisdictions. The data are updated continuously (as are registration lists). In the next section, we report figures from data maintained by the firm Catalist.

3. List Quality and Management

A. Registration Problems and Voting

The Current Population Survey (CPS) of the United States Bureau of the Census conducts a survey of roughly 75,000 respondents following each federal election. This is called the Voting and Registration Supplement to the CPS. One question asked in the survey is why non-voters did not cast a ballot. One category of the

question is "Registration Problem." The question format and methodology of the

survey has not changed over time, allowing for comparison of reasons for not voting

over time.   The Caltech/MIT Voting Technology Project, the National Commission

on Federal Election Reform, and other inquiries following the 2000 election relied

on this question to gauge the extent to which registration failures created obstacles

for voters.

   The CPS data reveal that registration problems remain a significant barrier to

voting, but there have been significant improvements over the past decade.   Table 3

presents the percent of people stating that "Registration Problems" were the main

reason they did not vote in a given general election.[2]

Table 3. CPS Reported Reasons for Not Voting: Registration	
Year	Percent Saying Registration Problems as Reason
2012	5.5 %
2008	6.0 %
2004	6.8 %
2000	6.9 %

   The decline from 6.9% in 2000 to 5.5% in 2012 is a statistically significant

decrease of 1.4 percentage points. That improvement translates into approximately

1.2 million additional voters at the polls in 2012. Specifically, there were 87.3

million non-voters among the citizen voting age population of the United States

(217.6-130.3). Had the rate of problems remained at 6.9% (the 2000 rate), instead

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[2] Data come from the reports from the
http://www.census.gov/hhes/www/socdemo/voting/publications/p20/index.html

of the 2012 rate of 5.5%, there would have been 1.2 million fewer votes in 2012.

Closer examination of the CPS tables of who increased suggests that the improvements were across all segments of the population, rather than in particular groups.

The rate with which non-voters cite Registration Problems as a barrier, however, remains a concern. The estimated 5.5 percent of all adult citizens in the United States who did not vote because of registration problems translates into 4.8 million persons. One key question is how to reduce further the rate with which registration problems create barriers to voting.

B. Registration Management

Local and state election offices have developed practices for managing registration lists over time. State and federal laws, especially the National Voter Registration Act (NVRA) and Help America Vote Act (HAVA), impose further constraints on how the lists are maintained.

The model in most locales is as follows. First, voters submit registration applications. Second, applications are received, inspected and verified by the office. Incomplete forms are voided. Third, valid registration applications are recorded into a database at a local election office or in the office that manages a statewide voter file. Fourth, an individual's previous record is dropped. If an individual was registered and indicates the address in the jurisdiction where he or she was registered, the election office updates the individual's registration and drops the old

entry. If the individual was registered in another jurisdiction (state or county), the election office sends the information to the jurisdiction at which the person was previously registered. Fifth, people for whom there is an indication that the registration may no longer be current are placed on an Inactive Voter list.   Sixth, people on the Inactive list for two federal elections can be purged.   (Other factors may trigger purges as well.)

This is a model in which the election offices have the primary responsibility for maintenance of voters' registration records.   Two key trends in state laws are shifting the responsibility for list management from the election office to the voters themselves.   First, 11 states plus the District of Columbia have adopted Same Day Registration (also called Election Day Registration).   These are California (2013), Connecticut (2012), Colorado (2013), District of Columbia (2010), Idaho (1994), Iowa (2007), Maine (1973), Minnesota (1974), Montana (2005), New Hampshire (1996), Wisconsin (1975), and Wyoming (1994).   Three other states —North Carolina, Ohio, and Maryland — allow those who are voting early at an election office to register and vote at the same time throughout the period of early voting.[3]

Second, 17 states have adopted On-Line Voter registration, in which people have the opportunity to register or update their registrations over the Internet. The states adopting On-Line Registration are Arizona (2002), California (2011), Colorado (2009), Connecticut (2012), Georgia (2012), Hawaii (2012), Indiana (2009), Kansas (2009), Louisiana (2009), Maryland (2011), Nevada (2012), New

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[3] Source: National Conference of State Legislators.
http://www.ncsl.org/legislatures-elections/elections/same-day-registration.aspx

Mexico (2013), Oregon (2009), South Carolina (2012), Utah (2009), Virginia (2013), Washington (2007), and West Virginia (2013).[4]

In other words, 28 states have adopted ways in which the voters have more immediate ability to manage their registrations. Nearly all of these changes in state laws have occurred since 2000.

C. Challenges

i. Residential Mobility

One force drives the most of the problems encountered in maintaining registration lists: residential mobility.   Registration lists are usually thought of as static – all people who are registered and eligible to vote, say for the November, 2012 general election.   The American population, however, is on the move. Every year, 12 percent of people in the United States move from one residence to another. Every 4 years almost half of all Americans move.

The dynamism of the American population is reflected in the day-to-day operation of the lists.   Registration lists change every day, as new records are added and obsolete records are dropped. The challenge for election offices is how to keep the list current and accurate as people move.   That challenge is made even greater because the lists maintained by the election office are usually not keyed to other lists maintained by state or local governments, such as death records. Most

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[4] Source: National Conference of State Legislators.
http://www.ncsl.org/legislatures-elections/elections/electronic-or-online-voter-registration.aspx

residential moves are within county, but county offices have not traditionally been able to track such moves.

Improvements in database management technologies, however, offer new opportunities to identify individuals who have moved. Many election offices use information from the Postal Service, such as the National Change of Address (NCOA) list, to identify movers. Some election offices now search for individuals who might have relocated using Lexis/Nexis and other databases.

ii. Types of Errors

Four types of errors in registration records can create election problems. These are

a. Incorrect information in records, such as typographical errors.

b. Obsolete information, such as changes in names or signatures.

c. Duplicate or obsolete records, such as when a person moves but does not notify the election office.

d. Improperly dropped records, such as when a person has not moved but is dropped from the rolls.

Errors in the registration databases can create other election administration difficulties. For example, many duplicate records can lead to inefficient distribution of poll workers to precincts. Also, a list with many incorrect records can slow down the processing of voters at polling places resulting in longer lines. Consequently, election administrators try to minimize these errors, and minimizing each sort of problem can ease other stresses on the election management system.

iii.   Indicators

Development of measures of each type of error would be helpful to local and

state election offices, in order to improve on list quality and to minimize election

management problems created by omissions from lists or errors in records.

Catalist has developed some indicators that are immediately revealing about the

overall quality of lists.   Using as NCOA and other postal lists, information from

marketing firms, past vote records, and other the entire national registration list,

Catalist identifies records that are "Deadwood."[5] Deadwood identifies records that

are likely obsolete because the person moved or died.

A relatively clean registration list would have a small percentage Deadwood,

and most of the Deadwood ought to be on the Inactive Voter file, rather than the

Active Voter File.   As of June 24, 2013, Catalist's records indicate that

- 7.3% of all registration records in the United States are "Deadwood."

- 3.0% of records on the Active lists in the states are "Deadwood."

- 66.2% of records on Inactive lists are "Deadwood."

The comparison of the Deadwood on the Active and Inactive lists reveals a relatively

high level of attention to the maintenance of the registration lists.   A Deadwood

figure of 3% among Active registrations is one quarter the number of persons who

move each year.   In other words, the local election offices appear to be quite good at

keeping pace with voters.   The high fraction of Deadwood among Inactive

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[5] Specifically, they classify records as Not Deadwood, Likely Deadwood, Probably
Deadwood, and Possibly Deadwood.   For simplicity we divide the records into Not
Deadwood and Deadwood.

Registrations means that the large majority of Inactive records appear to be cases that one plausibly might drop, say because the person has moved or died.

That said, there is some evidence that the Inactive classification does not perfectly catch non-voters or invalid registrations. In 2012, according to Catalist records, 7 percent of all Inactive registrants actually voted. In other words, 20 percent of the non-Deadwood portion of the Inactive list actually voted.

The fact that one-thirds of Inactives appear to be Not Deadwood presents a challenge or goal for local election offices. If the Catalist data are correct, then it appears that one-third of the Inactive lists might reasonably be valid registrations. The Catalist indicators suggest a target and a possible goal. The target is 1/3 and the goal would be to reduce the Not Deadwood portion of the Inactive list below 1/3. This is an example of how national registration data and list-matching technologies can be used to develop indicators of and targets for list quality.

4. Conclusions

Voter registration list development and maintenance is a rapidly changing aspect of election administration. Not only must the lists change continually to stay current, but state laws and technologies are changing very quickly and in ways that will reshape the registration systems in the future. The most significant of these changes are (i) the introduction of On-Line Registration and Same Day Registration, (ii) the development by private organizations of national registration lists, and (iii)

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the creation of new technologies for managing large databases and matching and tracking individual records.

We see several opportunities for innovation and improvement in the registration system.   First, technology available today makes it possible for citizens to register on-line or when voting and to manage their registrations on-line.   The states have begun to make this potential into a reality: 17 states have adopted on-line registration; 11 have adopted Same Day Registration, and 3 more allow registration at the time of early voting.

Second, list management technology makes it possible to improve the quality of lists. State and local election offices sometimes collaborate with technology firms, such as Lexis/Nexis, to maintain their voter files. These technologies allow the linking of many lists to verify residential addresses, to track residential mobility or name changes, and even to fix typographical errors (such as in addresses).   If appropriately deployed, these technologies could help minimize errors in lists.

Third, measures of list quality developed by private vendors suggest that it is possible to develop comparable metrics of list quality and targets for improving registration lists.   An example of a possible metric is the incidence of "Deadwood" on Active and Inactive lists. Having comparable metrics of list quality would allow election administrators to see what areas within their jurisdictions seem to have particularly high incidence of a given metric, so as to focus their efforts to improve lists.   It would allow administrators to set reasonable targets for improving list quality within their office.   It could also facilitate development of best practices.

Specifically, comparable metrics of quality or performance would reveal which election offices appear to have avoided or solved specific problems.

Fourth, there exists no national publicly-available list of total registrations and total votes cast at the precinct-level. Data on total registrations and votes cast at the precinct level are fundamental for providing an accounting of election results and operations at the level at which elections are run. Availability of such a database would help with the assessment of registration and other domains of election administration (such as technology performance). Today, most states make this data available; however, it is very difficult to obtain precinct level information from many states and a handful of states still do not report total numbers of voters.

Over the past decade there have been significant changes in the registration system in the states with the implementation of HAVA, the expansion of Same Day Registration and On-Line Registration, the adoption of new technologies, and the emergence of private firms dedicated to list management. These innovations have made the lists "smarter"—improving the ability of people to see their registration records, the ability of election offices to determine which records might be obsolete, and improving the ability of election offices and other users of this information to communicate with voters. These changes have come hand-in-hand with reductions in the number of people who say that they could not vote because of registration problems. The past decade of effort is evidence that local and state election offices, working together, can make significant strides to improve the election systems in the United States.