SPEED LEARNING:
EVALUATING POLLING ACCURACY

AAPOR Panel | May 16th, 2015

Mary McDougall | CFMC Survox

Summary of Panel Presentations

Evaluation of Mid-Term Election Polling in Georgia
Seth Brohinsky, Abt SRBI

AAPOR
American Association for Public Opinion Research

Sources of Error in the 2014 Midterm Pre-Election Polls
Natalie Jackson, Huffington Post/Pollster.com

What Happened in North Carolina? The 2014 Elections Through the Lens of the High Point University Poll
Brian McDonald, High Point University

Judging The Accuracy of Public Opinion Polls in Referendums
Thomas Marshall, University of Texas at Arlington

Measurements and Determinants of Polling Accuracy: Comparing Measures of Accuracy and Assessing Effects of Polling Practices
Jacob Sohlberg, University of Gothenburg, Department of Political Science

Evaluation of Methods for Polling Third Party Candidates
Joseph Lenski, Edison Research

Evaluating Polling Accuracy:

Evaluation of Mid-Term Election Polling in Georgia

Seth Brohinsky, Abt SRBI
Courtney Kennedy, Abt SRBI
Dean Williams, Abt SRBI

AAPOR 70th Annual Conference
Saturday, May 16, 2015

Seth Brohinsky
Project Director
Abt SRBI

- **Master's** Degree in Public Administration from the **University of Connecticut** and has directed several large-scale studies,
- including all election polling for the **2012 ABC News/Washington Post Election Polls.**

- Polling challenges in **Georgia**
- The **impact of experimental weighting** to improve horserace estimates for the 2014 U.S. Senate and Gubernatorial elections.
- What the **implications may be for the 2016** election

2014 Georgia Senate Race Polls

Poll	Date	Sample	MoE	Perdue (R)	Nunn (D)	Swafford (L)	Spread
Final Results	--	--	--	**53.0**	**45.1**	**1.9**	**Perdue +7.9**
RCP Average	**10/27 - 11/3**	--	--	**47.8**	**44.8**	**3.6**	**Perdue +3.0**
PPP (D)	11/1 - 11/3	975 LV	3.1	46	45	5	Perdue +1
WSB-TV/Landmark	11/2 - 11/2	1500 LV	2.5	50	46	2	Perdue +4
SurveyUSA	10/30 - 11/2	591 LV	4.1	47	44	5	Perdue +3
InsiderAdvantage	10/30 - 11/2	1463 LV	2.6	48	45	3	Perdue +3
YouGov	10/25 - 10/31	1743 LV	3.2	44	42	1	Perdue +2
NBC News/Marist	10/27 - 10/30	603 LV	4.0	48	44	3	Perdue +4
WSB-TV/Landmark	10/29 - 10/29	1500 LV	2.5	47	47	3	Tie
SurveyUSA	10/24 - 10/27	611 LV	4.0	48	45	3	Perdue +3
Atlanta Journal-Constitution	10/16 - 10/23	1170 LV	3.6	44	42	6	Perdue +2
CBS News/NYT/YouGov	10/16 - 10/23	1774 LV	4.0	47	44	1	Perdue +3
InsiderAdvantage	10/21 - 10/22	704 LV	3.7	45	47	4	Nunn +2
CNN/Opinion Research	10/19 - 10/22	565 LV	4.0	44	47	5	Nunn +3
WSB-TV/Landmark	10/20 - 10/21	1000 LV	2.8	47	47	3	Tie
SurveyUSA	10/17 - 10/20	606 LV	4.1	44	46	4	Nunn +2
WRBL/Ledger-Enquirer/PMB	10/13 - 10/14	1543 LV	2.5	45	46	6	Nunn +1

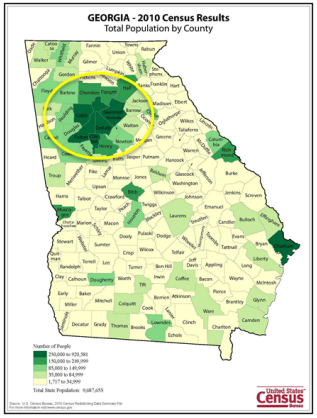
2014 Georgia Governor Race Polls

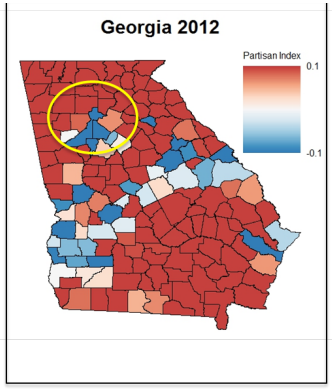
Poll	Date	Sample	MoE	Carter (D)	Deal (R)	Hunt (L)	Spread
Final Results	--	--	--	**44.8**	**52.8**	**2.4**	**Deal +8.0**
RCP Average	**10/27 - 11/3**	--	--	**43.4**	**48.0**	**4.0**	**Deal +4.6**
PPP (D)	11/1 - 11/3	975 LV	3.1	43	47	4	Deal +4
WSB-TV/Landmark	11/2 - 11/2	1500 LV	2.5	45	51	3	Deal +6
SurveyUSA	10/30 - 11/2	591 LV	4.1	42	47	5	Deal +5
InsiderAdvantage	10/30 - 11/2	1463 LV	2.6	44	47	5	Deal +3
YouGov	10/25 - 10/31	1743 LV	3.2	41	45	1	Deal +4
NBC News/Marist	10/27 - 10/30	603 LV	4.0	43	48	3	Deal +5
WSB-TV/Landmark	10/29 - 10/29	1500 LV	2.5	46	48	4	Deal +2
SurveyUSA	10/24 - 10/27	611 LV	4.0	44	46	3	Deal +2
Atlanta Journal-Constitution	10/16 - 10/23	1170 LV	3.6	41	46	5	Deal +5
CBS News/NYT/YouGov	10/16 - 10/23	1774 LV	4.0	43	47	2	Deal +4
InsiderAdvantage	10/21 - 10/22	704 LV	3.7	44	44	5	Tie
CNN/Opinion Research	10/19 - 10/22	565 LV	4.0	48	46	6	Carter +2
WSB-TV/Landmark	10/20 - 10/21	1000 LV	2.8	45	48	5	Deal +3
SurveyUSA	10/17 - 10/20	606 LV	4.1	43	45	4	Deal +2
WRBL/Ledger-Enquirer/PMB	10/13 - 10/14	1543 LV	2.5	44	44	6	Tie

Polling Overview

2014 Polling Trends

- Georgia has become **less white** in the last four years.
- Fall 2014 polling was based on an electorate no more diverse than in 2010, the last midterm election.
  - In some 2014 polls, black voters represent an even smaller share of the electorate than in 2010.
- Historically **mid-term elections favor the Republican** candidate in Georgia.





Georgia Secretary of State Data

- Georgia secretary of state data: 2010 electorate

  66.3 % white
  → **58%** by 2014

  28.2 percent black

- Historically, **white voters turn out at a higher rate** than other voters in past midterm elections.

AJC Poll - October 16 to October 23, 2014

- Sample Design
  - **Telephone interviews** with representative sample of 2,003 Georgia residents - landline (n=1,201), cell phone (n=802).
  - **Likely Voters:** Voter registration, intention to vote, attention to the race, and history of voting.
- Weighting
  - The weighting accounted for the dual-frame sample design using single frame estimation and **aligned the sample to match the population** parameters of the adult population in Georgia.
  - The full sample was raked to 2013 ACS benchmark demographic distribution for GA adult population:
    - Sex, age, education level, race/Hispanic ethnicity, region (North, Atlanta Metro, Atlanta Exurbs, Southeast, Southwest), and telephone usage.
  - Trimming: Base weights and final weights were trimmed to reduce variance and increase precision of survey estimates.

Approach - Experimental Weights

- We propose three alternative weighting solutions to improve the horserace estimates:
  - **RVwgt.** Addition of weight factors based on Georgia's extensive registered voter data provided by the Georgia Secretary of State;
  - **PIDwgt.** Post weight rake to trended Party ID target for all Georgia residents;
  - **Educwgt.** Separate weighting targets for "Less than high school grad" and "High School graduate";
- We analyze whether the various weighting corrections improve the final election estimates in light of the actual election result.

Experimental Weight 1: RVwgt

- Registered Voter Weight
  - Weight estimates developed from Georgia's extensive voter history data.
  - Three stage weighting process:
    1. **Pre-stage correction for probability of selection**;
    2. **Balance sample demographics for all respondents** on: Telephone usage (cell-only, dual-user, landline-only), education, and region (North, Atlanta Metro, Atlanta Exurbs, Southeast, Southwest);
    3. **Drop all Non-RV and** weight only RV's on: Race x Age and Race x Gender registered voter targets.

Experimental Weight 2: PIDwgt

- Party Identification Weight
  - Party ID weight constructed from the average of the last three Georgia polls
    - Applied following our standard first and second stage weighting.
    - Post-Weight to Party ID:
      - PID target is based 50% on the weighted PID estimate for the current poll and 50% on the average of the three previous Georgia polls.
  - Rationale: This "flexible" PID weight **(1) accounts for change in party identification over time (2) guards against bad party distribution in an individual poll** by chance.

Experimental Weight 3: EducWgt

- Less Than High School / HS Grad Weight
  - Break out “less than HS” and “HS graduate” weight adjustment
  - **Rationale: Individuals with low educational attainment and income are often underrepresented in survey data.**
    - We often collapse LT HS because it likely requires large weights due to small base size.

EDUCATION x GENDER		Male	Female		
		GEN=1	GEN=2		
EDUC4_RAKING=1	LESS THAN HS	7.85%	7.15%		
EDUC4_RAKING=2	HS GRAD	14.48%	14.25%		
EDUC4_RAKING=3	SOME COLLEGE/ASSOCIATES	13.77%	16.95%		
EDUC4_RAKING=4	COLLEGE GRAD+	11.99%	13.56%		
				100.0%	
EDUCATION x AGE		18-29	30-49	50+	
		AGE3_RAKING=1	AGE3_RAKING=2	AGE3_RAKING=3	
EDUC4_RAKING=1	LESS THAN HS	3.61%	4.73%	6.58%	
EDUC4_RAKING=2	HS GRAD	6.47%	9.70%	12.63%	
EDUC4_RAKING=3	SOME COLLEGE/ASSOCIATES	8.98%	10.97%	10.67%	
EDUC4_RAKING=4	COLLEGE GRAD+	3.61%	11.51%	10.55%	
					100.0%

Experimental Weighting - Senate

	Actual Vote	Original Wgt	RV Demo Rake	PID Rake	Educ Split
Nunn (D)	45.1	41.8	40.0	41.6	42.2
Perdue (R)	53.0	43.5	45.5	43.7	43.2
Swafford (I)	1.9	6.4	6.5	6.5	6.5
Margin (R-D)	7.9	1.7	5.5	2.1	1.0
Predictive Accuracy		-0.12	-0.03	-0.11	-0.14
*Mosteller 5 (Diff in Diff)		6.20	2.40	5.80	6.90

*Mosteller 5: The (unsigned) difference of the oriented differences between predicted and actual percentage results for the top two candidates.

Experimental Weighting - Governor

	Actual Vote	Original Wgt	RV Demo Rake	PID Rake	Educ Split
Carter (D)	44.8	40.5	38.2	40.3	40.9
Deal (R)	52.8	45.9	48.2	46.2	45.8
Hunt (I)	2.4	5.5	5.5	5.5	5.4
Margin (R-D)	8.0	5.4	10.0	5.9	4.9
Predictive Accuracy		-0.04	0.07	-0.03	-0.05
*Mosteller 5 (Diff in Diff)		2.60	2.00	2.10	3.10

*Mosteller 5: The (unsigned) difference of the oriented differences between predicted and actual percentage results for the top two candidates.

Recommendations

1. Registered Voter Weight

   – Using state RV data **can improve accuracy** of pre-election poll estimates in Georgia. Enough evidence to consider an RV weight for mid-term elections.

   – Limitations: may vary race to race; not all states collect and provide extensive registered voter demographic data.

2. Party Identification Weight

   – Evidence of **small beneficial effect** from inclusion of Party ID weight in raking.

   – Limitations: uncertainty about how this generalizes to other races in other states; requires recent polling to maintain accurate PID targets.

~~Less Than High School Weight~~

Do not recommend separating LT HS from HS grad in the weighting procedure

Explaining House Effects in 2014 Pre-Election Polls

Natalie Jackson
Mark Blumenthal
Huffington Post/Pollster.com

HUFFPOST POLLSTER

Presented at the 70th Annual Conference of the American Association for Public Opinion Research, Hollywood, FL May 16, 2015

Natalie Jackson
Data Scientist
Huffington Post Pollster

Natalie **focuses on survey methods controversies**, data quality, and election forecasting

Explaining House Effects in 2014 Pre-Election Polls

- ❑ What **factors bias a pollster** to favor one side or the other
- ❑ Why is this stronger in some firms over other
- ❑ Why some states are easier to poll than others

FiveThirtyEight's Pollster Ratings

FiveThirtyEight's pollster ratings are calculated by analyzing the historical accuracy of each firm's polls along with its methodology. Accuracy scores are adjusted for the type of election polled, a firm's sample size, the performance of other polls surveying the same race, and other factors. We also calculate measures of statistical bias in the polls.

Read more about our ratings » | Download the data »

RATINGS | DEFINITIONS

POLLSTER	CALLS CELLPHONES	NCPP/ AAPOR/ ROPER	POLLS ANALYZED	SIMPLE AVERAGE ERROR	SIMPLE +/-	ADVANCED +/-	PREDICTIVE +/-	538 GRADE	BANNED BY 538	MEAN-REVERTED BIAS
Selzer & Company	●	●	32	4.1	-1.3	-1.5	**-1.0**	A+		D+0.0
Field Research Corporation (Field Poll)	●	●	23	3.9	-1.6	-2.5	**-1.3**	A+		R+1.1
Ciruli Associates	●	●	17	3.6	-1.9	-2.0	**-1.0**	A+		R+0.7
SurveyUSA	◐	●	722	4.5	-0.9	-1.0	**-0.9**	A		R+0.2
Grove Insight	●		29	3.1	-1.7	-2.1	**-0.9**	A		D+0.5
Blum & Weprin Associates	●		18	4.6	-0.5	-2.8	**-0.9**	A		R+1.0
Elway Research	●	●	16	4.4	-1.5	-1.9	**-0.9**	A		D+0.5
National Journal	●	●	12	2.6	-2.4	-2.1	**-0.8**	A		R+0.2

What are house effects and why do we care?

- Difference between polls from one pollster and all other polls
  - Horse-race polling: is a pollster consistently favoring one side or the other?
- During an election cycle, house effect = difference from "industry average"
- Post-election, calibrate to results to get systematic deviations from election outcome
  - Rough estimate of pollster accuracy

19

Possible sources of house effect

PARTISANSHIP

Difference from Average

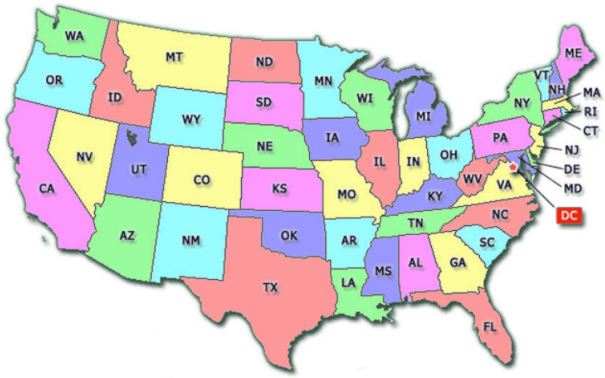
	2014
Democrat	-1.1
Nonpartisan	0.29
Republican	0.65

MODE

Average House Effect for 2014 Polls

Method	Senate	Governors	All
All	-3.94	-3.74	-3.84
Live phone	**-3.67** 308 polls	**-3.08** 347 polls	**-3.36** 655 polls
Internet	**-3.35** 150 polls	**-3.99** 159 polls	**-3.68** 309 polls
IVR	**-2.94** 94 polls	**-3.46** 95 polls	**-3.20** 189 polls
IVR/Internet	**-4.34** 275 polls	**-4.35** 263 polls	**-4.34** 538 polls
Total polls*	853	887	1740

GEOGRAPHY



How to figure out what drives house effects:

- **Build a regression model**
  - Unit of analysis: Pollster
  - Dependent variable: absolute value of result-corrected house effect (higher value = more house effect, lower value = less house effect

Model 1: Pollster Characteristics

	Coefficient
Number of polls	-0.03**
Polled in multiple states	-1.50**
Number of "surprise" races polled [1]	0.83**
Last poll n days before election	0.01**
Partisanship	-0.89*
Mode: Internet	0.12
Mode: Automated/IVR	-1.24
Mode: Live interviewer (LL + cell)	-0.79
Pollster n = 191	Adjusted R^2 0.06

[1] Races where the outcome margin was 5 or more percentage points different than poll averages. Includes GA, IA, KS, KY, LA, VA Senate; MD, VT governor.
**p < 0.05 * p < 0.1, two-tailed

Adding where they polled…

Model 2: Pollster Characteristics Plus States

	Coefficient
Number of polls	-0.04**
Polled in multiple states	-0.52
Number of "surprise" races polled*	4.12**
Last poll n days before election	0.00
Partisanship	-1.41**
Mode: Internet	-0.91
Mode: Automated/IVR	-0.79
Mode: Live interviewer (LL + cell)	-1.74**
Alaska	-1.40
Arkansas	3.25**
Colorado	-2.23**
Georgia	-5.33**
Florida	-1.94**
Iowa	-3.26**
Kentucky	-1.08
Louisiana	-5.98**
Michigan	-2.52**
New Hampshire	-1.53*
North Carolina	-0.10
Pollster n = 191	Adjusted R^2 0.31

[1] Races where the outcome margin was 5 or more percentage points different than poll averages. Includes GA, IA, KS, KY, LA, VA Senate; MD, VT governor.
**p < 0.05 * p < 0.1, two-tailed

GEO & MODE

Model 2: Pollster Characteristics Plus States

	Coefficient
Number of polls	-0.04**
Polled in multiple states	-0.52
Number of "surprise" races polled*	4.12**
Last poll n days before election	0.00
Partisanship	-1.41**
Mode: Internet	-0.91
Mode: Automated/IVR	-0.79
Mode: Live interviewer (LL + cell)	-1.74**
Alaska	-1.40
Arkansas	3.25**
Colorado	-2.23**
Georgia	-5.33**
Florida	-1.94**
Iowa	-3.26**
Kentucky	-1.08
Louisiana	-5.98**
Michigan	-2.52**
New Hampshire	-1.53*
North Carolina	-0.10
Pollster n = 191	Adjusted R^2 0.31

[1] Races where the outcome margin was 5 or more percentage points different than poll averages. Includes GA, IA, KS, KY, LA, VA Senate; MD, VT governor.

**p < 0.05 * p < 0.1, two-tailed

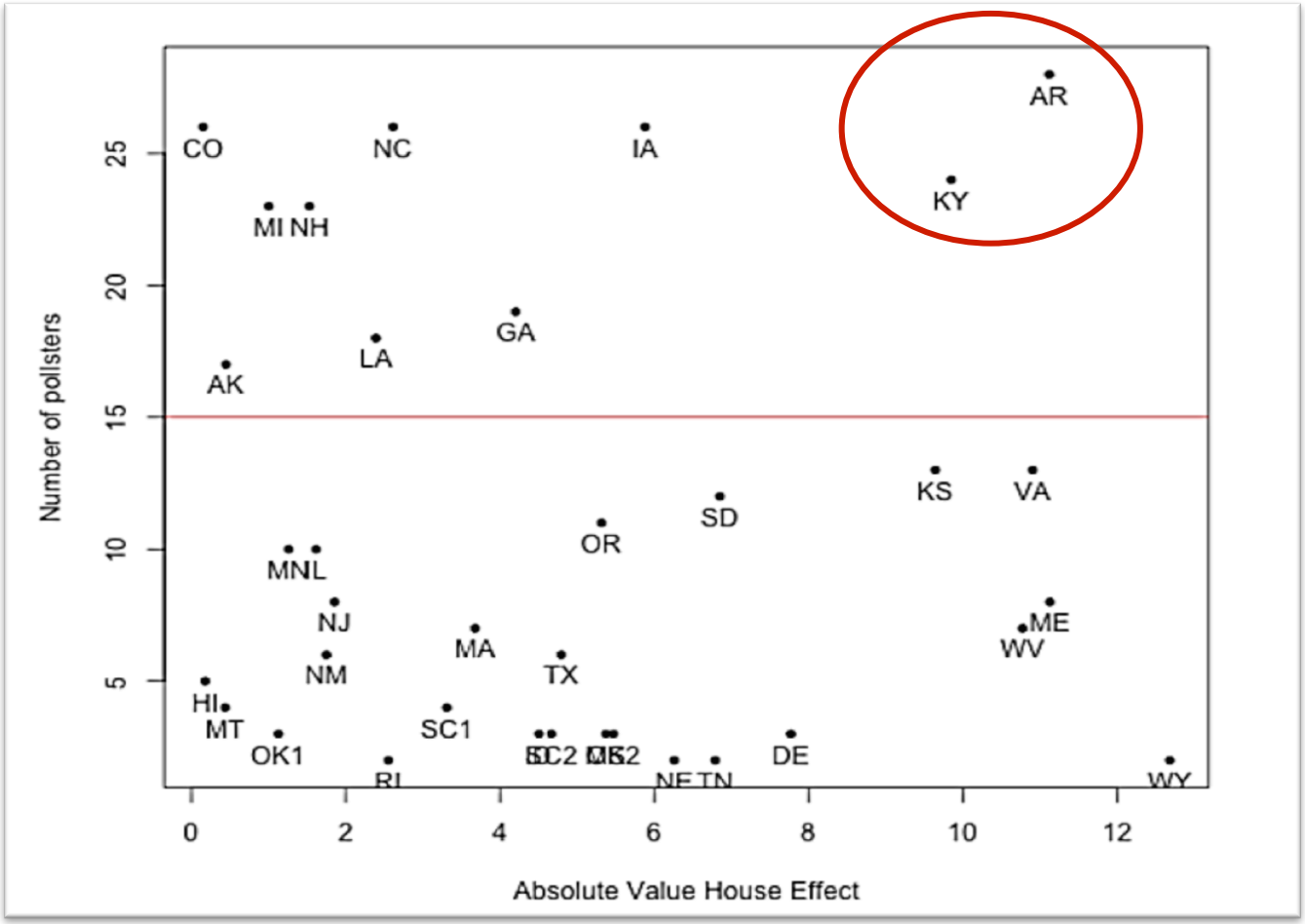
- Arkansas positive, Georgia & Louisiana large negative coefficients
  - Possible explanations:
    - GA & LA 36% (highest)
    - AR highest
    - GA & LA lowest, AR highest

	Correlation with model coefficient
% nonwhite	-0.44
Avg poll error	0.28
# pollsters	0.65

- **Live interviewer mode suddenly matters when the states are included.**

- **Number of pollsters effect isn't consistent.**
  - **– Among all states more pollsters = less error**

Number of pollsters vs. House effect



Arkansas

&

Kentucky

are outliers

Conclusions

- **Where** you're polling seems to drive error-corrected house effect
  - Common sense in a midterm year. What happens in Presidential cycles
- Can't **explain** much **variance** with anything besides **geography**
  - Hard to really say what differences between pollsters contribute most to errors and house effects
  - So do these measures really tell us anything useful about the pollsters? [DK, more research needed!]
- What would help explain variance in house effect and rate pollsters?
  - A common theme: look beyond the toplines
  - Transparency: provide detailed methods and crosstabs

HIGH POINT UNIVERSITY
SURVEY RESEARCH CENTER

EVALUATING POLLING ACCURACY

What Happened in North Carolina?

Brian McDonald and Martin J. Kifer
HPU Survey Research Center

Saturday, May 16, 2015

HIGH POINT UNIVERSITY
SURVEY RESEARCH CENTER

Brian McDonald

Assistant Director
High Point University Survey Research Center

Prior to joining High Point, Brian's **10+ years** experience includes

Evaluator for a **Race to the Top** grant
Program Director of Survey Research at **Kent State**

What Happened in North Carolina?

- ❑ Why was **Kay Hagan** predicted to win over **Thom Tillis**
- ❑ How **demographics** affect the outcome

HPU | www.highpoint.edu

Approach

- ***Chose RBS*** *for fall 2014:* Encouraged by Morin (2003), Gerber and Green (2006), Shipman and Leve (2006), Mitofsky, et al (2005)
- ***Three polls****:* Sept 13 – 18 and Sept 30 – Oct 9 (live interviewer), Oct 21 – 25 (IVR, with SurveyUSA)
- ***Telephone Interviews:*** *SRC specs*- 42 stations, 6 days a week (Sat – Thurs), Sawtooth Wincati dialing Cisco VOIP phones

HIGH POINT UNIVERSITY
SURVEY RESEARCH CENTER

APPROACH

Poll (Dates)	Mode	Sample	(Re)Screen	Sample size (MoE)	Weighting
HPU Poll 31 (9/13 – 9/18)	Live interviewer	RBS (2010 voters, 2012 voters registered after 2010, registered after 2012)	LVs were "certain" or "probably" voters in November	410 LVs (approx. 5 percent)	Race, gender, age (based on 2010 voting statistics)
HPU Poll 32 (9/30 – 10/9)	Live interviewer	RBS (2010 voters, 2012 voters registered after 2010, registered after 2012)	LVs were "certain" or "probably" voters in November	584 (approx. 4.1 percent)	Race, gender, age (based on 2010 voting statistics)
HPU Poll/ Survey USA (10/21 – 10/25)	IVR plus live interviewer for cell phones	RBS (2010 voters, 2012 voters registered after 2010, registered after 2012)	Had voted or "will vote"	802 (approx. 3.3 percent)	Race, age, gender, ethnic origin or region

HIGH POINT UNIVERSITY
SURVEY RESEARCH CENTER

OUTCOME – KEY FINDINGS

Poll (Dates)	Horserace (Hagan – Tillis)	Race gaps (Hagan – Tillis)		Gender gaps		Party ID gaps			Ideology gaps		
		Black	White	Male	Female	D	R	I	C	M	L
HPU Poll 31 (9/13 – 9/18)	2	83	-25	-6	7	84	-77	4	-55	33	88
HPU Poll 32 (9/30 – 10/9)	-1	58	-20	-6	0	75	-77	4	-55	33	88
HPU Poll/ Survey USA (10/21 – 10/25)	0	78	-23	-13	10	73	-75	-3	-66	43	76
Exit Poll	-1 (real result)	93	-29	-15	12	83	-87	-7	-66	23	83
Average (after 10/20, public xtabs)	1.8 (approx. 2)	78	-22	-7	10	74	-79	-2	-57	30	77

OUTCOME – KEY FINDINGS

- **RBS sampling** appeared to work well enough for tight NC election
- **Gaps** in demographics/crosstabs comparable to other polls
  - big **race** gap
  - moderate (variable) gender gap
  - big **party** and **ideological** gaps

Judging the accuracy of public opinion polls in referendums

Presentation at the 2015 AAPOR meeting -- Hollywood, FL

by Thomas R. Marshall

The University of Texas at Arlington – tmarshall@uta.edu

Thomas Marshall

Professor of Political Science
University of Texas at Arlington

Thomas teaches classes on public opinion, campaigns and elections

- Focuses how **public opinion drives public policy**
- Writing a **book** on US **public opinion** & **smoking policy**

Judging The Accuracy of Public Opinion Polls in Referendums

- ❑ Studied elections where there was a **tobacco-related issue**
- ❑ Effect of question **wording** and question **order** on results

5 types of poll questions

1. **"uninformed" heads-up** (baseline or tracking polls) – early in the survey, briefly describes the ballot issue and then asks favor/oppose
2. The "**strongly/somewhat favor/oppose**" uninformed heads-up
3. **"ballot format" heads-up** (baseline or tracking) – early in the survey reads the *actual ballot wording or a close paraphrasing* and then asks favor/oppose
4. **"informed" heads-up** -- near the end of the survey following several push-format questions, and then asks favor/oppose
5. **Post-election "uninformed" heads-up**

Does a "strongly" favor/oppose question improve accuracy? No.

- Sometimes an uninformed heads-up also asks whether a favor/oppose opinion is "strongly" held.
- This format doesn't improve accuracy. Average error for favor/oppose (only) format = 7.5%. Average error for the "strongly" format is 11% (both cf. to the tobacco control vote percentages).
  - **For the favor/oppose format, errors usually *over*estimate the election-day results**
  - **For the "strongly" format the errors are usually *under*estimates.**

- Simply averaging the two figures reduces the average error to 6.3% with a normal distribution of under- and over-estimates of the election day figures for the tobacco control side….

- **This finding is not affected by the type of election** (tax versus public smoking), **days out, or cash spending ratio**.

Does a "ballot format" question reduce the error in pre-election "uninformed" heads-up? No.

- Occasionally a pollster asked the short "uninformed" heads-up immediately followed by a follow-up question with the actual (or slightly paraphrased) ballot wording, then asked a "ballot format" heads-up question.
- **9% average shift** (for tobacco control)from the "uninformed" to the "ballot format" question … (with an average increase of 7% for the pro-tobacco control side)
- **but … the "ballot format" question actually performs 2.4% worse than the "uninformed" question** – that is, a 7.6% average error to the election results versus 5.2% for uninformed heads-up (again for the tobacco control side)

Do push-format questions help reduce error in pre-election polls?* Not necessarily.

*always compared to the earlier "uninformed" question

Average effect of push-format questions:

- A drop in support for tobacco control = 5.3% avg.
- A reduction in don't know/refused = 1.1% avg.
- … **but …the average reduction in "error" = 0%.**
- (The average number of push-format questions is 7 pro-tobacco control and 16 pro-smoking but with wide variations, often 2-to-1 or 3-to-1 or 4-to-1 anti-tobacco control).

More on push-format questions …

- Push-format questions *almost always* reduce the pro-tobacco control percentage *except if* there are very few push format questions or if there are about the same number of pro and con questions.

- Generally, when the ratio of anti-to-pro tobacco control questions exceeds two-to-one, the forecasting accuracy does not improve.
  - A push-format question ratio of 1-to-1 or 2-to-1 improves forecasting accuracy.
  - However, there is a wide variation in the patterns.

Five Conclusions?

1. **"Uninformed"** heads-up questions **improve nearer** to the election.
2. The "strongly" format **doesn't improve** forecasting accuracy.
3. "**Ballot format**" questions **don't improve** forecasting accuracy.
4. An "**informed**" heads-up question following push-format questions **doesn't necessarily improve** forecasting accuracy. A ratio of up to 2:1 anti-to-pro questions was optimum for forecasting accuracy. Push format questions may be more useful for identifying the best campaign issues.
5. **Post-election surveys perform fairly** well in accuracy and are useful for other purposes.

UNIVERSITY OF GOTHENBURG

MEASUREMENTS AND DETERMINANTS OF POLLING ACCURACY: COMPARING MEASURES OF ACCURACY AND ASSESSING EFFECTS OF POLLING PRACTICES

Jacob Sohlberg, Mikael Gilljam and Johan Martinsson

AAPOR 2015, MAY 16, HOLLYWOOD, FL.

Jacob Sohlberg, PhD, Post-doc
University of Gothenburg,
Department of Political Science

Doctorate from Stoney Brook University in NY

Jacob's research is mainly within **political psychology** with an **emphasis on environmental attitudes, personality & values**

Measurements and Determinants of Polling Accuracy: Comparing Measures of Accuracy and Assessing Effects of Polling Practices

- ❑ Compares **measures** of pre-election polling accuracy
- ❑ Examines factors that influence **accuracy**.
- ❑ Explores **opt-in** versus **random sampling**

Introduction

- Big issue in survey research: opt-in versus random sampling
- Elections provide unique opportunity to examine survey quality

Determinants of pre-election polling accuracy

- Probability sampling
  - Promoted by most textbooks and polling organizations, including AAPOR
  - The problems with opt-in sampling are well-known (Literary Digest, etc.)
- Opt-in sampling
  - For traditional surveys: falling response rates and difficulties in reaching certain groups
  - Improvements in how opt-in samples are recruited
  - Better post-stratification (e.g., Wang, Rothschild, Goel and Gelman 2014)
- Other factors:
  - Days to the election
  - Sample size
  - Number of fielding days

Method

- Pre-election polls taken in Sweden during the latest three elections (2006, 2010, 2014)
  - Sweden currently has eight parties in parliament
  - Sample includes polls five weeks before election
  - Available info: n, starting and closing dates
- Challenge: info on pollsters' methods
  - We sent survey to them
- Many traditional accuracy measures inadequate in multiparty or multicandidate elections, but the following work:
  - Arzheimer and Evans (2014)
  - Mosteller 3

Results: Arzheimer and Evans (Weighted B')

	1	2	3	4	5
Days before election	**.00095 (.00039)**				.00074 (.00047)
Sample size		**-.0051 (.00048)**			**-.0042 (.0011)**
Fielding days			.0011 (.0012)		.00088 (.0012)
Opt-in sample (dummy)				**.016 (.0063)**	**.017 (.0046)**
R-squared	0.064	0.076	0.016	0.035	0.164
N	112	113	112	113	112

Results: Mosteller 3

	1	2	3	4	5
Days before election	**.010 (.0035)**				.0080 (.0048)
Sample size		**-.054 (.0050)**			**-.0045 (.0011)**
Fielding days			.013 (.011)		.0097 (.013)
Opt-in sample (dummy)				**.16 (.066)**	**.18 (.05)**
R-squared	0.083	0.068	0.018	0.034	0.175
N	112	113	112	113	112

Conclusion

- Polls based on opt-in samples more biased than those based on probability samples
- Larger samples more accurate
- The two accuracy measures for multiparty elections highly correlated and yield similar results
- A few pollsters not very transparent about their methods, but a majority are

Evaluation of Methods For Polling Third Party Candidates

May 16, 2015

Joe Lenski

Joe Lenski

Co-founder and Executive VP of Edison Research

Edison Research currently **conducts all exit polls** for the **six major news** organizations comprising the National Election Pool (NEP) - ABC, CBS, CNN, Fox, NBC and the Associated Press.

Evaluation of Methods for Polling Third-Party Candidates

- ❑ Studied pre-election polls
- ❑ Should 3rd party candidates be **included** in the poll?
- ❑ Is it better to have **all** of them or just the **top** few?
- ❑ How best to **word** the question

edison research

Why do I care about polling third party candidates?

- Edison Research conducts the exit polls for the National Election Pool (ABC, CBS, CNN, FOX, NBC and the Associated Press)
- We need to determine which candidates to include on the printed exit poll questionnaires in each state
  - We want to make sure that we **don't waste valuable space** on the questionnaire with fringe candidates who will end up with only a small percentage of the vote
  - At the same time we **don't want to miss having a candidate** included who ends up with a significant percentage of the vote or has an effect on the outcome of the race

edison research

What did I find when reviewing pre-election polling of third party candidates?

- **Very little consistency** on whether the **names** of third party candidates were included in the vote questions
- **Very little consistency** on the **wording** of vote questions **when** the names of third party candidates were **not included** in the vote questions
- While there is a lot of evaluation of the accuracy of pre-election polls when it comes to the Democratic and Republican candidates or at least the difference between the Dem and Rep candidates – thank you HuffPollster and FiveThirtyEight.com – there is very little evaluation of the accuracy of pre-election polling of third party candidates

edison research

So overall how accurate was the pre-election polling reported for third party candidates?

- The **overall accuracy is not bad** but there is an overall tendency for pre-election polls to **overstate third party candidates**
  - Mean directional error +0.5
  - Median directional error +0.3
  - Mean absolute error 2.1
  - Median absolute error 1.3
  - 56% overstated third party candidate
  - 41% understated third party candidate
- However, there are some patterns of systematic bias hidden within this data
- Note that mean average vote percentages for candidates measure was 3.5%; median was 3.1%.

edison research

Using the candidate names makes a difference

- When the third party candidates are **named** in the vote question, pre-election polls tend to **overestimate** the vote for the third party candidates
- When the third party candidates are **not named** and "other" or "someone else" is used, polls tend to **underestimate** the vote for the third party candidates

Candidate Names	N	Error	Abs Error	Over	Under
Listed	942	+1.3	1.9	70%	27%
Not listed	518	-1.0	2.5	31%	68%

edison research

And if a polls names third party candidates it should name all of them

- The pre-election polls that listed all of the third party candidates were more accurate than those that only listed some of the third party candidates
- It seems that only giving one third party candidate option when there are multiple third party candidates on the ballot inflates the numbers for the third party candidate named

Candidate Names	N	Error	Abs Error	Over	Under
All listed	757	+1.1	1.7	68%	27%
Only some listed	185	+2.0	3.0	78%	22%

edison research

Even within a polling organization, using the candidate names makes a difference

- For example, using all 44 data points the Marist polls had a small average error on third party candidates
- However, when candidates were **listed** the **Marist** polls **overestimated** the third party candidates, and when the candidates were **not listed** the Marist polls **underestimated** the overall third party vote
- This pattern was also true with other polling organizations including Quinnipiac and SurveyUSA but for some reason not with the Fox News polls

Candidate Names	N	Error	Abs Error	Over	Under
Listed	28	+1.4	1.5	79%	7%
Not listed	16	-2.7	2.7	0%	100%

edison research

Summary of Findings

- Pre-election polling for third party candidates
  - Overestimates the vote for third party candidates when those candidates are named
  - Underestimates the total vote for third party candidates when the candidates are not named in the survey and “other” or “someone else” is used instead
- Accuracy is **better when all third party candidates are listed** instead of only some of the third party candidates
- The differences in overstating or understating support for third party candidates for the most part hold even within the same polling organizations – although there are some exceptions

edison research

Recommendations for using pre-election polls for estimating vote for third party candidates

- My recommendation to aggregators is to aggregate
  - First, average the polls which list the third party candidates
  - Second, average the "other" for polls which do not list the third party candidates
  - Third, average the two averages

Race Averages	N	Error	Abs Error	Over	Under
Candidates listed	94	+1.0	1.5	80%	20%
Candidates not listed	59	-1.2	2.0	27%	71%

edison research

Recommendations for polling organizations for dealing with third party candidates

- Acknowledge that asking about vote for third party candidates
  - Will usually inflate the third party candidates when the names are listed
  - Asking about third party vote when candidates are not listed will usually understate the total third party vote

- Experiment with asking the vote questions both ways and averaging the results either by
  - asking the entire sample both questions (listing and not listing the third party candidates)
  - or by split-sampling and asking one-half of the sample each of the two vote questions

edison research

Polling Accuracy

- Sample
  - RBB similar to RDD; opt-in sample introduces bias
  - Registered Voter weighting improves accuracy
  - Demographics matter
- Poll Design
  - Question Wording -- Little impact
  - Third Party Candidates – significant effect
    - Include all names for greater accuracy
- Pollster Bias?

Mary McDougall

MMCDOUGALL@CFMC.COM