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Feb. 3, 2014

Review of 2013 Election Polling
By the Rutgers-Eagleton Poll

Executive Summary

This report constitutes our review of public opinion research conducted by the Eagleton Center for Public Interest Polling at the Eagleton Institute of Politics, Rutgers University, through its Rutgers-Eagleton Poll, in the 2013 U.S. Senate and gubernatorial elections in New Jersey. The Institute commissioned this review as an independent examination of the possible causes of its imprecise vote-preference estimates in both these races.

Compared with the election outcomes, the Rutgers-Eagleton Poll significantly overstated support for the leading candidates, Democrat Sen. Corey Booker and Republican Gov. Chris Christie, and/or understated support for their opponents. It did so, in most cases, by wider margins than did contemporaneous, publicly released opinion polls by other survey producers, specifically the polling institutes at Fairleigh Dickinson (FDU), Monmouth and Quinnipiac universities.

We have conducted this review by evaluating the sample design, survey instruments, datasets, data analysis and news releases of the Rutgers-Eagleton surveys, as well as relevant materials helpfully provided by FDU, Monmouth and Quinnipiac. Monmouth deserves particular thanks for sharing its full datasets, an exemplary level of disclosure.

We find that the Rutgers-Eagleton vote-preference estimates in the 2013 elections likely were biased by questionnaire design. In a departure from best practices, vote-preference questions were preceded by questions on the leading candidates' personal favorability and "feeling thermometer" ratings, and, in the case of Christie, job performance ratings. We conclude that these questions produced priming and cognitive consistency effects, encouraging respondents who were positively inclined toward Christie and/or Booker on favorability and job performance questions to over-report their intention to vote for these candidates, or to under-report support for their opponents.

While conclusive evidence of priming would require a controlled experimental design, our evaluation of the data finds that distortion in the Rutgers-Eagleton estimates occurred among groups most logically vulnerable to these effects, including, notably, Democrats and Democratic-

leaning independents in the Christie-Buono race and Republicans and Republican-leaning independents in the Booker-Lonegan race.

Comparisons of crosstabulated results, provided below, are sufficient to support this conclusion. We also note that, within the Rutgers-Eagleton data, the correlation of favorability and vote preference is higher among the candidates' out-of-party supporters than among their in-party supporters, further suggesting that out-of-party respondents were disproportionately susceptible to priming. In-party supporters, by contrast, appear to have been influenced primarily by their underlying partisanship.

In addition to question order, we evaluated the Rutgers-Eagleton Poll's sample design, sample management, data processing procedures, field dates, question wording, data analysis, likely voter modeling and reports. We found no other apparent explanations for the inaccurate estimates of vote preferences, the focus of this study.

Main Analysis

1. Overall vote-preference estimates

Pre-election polls seek to measure each candidate's level of support. As such, their accuracy is best evaluated by totaling the number of percentage points of error in these estimates – the total error method. We employ this method in our analysis.

Some analysts prefer to evaluate the gap between the candidates, a technique compromised by its failure to account for "undecided" respondents, a measurement that can be highly dependent on polling technique. This is shown in vote-preference estimates in the Booker-Lonegan race, in which "undecideds" ranged from 23 percent in FDU's survey to 3, 4 and 5 percent in the others. Regardless, this method of analysis is included in the table below for comparison.

In the Booker-Lonegan race, the Rutgers-Eagleton poll published a final pre-election estimate of 58-36 percent, compared with an actual vote of 55-44 percent. The poll understated Lonegan's support by 8 percentage points, while overstating Booker's support more narrowly, by a non-significant 3 points. The combined total error, 11 points, exceeded the total error in the Quinnipiac and Monmouth polls (both 5 points), but was less than the total error in the Fairleigh Dickinson poll (25 points, with its high level of undecideds).[1]

In the Christie-Buono race, the November Rutgers-Eagleton poll overstated Christie's support by 6 points and understated Buono's support by 8 points, a total error of 14 points. That compares with total errors of 3, 4, and 6 points, respectively, in the final FDU, Monmouth and Quinnipiac polls.

Rutgers-Eagleton's overstatement of Christie's support, understatement of Buono's and understatement of Lonegan's all exceeded the margin of sampling error in its surveys. However these were not the only such cases. FDU's Booker and Lonegan estimates, compared with the actual vote, also exceeded its survey's error margin (given its high undecideds). And Quinnipiac underestimated Lonegan's and Buono's support alike (given its small sampling error, a function of its comparatively large sample size). All other differences were within sampling error.

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Table 1 – Final vote-preference estimates
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	Booker-Lonegan	TE	Gap	n	Christie-Buono	TE	Gap	n
Official count	55-44%	NA	11		60-38%	NA	22	
Rutgers-Eagleton	58-36	11	22	513	66-30	14	36	535
FDU	45-29	25	16	702	59-40	3	19	570
Monmouth	52-42	5	10	1,393	57-37	4	20	1,436
Quinnipiac	54-40	5	14	1,696	61-33	6	28	1,388

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[1] The FDU result was among registered rather than likely voters. In a brief report the day before the election, FDU released a table showing horse-race modeling results given high, moderate and low voter turnout, with undecideds removed. The total errors in these projections were much smaller – 2, 4, and 8 points, respectively – compared with FDU's poll result the previous week.

(Table shows FDU's Booker-Lonegan poll result of Oct. 8, not its modeling forecasts of Oct. 15. See footnote 1.)

2.   Priming and cognitive consistency

It is axiomatic that each question posed in a survey questionnaire poses some risk of biasing responses to questions that follow it. Among many references, Schuman and Presser explore question order effects in their seminal "Questions and Answers in Attitude Surveys" (1981). In another foundational text, "The Nature and Origins of Mass Opinion," Zaller (1992) evaluated question order effects and other context effects specifically in the realm of political surveys. Both sources underscore the need to pay close attention to such effects in questionnaire design.

The Pew Research Center, in a posting on its website on pre-election polling, states the catechism: "The trial heat questions are asked very early in the questionnaire, prior to any other substantive questions about politics other than voter registration, political engagement and past voting history. This is done to avoid the possibility of affecting the voter's choice by raising considerations such as issues, candidate personalities, or other factors. While all of these may ultimately be relevant to the voter's choice, there is no guarantee that the things we mention will be the ones most important when a voter finally makes a choice among the candidates. Thus, it is important to make the choice as 'clean' as possible."

The theory of priming suggests that, in the case at hand, some respondents who reported favorable views of Christie and Booker were influenced by those positive attitudes when subsequently asked their vote preference, thereby overstating their inclination to support these candidates. Similarly, asking favorability about their lesser-known opponents could have depressed support for those candidates' by accentuating respondents' unfamiliarity with them.

A second element, cognitive consistency, relates to a recurring finding in the social psychology literature that people desire to be consistent in their views. Reporting a positive view about a candidate (e.g., favorability), then having to switch to a negative one (i.e., voting against them), can cause cognitive dissonance (Festinger, 1957). The discomfort raised by this dissonance can be avoided by adjusting the response to the second question. These effects are especially pronounced when such questions are asked in close proximity to one another.

As noted, the October Rutgers-Eagleton poll asked questions regarding Christie's favorability, "feeling thermometer" rating, letter-grade job performance, overall job approval and job approval on the economy/jobs, superstorm Sandy recovery, taxes, education/schools, the state budget and crime/drugs, all ahead of gubernatorial vote preference. It also included Booker favorability and feeling thermometer questions ahead of the Senate vote question. The November Rutgers-Eagleton poll (conducted after the Senate special election) repeated a similar set of attitudinal questions on Christie ahead of the gubernatorial vote question.

With one exception, the Quinnipiac, Monmouth and FDU polls all asked vote-preference questions before asking attitudinal questions about the candidates. The exception is FDU's September-October poll, which asked two Christie rating questions (job approval and a

combined personal/political likeability question) ahead of vote preference. Appendix A lists relevant question order in these surveys.

3. Christie-Buono estimates

As noted, it can be expected that Republicans who supported Christie and Democrats who supported Booker were acting primarily on their partisan predispositions, while Democrats who supported Christie and Republicans who supported Booker are likelier to have based their preference on other factors. Asking about these candidates' personal popularity and professional achievements thus may have had a particular priming effect on respondents not affiliated with the candidates' political parties.

Results by partisan groups indicate that the November Rutgers-Eagleton poll overestimated Christie's support, and underestimated Buono's, among Democrats and independents, compared with the Quinnipiac, Monmouth and FDU polls. The polls were more closely aligned on Christie's near-unanimous support among Republicans.

For example, the November Rutgers-Eagleton poll found Christie supported by 38 percent of Democrats, vs. 30 percent in the Quinnipiac poll, 23 percent in the Monmouth poll and 19 percent in the FDU poll, differences of 8, 15 and 19 points, respectively.

Rutgers-Eagleton also found Christie supported by 73 percent of independents, vs. 64 and 61 percent, respectively, in the Quinnipiac and Monmouth results, differences of 9 and 12 points.

The Rutgers-Eagleton and FDU estimates were similar in terms of Christie's support among independents, but this could be an artifact of their party identification measurements. That's because they're dissimilar, in a way that further suggests priming, when comparing their results among leaned Democrats (that is, Democrats plus Democratic-leaning independents). Rutgers-Eagleton found Christie supported by 38 percent of leaned Democrats, vs. 23 percent in the November FDU poll, a difference of 15 points.

Rutgers-Eagleton and FDU, at the same time, differed by only 2 points in their estimates of Christie's support among leaned Republicans. And using unleaned Republicans, Rutgers-Eagleton differed from FDU, Quinnipiac and Monmouth by merely 1, 1 and 3 points, respectively. (Quinnipiac and Monmouth did not produce leaned party estimates.)

Rutgers-Eagleton, at the same time, found Buono supported in November by 59 percent of Democrats, vs. 64 percent in Quinnipiac's, 70 percent in Monmouth's and 80 percent in FDU's results. And Buono's support among independents was lower in Rutgers-Eagleton data than in these other polls by 9, 10 and 8 points, respectively.

Comparisons with the media-sponsored exit poll may be less meaningful given the different context in which party identification is measured in exit polls vs. pre-election surveys. Regardless, compared with exit poll results, Rutgers-Eagleton overstated Christie's support among self-identified Democrats by 6 points and among independents by 7 points.

These effects, it should be noted, were not apparent in the October Rutgers-Eagleton poll, which more closely resembled its peers. The most likely reason is that Christie's ratings were separated from the gubernatorial vote question in the October poll by questions about Booker and Senate vote preferences. The Booker questions may have buffered the Christie priming, while bringing Democrats and Democratic-leaning independents back to their partisan predispositions.

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Table 2 - Christie-Buono vote preference by party ID

                --------- Nov. polls --------   --------- Oct. polls --------
           Exit    Rutg.   Quin.   Mon.    FDU     Rutg.   Quin.   Mon.    FDU
Overall    60-38%  66-30   61-33   57-37   59-40   59-33   62-33   59-35   58-25

Dems       32-66   38-59   30-64   23-70   19-80   25-65   30-66   30-63
Reps       93- 6   95- 5   94- 5   92- 6   94- 5   93- 6   92- 6   90- 7
Inds       66-32   73-20   64-29   61-30   70-28   68-22   71-23   65-26

Leaned D.          38-58                   23-76   32-58                   38-44
Leaned R.          96- 4                   94- 5   92- 6                   90- 3
```

Vote preferences among Democrats who saw Christie favorably provide another useful comparison. Using November results, Democrats in the Rutgers-Eagleton poll who expressed a favorable opinion of Christie supported him over Buono by 80-18 percent. In the Monmouth and FDU polls, by contrast, Democrats who saw Christie favorably supported him over Buono by 61-31 and 68-32 percent, respectively (see Table 12).

Similarly, leaned Democrats who saw Christie favorably were more likely to support him in the Rutgers-Eagleton poll (80-18 percent) than in the FDU poll (68-30 percent).

Another evaluation can be made within the Rutgers-Eagleton data by comparing the correlation between favorability ratings and vote preferences. It's stronger for leaned Democrats than for leaned Republicans (r=.84 vs. .62 and r=.78 vs. .66 in October and November, respectively). Additionally, standardized regression coefficients for a model including basic demographics and favorability as predictors of vote are larger for leaned Democrats than for leaned Republicans (β=.83 vs. .62 and β=.77 vs. .61 in October and November, respectively).

These correlational patterns are not repeated in the Monmouth and FDU polls. (See Tables 14 and 15. Note, this level of analysis was not available for the Quinnipiac data.) The absence of priming in those studies may be the cause of this difference.
Overall, it seems clear that the Rutgers-Eagleton poll overstated Christie's support, and understated Buono's, by asking vote preference after reminding Democrats and Democratic-leaning independents that they might see Christie favorably and that there were aspects of his job performance of which they might approve. As expected, Republicans and leaned Republicans, who were set on voting for their party's candidate anyway, were not affected by this priming.

4. **Booker-Lonegan estimates**

There is evidence of priming effects among Republicans, meanwhile, in the October estimates of Senate vote. After asking Booker and Lonegan favorability and feeling thermometers, Rutgers-

Eagleton produced significantly lower estimates of support for Lonegan among Republicans than did Quinnipiac and Monmouth. Seventy-four percent of Republicans in the Rutgers-Eagleton poll supported Lonegan, compared with 86 percent in the Monmouth poll and 87 percent in Quinnipiac's. (FDU, as noted, had much higher undecideds, making comparisons difficult.)

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Table 3 – Booker-Lonegan vote preference by party ID


            Vote      Rutg.   Quin.   Mon.    FDU
Overall     55-44%    58-36   54-40   52-42   45-29

Dems                  96- 2   92- 4   90- 6
Reps                  16-74   11-87   11-86
Inds                  49-41   46-46   43-48

Leaned D.             96- 2                   74- 4
Leaned R.             15-78                   14-67
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The Rutgers-Eagleton data show a stronger correlation between favorability and vote preference among Republicans than among Democrats (r=.40 vs. .32) and among leaned Republicans than among leaned Democrats (r=.47 vs. .33). Similarly, in a regression analysis, the relationship between favorability and vote is stronger among Republicans than Democrats (β=.34 vs. .25) and among leaned Republicans than leaned Democrats (β=.39 vs. .24). (See Tables 19 and 20.) This pattern by partisanship is not evident in the Monmouth data, again potentially because priming did not occur in that survey. (FDU did not ask Booker/Lonegan favorability, and, as in the gubernatorial race, this level of analysis for the Quinnipiac data was not available.)

There are plausible reasons that priming in the Senate race deflated Lonegan's support rather than inflating Booker's, while, in the governor's race, it boosted Christie's support as well as reducing Buono's. The gubernatorial election involved a highly popular and well-known Republican incumbent running for re-election in a Democratic-leaning state. The open-seat Senate race, by contrast, pitted a less broadly popular Democrat against a largely unknown Republican in a low-turnout special election. Additionally, the Rutgers-Eagleton questionnaire included fewer priming questions for Booker than for Christie.

While the mechanism appears different, another mis-estimate resulted. After priming for Booker favorability, and after reminding voters of their relative lack of familiarity with Lonegan (asked his favorability, 36 percent had no opinion), the Rugters-Eagleton poll found Republicans less apt to back Lonegan than did the Quinnipiac and Monmouth polls, by substantial margins of 13 and 12 points, respectively.

5. Conclusion

Pre-election polls are closely scrutinized for the proximity of their vote-preference estimates to election outcomes. Many implicitly invite this scrutiny by focusing their analyses on the horse-race aspect of election contests. That can be an unfortunate choice; handicapping who's ahead often occurs to the comparative exclusion of other rich information such polls have to offer, including examination of voters' chief concerns, policy preferences, assessment of candidates'

positions and personal attributes, and key attitudinal and demographic factors motivating their choices. Boiling evaluations of the quality of pre-election surveys down to their horse-race accuracy does disservice to other important concerns. It also reinforces a myth of greater accuracy than may be warranted, particularly in terms of surveys with relatively small sample sizes.

Nonetheless, good-quality pre-election polls, following best practices in sampling and weighting, and using sufficient sample sizes and robust, empirically based likely voter modeling, have a long history of accurate vote-preference estimates. Departures from this expected accuracy are worthy of examination as part of a continuous-improvement process. While not an exhaustive review of Rutgers-Eagleton survey methodology, this report identifies priming and cognitive consistency effects caused by questionnaire design as the likely culprit in its imprecise estimate of vote preferences in the 2013 New Jersey gubernatorial and U.S. Senate elections.

We understand that Rutgers-Eagleton chose to ask candidate ratings ahead of vote-preference questions in order to preserve its long-term trend on the former items. While preservation of trend is a laudable goal, the prominence that the Rutgers-Eagleton survey reports gave to its vote-preference results, as well as the level of attention such results customarily receive, suggest that this was a misplaced priority.

About this report

This report was independently prepared for the Rutgers Institute of Politics by Langer Research Associates, a survey research design, management and analysis company based in New York, N.Y. The assessments we report reflect our understanding of best practices in pre-election survey research as developed through our years of training and experience as practitioners in the field.

The founder of Langer Research Associates, Gary Langer, former director of polling at the ABC News television network, has conducted ABC's pre-election polling and exit poll analysis in all U.S. national elections since 1990. Langer authored or co-authored chapters on "likely voter modeling" and "tracking polls" in the Encyclopedia of Survey Research Methods (Sage 2008) and papers including "Best Practices in Pre-Election Polling" (2009) and "Methodological Issues in Pre-Election Polling" (2005), presented at annual meetings of the American Association for Public Opinion Research (AAPOR). "The Numbers," Langer's ABC News blog on pre-election polling in the 2008 presidential election, received the University of Iowa-Gallup Award for Excellent Journalism Using Polls, and Langer's on-air exit poll analysis during ABC's election-night coverage of the 2010 U.S. midterm elections was recognized in an Emmy nomination.

Beyond its work for ABC, Langer Research Associates has consulted on questionnaire design, likely voter modeling, data analysis and a wide range of sampling and methodological issues in state, national and international polling projects.

The analysis for this evaluation was led by Research Analyst Gregory Holyk, Ph.D., and the report was written by Langer and Holyk, with assistance from Senior Research Analyst Christopher C. Weiss, Ph.D.

Appendices and Supplemental Tables

Appendix A - Question order

Rutgers-Eagleton 188 (Oct. 7-13):
(Voter screening)
Q1a-f. Favorables: Obama; Christie; Buono; Booker; Lonegan; the Tea Party.
Q2a-d. Feeling thermometers: Christie; Buono; Booker; Lonegan.
Q3. Letter grade rating of Obama job performance.
Q4. Letter grade rating of Christie job performance.
Q5. Christie job approval rating.
Q6a-f. Christie job approval ratings: NJ's economy and jobs; Hurricane Sandy recovery; taxes; education and schools; the state budget; crime and drugs.
Q7. NJ right direction/wrong track.
Q8. Most important problem facing NJ (list provided): Hurricane Sandy recovery; the economy and jobs; taxes, including property taxes; education and schools; crime and drugs; government spending; health care; legalizing same-sex marriage; something else.
Q9. Senate vote.
Q9a. Leaned Senate vote.
Q10. Booker has made a real difference/mostly has focused on self-promotion.
Q11a. Booker more liberal/conservative/about right than most NJ voters.
Q11b. Lonegan more liberal/conservative/about right than most NJ voters.
Q12a-d. Booker done or said anything during the campaign to make you: angry; worried or anxious; proud; hopeful.
Q13a-d. Lonegan done or said anything during the campaign to make you: angry; worried or anxious; proud; hopeful.
QP1: Heard anything about a one of the candidates posting a map of Newark on his Twitter account or not.
Q14: Unleaned gubernatorial vote.

Rutgers-Eagleton 189 (Oct. 28-Nov. 2):
(Voter screening)
Q1a-g. Favorables: Obama; Christie; Buono; Booker; the NJ State Legislature; Lieutenant Governor Kim Guadagno; union leader Milly Silva.
Q3. Letter grade rating of Obama job performance.
Q4. Letter grade rating of Christie job performance.
Q5. Christie job approval rating.
Q6a-f. Christie job approval ratings: NJ's economy and jobs; Hurricane Sandy recovery; taxes; education and schools; the state budget; crime and drugs.
Q7. NJ right direction/wrong track.
Q8. Most important problem facing NJ (list provided): Hurricane Sandy recovery; the economy and jobs; taxes, including property taxes; education and schools; crime and drugs; government spending; health care; legalizing same-sex marriage; something else.
Q9/Q10. Leaned gubernatorial vote.

Quinnipiac (Oct. 10-14, 2013)
(Voter screening)

Q1. Leaned Senate vote.
Q1a/Q1b. Definitely vote for candidate or not.
Q2. Leaned gubernatorial vote.
Q2a/Q2b. Definitely vote for candidate or not.
Q3/Q4. Favorables: Christie; Buono.
Q5/Q6. Favorables: Booker; Lonegan.

Quinnipiac (Oct. 30-Nov. 3, 2013)
Q1. Leaned gubernatorial vote.
Q2. Definitely vote for or change mind.
Q3. Enthusiasm about support.
Q4a-b. Favorables: Christie; Buono.

Monmouth (Oct. 10-12, 2013)
(Voter screening)
Q2. Heard about special Senate election or not.
Q3. Special Senate election vote likelihood.
Q4. Gubernatorial election vote likelihood.
Q5. If had to choose, vote in special election or regular one.
Q6. Senate vote.
Q6a. Sure about Senate vote or could change mind.
Q6b. Leaning in Senate race.
Q7. Gubernatorial vote.
Q7a. Sure about gubernatorial vote or could change mind.
Q7b. Leaning in gubernatorial race.
Q8-11. Favorables: Booker; Lonegan; Christie; Buono.
Q12-15: Views in line or out of step with New Jerseyans: Booker; Lonegan; Christie; Buono
Q16. Booker wants to become senator to serve NJ or to be on the national stage.

Monmouth (Oct. 30-Nov. 2, 2013)
(Voter screening)
Q2. Gubernatorial election vote likelihood.
Q3. Gubernatorial vote.
Q3a. Sure about gubernatorial vote or could change mind.
Q3b. Leaning in gubernatorial race.
Q3c. If already voted, vote.
Q4/Q4. Favorables: Christie; Buono.
Q6/Q7. Favorables: Guadagno; Silva.
Q8. Minimum wage ballot measure vote.
Q9. Thought about how minimum wage measure would affect the state Constitution?
Q10. Good/bad idea to write annual minimum wage increases into the state Constitution.
Q11. Campaign good/bad addressing most important issues in NJ.
Q12. Confidence Christie will fix NJ's biggest problems if re-elected.
Q13. Most important issue in gubernatorial vote.
Q14. Christie good president or not.
Q15. Feeling on health care law.

Q16. Responsible for gov't shutdown – Obama or GOP.
Q17. Support/oppose Tea Party.
Q18. Vote in Senate special election or not.
Q19. Senate vote.

Fairleigh Dickinson (Sept. 30-Oct. 5, 2013)
(Voter screening)
US1. Obama job approval.
US2. U.S. right direction/wrong track.
NJ1. Christie job approval.
NJ2. NJ right direction/wrong track.
NJ3. Christie personal/policy likability.
NJ4. Unleaned Senate vote.
NJ5. Unleaned gubernatorial vote.

Fairleigh Dickinson (Oct. 24-30, 2013)
(Voter screening)
GOV1. Leaned gubernatorial vote.
GOV2a-b. Favorables: Christie; Buono.

Appendix B - Question wording

Horse race:

Rutgers-Eagleton: Let's talk about the election for governor. If the election for governor was today and the candidates were [Republican Chris Christie and Democrat Barbara Buono], for whom would you vote? (IF DK OR REF) Do you lean more toward [Republican Chris Christie or Democrat Barbara Buono?] *(Note: gubernatorial vote was not leaned in October.)*

Quinnipiac: If the election for Governor were being held today, and the candidates were Barbara Buono the Democrat and Chris Christie the Republican, for whom would you vote? (If undecided) As of today, do you lean more toward Buono or Christie?

Monmouth: If the election for New Jersey Governor was today, would you vote for Chris Christie, the Republican, Barbara Buono, the Democrat or some other candidate? [NAMES WERE ROTATED] [IF UNDECIDED OR OTHER CANDIDATE: At this moment, do you lean toward Chris Christie or lean toward Barbara Buono?]

Fairleigh Dickinson: In the upcoming elections for governor of New Jersey, which candidate are you most likely to vote for – [Chris Christie the Republican or Barbara Buono the Democrat]?

Same format followed in each case for Senate vote.

Favorability:

Rutgers-Eagleton: First, I'd like to ask about some people and groups. Please tell me if your general impression of each one is favorable or unfavorable, or if you do not have an opinion. First…

Quinnipiac: Is your opinion of [ITEM] favorable, unfavorable or haven't you heard enough about him?

Monmouth: Is your general opinion of [ITEM] favorable, unfavorable, or do you have no opinion of him?

Fairleigh Dickinson: Regardless of how you're going to vote, do you have a favorable or unfavorable opinion of [ITEM], the Republican/Democrat?

Appendix C - Likely voter modeling

Based on our reading of the Rutgers-Eagleton SPSS syntax, the likely voter model used in the November gubernatorial analysis was:

If ((following very or somewhat closely) and (very or somewhat likely to vote or already voted) and (did not say "will not vote" on the vote question) and (last voted in 2013 or 2012)) LV=1
Or…
If (watched the gubernatorial debate and did not say "will not vote" on the vote question) LV=1
But…
If (LV=1 and not very likely to vote or will not vote or already voted) LV=0
If (LV=1 and refused the vote question) LV=0
If (LV=1 and following not at all closely) LV=0
If (LV=1 and have never voted or don't know if they've ever voted) LV=0.
As noted, "already voted" respondents were inadvertently excluded.

Appendix D – Supplemental tables

Table 6 - Field periods

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FDU          Sept. 30-Oct. 5
Rutgers      Oct. 7-13
Monmouth     Oct. 10-12
Quinnipiac   Oct. 10-14

FDU          Oct. 24-30
Rutgers      Oct. 28-Nov. 2
Monmouth     Oct. 30-Nov. 2
Quinnipiac   Oct. 30-Nov. 3
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Table 7 - Weighted group sizes for likely voters

	Exit	---------- Oct. polls ---------					----- Nov. polls ------			
	Exit	REgov	REsen	Quin.	Mon.	FDU	Rutg.	Quin.	Mon.	FDU
Dems	40%	36%	38	35	38		37%	32	36	36
Reps	28	27	28	27	28		25	29	30	30
Inds	31	37	35	33	34		38	34	34	33
Lean. Dems		47	48			46	45			47
Lean. Reps		38	37			35	35			40
Libs	25	24	24				24			
Mods	49	50	47				52			
Cons	26	26	29				24			
Men	46	47	48	47	47	49	46	45	47	50
Women	54	53	52	53	53	51	53	55	53	50
Whites	72	75	77	72	74	68	74	71	75	75
Nonwhites	28	25	23	28	26	32	26	29	25	25
18-44	31	31	28				30			
45-64	47	42	42				43			
65+	22	27	29	34			27		35	30
HS or less	23	16	17				19			
Some coll.	24	27	24				25			
Coll. grad	29	30	30				30			
Grad work	24	27	29				26			
<$50K	28	23	21				25			
$50-$100K	32	40	41				36			
$100K+	39	37	38				38			

Note: Different columns for Rutgers-Eagleton October poll reflect the separate LV weights and models for gubernatorial and Senate election voters.

Table 8 - Group sizes by weight in RE 188 (October)

	RVs	-- Senate LVs --			Gubernatorial LVs		
Weight	rv	rv	slv	Diff.	rv	glv	Diff.
Dems	39%	42	38	-4	40	36	-4
Reps	21	22	28	+6	22	27	+5
Inds	40	36	35	+1	38	37	-1
Leaned D.	52	53	48	-5	52	47	-5
Leaned R.	29	32	37	+5	33	38	+5
Libs	26	26	24	-2	26	24	-2
Mods	51	48	47	-1	50	50	0
Cons	23	26	29	+3	24	26	+2
Men	46	47	48	+1	47	47	0
Women	54	53	52	-1	53	53	0
Whites	68	76	77	+1	74	75	+1
Nonwhites	32	24	23	-1	26	25	-1
18-44	38	28	28	0	31	31	0
45-64	38	42	42	0	42	42	0
65+	24	29	29	0	27	27	0

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HS or less      19        17       17        0        16       16        0
Some coll.      26        24       24        0        27       27        0
Coll. grad      30        30       30        0        29       30       +1
Grad work       26        29       29        0        27       27        0

<$50K           23        21       21        0        23       23        0
$50-$100K       37        41       41        0        40       40        0
$100K+          40        38       38        0        37       37        0
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Table 9 - Gubernatorial vote preference (Christie-Buono)

| | Exit | -------- Oct. polls -------- | | | | ------- Nov. polls --------- | | | |
		Rutg.	Quin.	Mon.	FDU	Rutg.	Quin.	Mon.	FDU
Overall	60-38%	59-33	62-33	59-35	58-25	66-30%	61-33	57-37	59-40
Total error		**6**	**7**	**5**	**15**	**14**	**6**	**4**	**3**
Dems	33-66	25-65*	30-66	30-63		38-59	30-64	23-70	19-80
Reps	93- 6	93- 6	92- 6	90- 7		95- 5	94- 5	92- 6	94- 5
Inds	66-32	68-22	71-23	65-26		73-20	64-29	61-30	70-28
Leaned D.		32-58			38-44	38-58			23-76
Leaned R.		92- 6			90- 3	96- 4			94- 5
Libs	31-67	38-56				35-64			22-76
Mods	61-37	55-34				68-26			58-42
Cons	86-13	89- 9				92- 8			88-11
Men	63-35	63-29*	66-29	61-34	67-20	68-28	66-29	62-32	62-37
Women	57-41	56-36	57-37	57-35	50-30	63-32	57-36	52-41	55-44
Whites	70-29	66-27	67-29	64-31	65-21	70-27	67-28	64-32	66-32
Nonwhites**		41-50		45-45	44-36	55-40		33-53	33-65
18-44**		53-38		51-39		64-32		48-45	
45-64		60-32		57-37		62-34		57-36	
65+		66-28*		66-30		73-23		62-33	
HS or less**	63-36	59-31				68-26			66-31
Some coll.	62-36	62-33				70-26			63-36
Coll. grad	64-35	66-28				71-27			60-39
Grad work	51-47	50-40				53-43			52-47
<$50K	51-46	55-38				70-27	52-40		
$50-$100K	59-39	53-39				60-38	66-28		
$100K+	66-34	69-24				67-29	67-30		

*Not replicated in SPSS, apparently due to rounding.
**Caution, small samples sizes in Rutgers-Eagleton October data.

Table 10 - Christie favorability among likely voters

| | ------ Oct. polls ------- | | | | ------- Nov. polls -------- | | | |
	Rutg.	Quin.	Mon.	FDU	Rutg.	Quin.	Mon.	FDU
Overall	62-30%	63-31	59-29		67-28%	64-29	59-28	62-31
Dems	33-56	38-54	34-51		43-50	39-52	29-51	
Reps	89- 7	89- 9	89- 8		96- 2	93- 6	91- 5	
Inds	69-22	69-24	62-23		71-25	65-27	62-24	

Leaned Dems	41-50			42-51		35-55	
Leaned Reps	85- 9			94- 4		88- 7	
Libs	41-48			35-61			
Mods	61-31			72-23			
Cons	83-10			88- 8			
Men	65-27	68-29	62-27	72-25	69-25	65-22	63-29
Women	59-33	59-33	57-31	62-31	60-32	53-33	61-33
Whites	65-27	68-28	65-28	70-26	70-25	65-26	68-28
Nonwhites*	49-40		44-35	56-35		39-33	41-43
18-44*	61-36		49-33	63-31		52-31	
45-64	57-31		58-32	66-30		58-29	
65+	71-21		68-25	72-23		65-24	
HS or less*	74-18			74-20			
Some coll.	61-32			69-25			
Coll. grad	65-27			69-25			
Grad work	50-39			56-41			
<$50K	56-38			66-30	63-28		
$50-$100K	58-35			61-34	65-31		
$100K+	67-25			71-25	67-29		

*Caution, small samples sizes in Rutgers-Eagleton October data.

Table 11 - Vote preference by LV model and weight in RE 188 (October)

	--------- Senate ---------			----- Gubernatorial ------			
	Actual	RVs	LVs	LVs	Actual	RVs	LVs	LVs
(Weight)		rv	rv	slv		rv	rv	glv
Vote	55-44%	61-29	62-32	58-36	60-38%	58-32	56-35	59-33
Total error		**21**	**19**	**11**		**8**	**7**	**6**

Note: "Will not vote" removed.

Table 12 - Gubernatorial vote preference by Christie favorability and partisanship

	---------- Favorable ----------				-------- Unfavorable ---------			
	All	Dems*	Reps	Inds	All	Dems	Reps*	Inds*
October								
Rutgers	88- 7%	64-21	99- 1	88- 6	7-85%	1-94	20-58	17-71
n=	(347)	(74)	(117)	(155)	(164)	(114)	(5)	(45)
Monmouth	91- 6	76-20	97- 1	94- 3	6-89	3-95	27-61	8-82
November								
Rutgers	92- 6%	80-18	98- 2	93- 2	8-88%	3-96	0-100	17-72
n=	(362)	(83)	(132)	(145)	(146)	(91)	(3)	(52)
Monmouth	88- 9	61-31	98- 1	89- 8	4-92	2-96	10-87	8-83
FDU		68-32	100- 0	93- 6		0-100	18-64	11-86

*Caution, small sample sizes in Rutgers-Eagleton and FDU data.

Table 13 – Rutgers-Eagleton gubernatorial vote preference by Christie favorability among leaned partisans

	------- Favorable -------		----- Unfavorable -------	
	Leaned Dems	Leaned Reps	Leaned Dems	Leaned Reps*
October				
Rutgers	72-15%	98- 2	2-93%	35-46
n=	(113)	(169)	(137)	(10)
November				
Rutgers	80-18	99- 1	5-94	29-58
n=	(102)	(190)	(119)	(7)
FDU	68-30	100- 0	1-99	24-59

*Caution, small sample sizes.

Table 14 - Correlations between gubernatorial vote preference and Christie favorability

	All	Dems	Leaned Dems	Reps	Leaned Reps	Inds
	---	---	---	---	---	---
October						
Rutgers	.84	.79	.84	.74	.62	.74
Monmouth	.86	.79	–	.72	–	.87
November						
Rutgers	.85	.80	.78	.77	.66	.82
Monmouth	.84	.72	–	.80	–	.80
FDU	.86	.76	.74	.85	.84	.81

Note: Calculated among Christie or Buono supporters and those who reported a favorable or unfavorable opinion of Christie.

Table 15 - Regression betas for Christie favorability rating predicting gubernatorial vote preference

	All	Dems	Leaned Dems	Reps	Leaned Reps	Inds
	---	---	---	---	---	---
Rutgers						
Oct.	.74	.80	.83	.80	.62	.77
Nov.	.75	.80	.77	.79	.61	.79
Monmouth						
Oct.	.77	.78	–	.72	–	.87
Nov.	.72	.71	–	.85	–	.77
FDU						
Nov.	.69	.73	.73	.79	.81	.78

Note: Models also included ideology, gender, age, race/ethnicity, education and income.

Table 16 - Senate vote preference and Booker favorability

		-- Vote: Booker-Lonegan --				-- Favorable-Unfavorable --			
	Vote	Rutg.	Quin.	Mon.	FDU	Rutg.	Quin.	Mon.	FDU
Overall	55-44%	58-36%	54-40	52-42	45-29	54-32%	53-35	51-30	
Total error		**11**	**5**	**5**	**25**				
Dems		96 -2	92- 4	90- 6		83- 9	83- 6	82- 6	
Reps		16-74	11-87	11-86		28-57	18-71	21-54	
Inds		49-41	46-46	43-48		44-36	49-38	40-38	
Leaned D.		96- 2			74- 4	83- 8			
Leaned R.		15-78			14-67	24-60			

	1	2	3	4	5	6	7
Libs	93- 5				78-13		
Mods	66-27				63-23		
Cons	15-77				22-63		
Men	51-45	50-45	51-46	43-35	48-37	51-39	49-32
Women	64-27	58-36	53-39	46-24	60-28*	55-31	53-28
Whites	50-44	47-50	45-49	63-11	51-36	49-41	46-34
Nonwhites**	87-10		69-24	76- 0	64-22		61-15
18-44**	57-31		51-40		57-29		47-22
45-64	61-34		54-39		55-30		55-28
65+	53-43		49-47		50-38		46-34
HS or less**	61-34*		48-45		46-36*		43-32
Some coll.	52-44		45-48		52-33		45-30
Coll. grad	56-40		51-44		52-36		51-30
Grad work	66-23*		62-33		63-25*		57-23
<$50K**	67-31				55-33		
$50-$100K	56-37				53-34		
$100K+	61-34				57-32		

*Not replicated in SPSS, apparently due to rounding.
**Caution, small sample sizes in Rutgers-Eagleton data.

Table 17 - Senate vote preference by Booker favorability and partisanship

| | --------- Favorable ---------- | | | | -------- Unfavorable ------- | | | |
	All	Dems	Reps*	Inds*	All	Dems*	Reps*	Inds*
October								
Rutgers	87- 9%	99-<.5	35-44	88- 7	16-81%	85-15	9-90	7-87
n=	(280)	(166)	(28)	(86)	(161)	(15)	(68)	(77)
Monmouth	88- 9	97- 1	51-45	87-10	6-92	27-62	<.5-99	8-90

*Caution, small sample sizes in Rutgers-Eagleton data.

Table 18 – Rutgers-Eagleton Senate vote preference by Booker favorability among leaned partisans

| | ------- Favorable ------- | | ----- Unfavorable ------- | |
	Leaned Dems	Leaned Reps*	Leaned Dems*	Leaned Reps
October	98-<.5%	38-43	84-16%	7-93
n=	(217)	(36)	(19)	(107)

*Caution, small sample sizes.

Table 19 - Correlations between Senate vote preference and Booker favorability

	All	Dems	Leaned Dems	Reps	Leaned Reps	Inds
October						
Rutgers	.74	.32	.33	.40	.47	.85
Monmouth	.84	.77	–	.62	–	.82

Note: Calculated among Booker or Lonegan supporters and those who rated Booker favorably or unfavorably.

Table 20 - Regression betas for Booker favorability rating predicting Senate vote preference

	All	Dems	Leaned Dems	Reps	Leaned Reps	Inds
October						
Rutgers	.47	.25	.24	.34	.39	.79
Monmouth	.66	.76	–	.76	–	.82

Note: Models also included ideology, gender, age, race/ethnicity, education and income.