Forecasting Elections from Voters' Perceptions of Candidates' Positions on Issues and Policies

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Abstract

Ideally, presidential elections should be decided based on how the candidates would handle issues facing the country. If so, knowledge about the voters' perception of the candidates should help to forecast election outcomes. We make two forecasts of the winner of the popular vote in the U.S. Presidential Election. One is based on voters' perceptions of how the candidates would deal with *issues* (problems facing the country) if elected. We show that this approach would have correctly picked the winner for the three elections from 1996 to 2004. The other is based on voters' preference for *policies* and their perceptions of which policies the candidates are likely to pursue. Both approaches lead to a forecast that Democrat candidate Barack Obama will win the popular vote.

Introduction

Issues and policies play a fundamental role in election campaigns. They are discussed in the media and make voters aware of what the candidates stand for and, thus, enable voters to develop their own positions and values. Acting rationally, voters should select the candidate whose positions on issues and policies appear most beneficial. If so, knowledge about the relationship between voters' and candidates' positions should be useful in forecasting the outcomes of elections. In addition, such knowledge can help candidates to develop and communicate their positions on policies. We apply the index method to predict election outcomes from both voters' perceptions of how the candidates would handle various issues and the policies they would pursue.

The Index Method

Subjective indexes, or "experience tables" (Armstrong 1985, pp. 217), have long been used for forecasting and can be traced back to Benjamin Franklin's "prudential algebra" (http://homepage3.nifty.com/hiway/dm/franklin.htm). Analysts prepare a list of key variables and determine whether they are favorable (+1), unfavorable (-1), or indeterminate (0) in their influence on a certain outcome. Then, they simply add the scores and use the total to calculate the forecast.

The index method has been used for various types of forecasting problems. For example, Burgess (1939) describes its use in predicting the success of paroling individuals from prison. Based on a list of 25 factors, which were rated either "favorable" (+1) or "unfavorable" (0), an index score was calculated for each individual. Then, one examined available data and determined the rate of successful parolees for each score. This approach was questioned since Burgess (1939) did not differentiate between variables. All were considered to be of equal importance and were assigned a unit weight of "1". Also, no consideration was given to the magnitude (i.e. *how* favorable the ratings were). In response, Glueck and Glueck (1959, pp.23) suggested using only a small number of variables and assigning different weights to each variable as in regression models. However, in addressing this issue, Gough (1962) did not find evidence that supported the use of regression over indexes.

Armstrong's (1985, p.230) findings were similar. Regression was slightly more accurate in three studies (for academic performance, personnel selection, and medicine) but less accurate in five (three on academic performance, and one each on personnel selection and psychology). In addition, Einhorn and Hogarth (1975) showed that in prediction, simple unit weighting is often superior to regression models. While regression is optimal for fitting a model to existing data, its predictive ability suffers when the number of observations is small.

For forecasting US Presidential elections, the number of observations is limited. In fact, all forecasting models are based on fewer than 25 observations – and usually no more than 15 – which led researchers to experiment with unit (or equal) weights. In a recent study, Cuzán and Bundrick (2008) applied an equal weighting approach to three traditional regression models: Fair's equation (Fair 1978) and two variations of the fiscal model (Cuzán & Heggen 1984). Over 23 elections from 1916 to 2004, they showed that when making out-of-sample predictions, the equal weighting scheme outperformed two of the three regression models – and did equally well than the third. When they used data from the 32 elections from 1880 to 2004, Cuzán and Bundrick (2008) found equal weighting yielded a lower mean absolute error compared to all three regression models.

Indexes have other advantages over regression models. Due to small samples, measurement errors, and correlations among explanatory variables, regression models are limited to a small number of variables. In fact, regression models for election forecasting often rely on only two independent variables: incumbent popularity (or job or government approval) and the state of the economy. In contrast, indexes may provide useful forecasts in situations involving many causal variables, good knowledge about the variables, and little data.

Given the many variables, the index method appears to be appropriate for election forecasting. Yet, as far as we are aware, Lichtman (2008) is the only study that used the index method to predict election outcomes. Transforming Lichtman's (2008) "Keys" into forecasts of the two-party vote going to the incumbents, Armstrong and Cuzán (2006) compared the derived forecasts against forecasts from three traditional regression models for six US presidential elections from 1984 to 2004. Lichtman's Keys performed well, leading to forecast errors almost as low as those of the best regression models. Armstrong and Cuzán (2006) concluded that indexes provide a useful alternative to regression models for long-term forecasting of presidential elections as they use a different method and different information. However, they raised four concerns about the Keys model. First, it used only 13 variables. Second, only one variable, which was formulated rather vaguely, referred to policy ("the administration achieves a major policy change"). Third, the Keys were only assessed by one person. Fourth, the model penalized the incumbent, which is contrary to the commonly held assumption that incumbents have an advantage in political elections. We extend the use of the index method by including more variables that relate to issues and policies.

Issues Index

The issue-based index forecast is based on the assumption that voters select the candidate they believe will perform best in handling the issues. In particular, we assume that for the voter it is not primarily important *how* the candidates intend to solve the problems (i.e. what policies they candidates promise to pursue), but *whether* they will solve them.

We analyzed data from polls that asked voters which candidate would be more successful in solving a problem. For example: *"Now I'm going to mention a few issues and for each one, please tell me if you think Barack Obama or John McCain would better handle that issue if they were elected president: terrorism, the economy, illegal immigration, etc."* (cf. CNN/Opinion Research Corporation Poll. July 27-29, 2008). For each issue, we derived the voters' support for the candidates. (Early in the campaign, when the candidates were still unknown, these polls asked about voters' support for the Parties). In cases where different polls obtained information on the same issue, we averaged the poll results to calculate the voters' support for the candidates. In case of repeated polls by the same polling institute, we first averaged the poll results for each polling institute. Then, for each issue, we generated index scores for the candidates; assigning "1" to the candidate receiving the higher voter support and "0" to the opponent. In case candidates achieved equal voter support, we assigned "1" to both candidates. Finally, we simply summed up the index scores to determine the election winner. We show the calculation of a two-issue index in Table 1 as an example of how we derived our indexes from poll data.

Table 1: Example calculation of simple 2-issue index scores

ISSUE	Poll	Voter support		Index scores	
		McCain	Obama	McCain	Obama
Health care	ABC News/Washington Post Poll. June 12-15, 2008	33	53		
	Diageo/Hotline Poll. June 5-8, 2008	24	54	0	1
Mean		28.5	53.5		
Terrorism / Homeland Security	ABC News/Washington Post Poll. July 10-13, 2008	49	43		
	Time Poll. June 18-25, 2008	53	33	1	0
Mean		51	38		
			Sum of index scores	1	1

Accuracy of Issues-Index Forecasts for 1996, 2000, and 2004 Elections

We retrospectively calculated forecasts for the three US Presidential Elections from 1996 to 2004. Altogether, we obtained data from 26 polls conducted between March and October in the respective election years. A complete list of the issue-based polls used in this study is provided in Appendix 1. The aggregated polling data is provided in Appendix 3. The amount of available information varied over the three elections. We derived voters' opinion on 11 issues (from two polls) for 1996, on 18 issues (from 12 polls) for 2000, and on 19 issues (from 12 polls) for 2004. While some issues were only raised in a single poll, others were asked more frequently. For

example, moral values, health care, and guns control were popular issues in 2000. In 2004, the key issues were terrorism and homeland security, foreign policy, Iraq, the economy and, again, health care.

As we show in Table 2, the sum of the index scores correctly predicted the winner of the popular (not electoral college[1]) vote for all three elections from 1996 to 2004. Interestingly, the index scores differed substantially over the three elections. For 1996, voters perceived Clinton to do better for 10 of the 11 issues raised in the polls. For 2000 and 2004, voters' support for how candidates would be able to deal with the issues was much more even. For 2000, the Republican candidate achieved an index score of 9 compared to a score for the Democrat of 10, whereas in 2004, the scores were reversed. When the candidates' index scores were close, the popular votes were close.

Table 2: Issue-based forecast for 1996 to 2004

Election year	No. issues	Index scores		Predicted winner	Actual winner
		Republican	Democrat		
1996	11	1	10	Democrat	Democrat
2000	18	9	10	Democrat	Democrat*
2004	19	10	9	Republican	Republican

* based on the popular, rather than electoral college, vote

This retrospective small-sample study does not allow for definite conclusions on the applicability of the index method for forecasting election outcomes based on how voters believe candidates will handle the issues. However, the results indicate that the index method might at least help to predict the election winner in combination with other methods. In the next section, we provide an issue-based index forecast for the 2008 U.S. Presidential Election.

Issues-Index Forecast for the 2008 U.S. Presidential Election

We applied the procedure we described for the three historical elections to the forthcoming 2008 U.S. Presidential Election. Table 3 shows data from 35 polls conducted between July 2007 and July 2008. We derived voters' perceptions on 30 issues. Similarly to 1996, the results show clear differences in voter support. For 22 issues, voters favored the Democratic candidate Barack Obama. Voters favored John McCain for only for 7 issues, 6 of which dealt with foreign policy or defence. For "foreign policy", the candidates were tied. Thus, at the time of writing, the issues-index forecast is a clear victory for Obama.

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Table 3: Polling data and index scores for issues (2008)

Issues	No. polls	Voter support for		Index scores for	
		McCain	Obama	McCain	Obama
Social Welfare Issues					
Health care	9	28	54	0	1
Education	2	23	48	0	1
Foreign affairs / defense issues					
Military	2	51	30	1	0
Afghanistan	1	53	43	1	0
Terrorism / Homeland Security	12	47	37	1	0
Middle East	1	52	45	1	0
Iran	3	49	44	1	0
Israel and Palestine	1	44	42	1	0
America's standing in the world	1	17	44	0	1
Iraq	21	38	44	0	1
China	1	21	26	0	1
Foreign policy	4	44	44	1	1
Economic issues					
Energy	4	27	50	0	1
Budget deficit	6	25	47	0	1
Gas prices	4	26	48	0	1
Homeownership	1	16	35	0	1
Jobs	1	38	57	0	1
Economy	22	33	49	0	1
Government spending	1	20	36	0	1
Recession	1	25	41	0	1
Taxes	9	37	43	0	1
Trade	1	25	28	0	1
Social Issues and others					
Crisis management	1	50	41	1	0
Environment	1	21	65	0	1
Global Warming	3	19	52	0	1
Women	1	26	58	0	1
Ethics in government	3	30	40	0	1
Moral values	5	33	42	0	1
Immigration	8	36	41	0	1
Supreme Court Appointments	1	43	45	0	1
Overall index scores				**8**	**23**

Policies Index

The issue-index forecast was based on the voters' beliefs about how the candidates would handle the issues. In this section, we provide an index forecast based on the voters' preferences for *policies* and their perceptions of the candidates positions on those policies. This assumes that voters actually know how the candidates intend to solve problems and that they take this into account when making voting decisions. For example, on the issue of crime, a Democratic

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[1] To predict the Electoral College vote, which is the mechanism by which US presidents are ultimately elected, it would first be necessary to derive forecasts for each state. In practice, the popular vote and the Electoral College vote

candidate might advocate education and training programs to improve the employment skills of those who might otherwise resort to law-breaking. A Republican candidate might advocate liberalizing handgun laws, increasing police numbers, and longer prison sentences.

We analyzed polls that asked voters to reveal their opinion on what policies should be pursued. A typical poll question was formulated like this: "*As you may know, the federal income tax cuts passed into law since George W. Bush became president are set to expire within the next several years. Would you favor or oppose making those tax cuts permanent?*" (cf. CNN/Opinion Research Corporation Poll. March 14-16, 2008.) For each policy, we derived the voters' preferences. In cases where different polls obtained information on the same policy, we averaged the poll results to calculate voters' preferences. In case of repeated polls by the same polling institute, we first averaged the poll results for each polling institute. Then, one of the authors and two research assistants independently categorized the candidates as to whether they support or oppose the respective policy.

The coders initially disagreed only for two out of 29 policies, but were able in both cases to resolve the disagreement after further research and discussion. For example, McCain's position appeared to be unclear on raising the minimum wage. In fact, McCain voted "yes" on increasing the minimum wage to $7.25 in 2007 whereas two years earlier he voted "no" on raising it to $7.25 rather than $6.25. We then analyzed statements from his 2008 campaign website which indicate that he opposes this policy.

We excluded policies for which (a) we could not identify differences in the candidates' positions or (b) the candidates' positions were unclear. For example, although frequently asked in polls and intensively discussed in the media, issues like immigration, same-sex marriage, or the death penalty do not appear in our forecast since the candidates seem to have identical positions on the respective policies (cf. Table 6).

Table 4: Example calculation of simple 1-policy index scores

		Voter support		Index scores	
		McCain (Yes)	Obama (No)		
POLICY	Polls			McCain	Obama
Make Bush's tax cuts permanent	CNN/Opinion Research Corporation Poll. March 14-16, 2008.	54	40	1	0
	Fortune Magazine poll, Jan. 14-16, 2008.	53	37		
	Mean voter support	53.5	38.5		

Finally, we matched the voters' preferences for policies with the candidates' positions. If the majority of voters favor a candidate's position, we assigned an index score of "1" to this

have favored the same candidate in 52 out of 55 elections.

candidate and "0" to the opponent as we show in Table 4. The policy-index forecast is that the candidate with the highest overall index score will win the election.

Table 5: Voters' preference, candidates' positions, and index scores

POLICIES	No. polls	Position of		Voter support for			Index scores	
		McCain	Obama	McCain	Obama	Unsure	McCain	Obama
Health care								
Providing health coverage for all vs. keeping costs down	2	Keeping costs low	Providing health coverage for all	36.0	59.5	4.5	0	1
Mandatory health insurance for children	1	No	Yes	31.0	65.0	4.0	0	1
Economy								
Raise the minimum wage	1	No	Yes	52.0	46.0	2.0	1	0
Taxes								
Suspend federal gasoline tax for the summer	4	Yes	No	46.5	46.8	6.7	0	1
Make Bush's tax cuts permanent	3	Yes	No	55.0	39.0	6.0	1	0
Tax cuts only for low and middle income people	2	No	Yes	30.5	64.5	5.0	0	1
Trade								
Re-negotiate NAFTA	1	No	Yes	35.0	48.0	17.0	0	1
Free trade	2	Yes	No	33.0	54.5	12.5	0	1
Energy								
Building more nuclear power plants	1	Yes	No	51.0	41.0	8.0	1	0
Foreign policy								
Re-establishing U.S. diplomatic relations with Cuba	1	No	Yes	29.0	61.0	10.0	0	1
Withdrawal of troops in Iraq	17	Stay as long as necessary	Withdraw within 16 months	32.7	58.0	9.3	0	1
Meet with leaders of hostile foreign countries	1	No	Yes	20.0	77.0	3.0	0	1
Guns								
Guns laws should get more strict	3	No	Yes	38.3	52.8	8.9	0	1
Right of gunownership is more important than control	1	Yes	No	37.0	58.0	5.0	0	1
Abortion								
Pro-choice vs. pro-life	9	Pro-life	Pro-choice	36.5	41.3	22.2	0	1
Overturn Roe v. Wade	3	Yes	No	35.0	60.3	4.7	0	1
Other								
Allow Guantanamo prisoners to challenge their detentions in US civilian court system	1	No	Yes	61.0	34.0	5.0	1	0
Teach sex education	1	No	Yes	46.0	51.0	3.0	0	1
Sum							**4**	**14**

We analyzed data from 34 polls, conducted between October 2007 and July 2008, and obtained voters' preferences on 18 policies. A complete list of the policy-based polls used in this study is provided in Appendix 2. For each policy, Table 5 shows the number of polls, the positions of the candidates, the voter support for a candidate's position, as well as the derived index scores. For each category, the policies are ordered by descending "unsure" voter preference. Interestingly,

the data discloses differences between polls addressing issues versus polls addressing policies. When asking voters about which candidate they expect to handle the *issues*, most frequently cited topics were the economy and Iraq, followed by taxes and health care. When asking voters about which *policies* they prefer, most frequently cited topics were the troop withdrawal in Iraq, abortion, gun control, and taxes.

In issue-based polls, voters simply have to reveal which candidate they support. In contrast, policy-based polls are more complex and require not only voters – but also polling institutes – to be informed about current policies. Policy-based polls appear to focus on topics that polarize voters and that are easy for voters to understand, like abortion, gun control, or taxes. On the other hand, for complex economic problems like "raise the minimum wage", we found only one poll relevant to our analysis.

Overall, the policy-based polls also favor Obama. McCain's positions are favored for 4 policies, whereas Obama's are favored for 14. Thus, the policy-based index forecast also predicts Obama as the winner.

Discussion

The question of whether the polls truly reflect the voters' opinion on which candidate will best handle the issues arises. First, voters' support for a candidate might be (unconsciously) influenced by irrelevant factors including the candidate's sex, religion, race or age – criteria that have already attracted immense media attention during the 2008 election campaign. For example, research has shown that by simply catching a glimpse of candidates' faces, one can quite accurately predict the outcome of elections (Todorov et al. 2005, Armstrong et al. 2008). Second, still early in the campaign, voters might not even have formed an opinion on the issues yet. Rather, we would assume that the polls reflect voters' unhappiness with the current government. By the end of July 2008, George W. Bush's job approval rate had reached all-time lows. If voters are unhappy with the incumbent, they might express this by indicating that they support the contender from the opposing party. Moving forward in the campaign, we would expect more voters to be informed on the candidates' positions. Accordingly, the influence of the incumbent's popularity should become less, and this should be reflected in the polls.

Our analyses revealed differences between issue-based and policy-based polls for the 2008 election. In particular, voters' perceptions on issues and preferences on policies differ. For example, in the issue-based polls, voters favor Obama for dealing with the economy or energy problems. In contrast, when asked *how* these problems should be solved, voters support McCain's positions. Vice versa, the voters expect McCain to do better in handling 6 out 10 *issues*

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related to foreign affairs. However, when asked about which *policies* should be pursued to deal with foreign affairs, voters prefer the views of Obama. These discrepancies imply that voters are not necessarily well-informed about which policies will be pursued by the candidates. A reason might be that voters' perceptions are largely influenced by issue ownership of parties (i.e. the long-term issue handling reputation). Traditionally, Democrats are seen as better equipped to handle welfare problems. Republicans are favored on handling social issues (e.g. crime, moral values) or foreign affairs and defence, whereas perceptions of economic issues are mixed (Petrocik 1996).

The most important advantage of the policy-based index method is that candidates can use its results and take action to change their appeal to voters. They could, for example, advertise positions on policies that clearly favor them (cf. Table 5). Obama could emphasize his policies regarding health care, gun control, abortion, or foreign affairs. The latter might be of particular interest for Obama since, as noted above, the voters' perception on the candidates resolution of this issue is the reverse of their preferred policies. On the other hand, voters clearly favor McCain's positions for one policy: *allowing Guantanamo prisoners to challenge their detentions in US civilian court system.* McCain has already pursued the strategy of emphasizing his position in the case of the former policy, attacking the Supreme Court decision to allow Guantánamo Bay prisoners to challenge their detention in US courts as "one of the worst decisions in the history of this country" (http://www.ft.com/cms/s/0/68bdeeb4-3987-11dd-90d7-0000779fd2ac.html).

Although the latter (drilling) policy is the one for which he received the highest voter support, McCain defined his position with comparative restraint. A reason might be that he recently changed his position from opposing to supporting off-shore drilling. Voters may perceive this negatively.

Candidates could also adopt new or revised positions based on policy-based indexes. For example, they could take the initiative and claim a policy as their own in cases where (a) candidates are in agreement but where this is not commonly understood by the voters, (b) many voters are unsure or have no opinion, or (c) a candidate's position is contrary to voters' preference. In fact, both candidates already revised their positions on certain issues. For example, both initially opposed offshore drilling for oil and gas in U.S. waters. However, due to rising gas prices, more and more voters were calling for such a policy. In response, it was McCain who first changed his position from opposing to supporting offshore drilling. Interestingly, although being one of the few policies for which he received high voter support, McCain advertised his revised position with comparative restraint. A reason might be that changing positions on policies could

be perceived negatively by voters. Eventually, presumably due to a fear of losing voters, also Obama deviated from his disaffirmation and recently backed offshore drilling.

Table 6 shows policies for which the positions of the candidates are similar (ordered by descending "unsure / no opinion" by voters). Interestingly, for all policies on which the candidates agree, their positions conform to voters' preferences. We could not find cases for which the candidates agree on policies that are contrary to what the voters support. Also, in each case, there is already a majority that either supports or opposes the policy. Even if all voters that are unsure or have no opinion would swing to one side, voter preference would not change. Notably, both McCain and Obama diverge from popular positions held by their respective parties. For example, McCain voted "no" on a constitutional ban of same-sex marriage, proposed by his Party's incumbent president George W. Bush. On the other hand, by supporting the death penalty or the building of a fence along the nation's border with Mexico, Obama differs from traditional Democratic views.

Table 6: Similar positions of candidates on policies

POLICIES	Issue	No. polls	Voter preference Support	Oppose	Unsure / no opinion	Candidates' position
Giving illegal immigrants now living in the United States the right to live here legally if they pay a fine and meet other requirements	Immigration	2	54.5	30.5	15.0	Yes
Stem cell research	Moral values	2	62.0	27.0	11.0	Yes
Death penalty for persons convicted of child rape	Death penalty	1	55.0	38.0	7.0	Yes
Death penalty for persons convicted of murder	Death penalty	3	63.7	27.7	8.6	Yes
Same-sex marriage	Moral values	5	39.6	54.0	6.4	No
Amendment to the US constitution to ban same-sex marriage	Moral values	3	41.0	54.0	5.0	No
Ban sales of handguns	Guns	3	33.0	63.5	3.5	No
Reduce emissions	Global warming	1	52.0	45.0	3.0	Yes
Building a fence along the border with Mexico	Immigration	2	50.5	47.5	2.0	Yes
Drilling for oil and natural gas offshore in U.S. waters	Energy	2	74.5	23.5	2.0	Yes
Use interrogation methods that cause physical or emotional suffering	Moral values	1	40.0	58.0	2.0	No

Conclusion

We retrospectively applied the index method to the three US Presidential Elections from 1996 to 2004 and provided a forecast based on voters' perceptions on *issues* (i.e. which candidate will be more successful in solving the problems facing the country). For all three elections, this issue-based forecast correctly picked the winner. Applying this procedure for the 2008 election, the index method predicts Obama will win the popular vote. In addition, for 2008, we provided a forecast based on voters' preference for *policies*; that is what policies should be pursued by the candidates. The policy-based forecast also predicts Obama as the winner.

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These forecasts are consistent with those from other methods, as summarized in the PollyVote (www.pollyvote.com). The PollyVote follows the principle of combining forecasts (Armstrong 2001) and provided a near-perfect forecast for the 2004 election (Cuzán et al. 2005). In particular, the PollyVote aggregates forecasts from four components: polls, a prediction market, expert judgments, and quantitative models. Since its re-launch in August 2007 through to July 2008, the PollyVote predicted that the Democratic candidate would win. By July 2008, none of her components predicted a Republicans win.

We believe our approach will make a useful contribution to forecasting election winners. In addition, policy-based index forecasts can help candidates in developing and communicating their positions on policies. The index method draws on different information and uses a different method. Furthermore, it is simple to use and easy to understand. Unfortunately, its simplicity may be the method's biggest drawback. Summarizing evidence from the literature, Hogarth (2006) shows that people exhibit a general resistance to simple solutions. Although there is evidence that simple models can outperform more complicated ones, there is a strong belief that complex methods are necessary to solve complex problems.

Acknowledgments

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Appendix

Appendix 1: Polls on issues

POLL	POLL
Election 1996	**Election 2008**
CNN/USA Today Gallup Poll. Nov. 2-3, 1996.	ABC News/Washington Post Poll. April 10-13, 2008.
CNN/USA Today Gallup Poll.Oct. 26-29, 1996.	ABC News/Washington Post Poll. Dec. 12, 2007
	ABC News/Washington Post Poll. Jan. 30-Feb. 1, 2008
Election 2000	ABC News/Washington Post Poll. July 10-13, 2008
ABC News/Washington Post Poll. July 20-23, 2000	ABC News/Washington Post Poll. June 12-15, 2008
CBS News/New York Times Poll. May 10-13, 2000.	ABC News/Washington Post Poll. March 3, 2008
CNN/Time Poll. Oct. 12-13, 2000.	ABC News/Washington Post Poll. May 8-11, 2008
CNN/USA Today/Gallup Poll. Apr. 28-30, 2000.	ABC News/Washington Post Poll. Nov. 1, 2007
Gallup Poll. Mar. 10-12, 2000.	ABC News/Washington Post Poll. Oct. 29-Nov. 1, 2007.
Self/Kaiser Family Foundation. Jun. 7-14, 2000.	ABC News/Washington Post Poll. Sep 30, 2007
The Harris Poll. May 4-8, 2000.	ABC News/Washington Post Poll. Sep 7, 2007.
The Harris Poll. Sept. 8-17, 2000.	ABC News/Washington Post Poll. Sept. 27-30, 2007
Washington Post/Kaiser Family Foundation/Harvard University. Jul. 5-18, 2000.	CBS News/New York Times Poll. April 25-29, 2008
Washington Post/Kaiser Family Foundation/Harvard University. May. 11-22, 2000.	CBS News/New York Times Poll. Dec. 9, 2007
Washington Post/Kaiser Family Foundation/Harvard University. Oct. 12-19, 2000.	CBS News/New York Times Poll. Sep 8, 2007
Washington Post/Kaiser Family Foundation/Harvard University. Sep. 7-17, 2000.	CNN/Opinion Research Corporation Poll. July 27-29, 2008.
	Diageo/Hotline Poll. June 5-8, 2008
Election 2004	Fortune Magazine poll. Jan. 14-16, 2008
ABC News/Washington Post Poll. June 17-20, 2004	Gallup Poll. Sept. 14-16, 2007
ABC News/Washington Post Poll. Sept. 6-8, 2004.	LA Times / Bloomberg. Apr. 10-14, 2008.
Associated Press-Ipsos poll. March 19-21, 2004.	Los Angeles Times/Bloomberg Poll. Nov. 30-Dec. 3, 2007
CBS News/New York Times Poll. April 23-27, 2004.	NBC News/Wall Street Journal Poll. Jan. 20-22, 2008
CNN/USA Today/Gallup Poll. Sept. 3-5, 2004.	NBC News/Wall Street Journal Poll. July 11, 2007
FOX News/Opinion Dynamics Poll. June 8-9, 2004.	NBC News/Wall Street Journal Poll. Sep. 11, 2007
Newsweek Poll. July 29-30, 2004.	NBC News/Wall Street Journal Poll. July 27-30, 2007
Newsweek Poll. Sept. 2-3, 2004.	NBC News/Wall Street Journal Poll. Jan. 20-22, 2008.
Pew Research Center for the People & the Press survey. March 22-28, 2004.	Newsweek Poll. Aug. 1-2, 2007.
The Los Angeles Times Poll. March 27-30, 2004.	Pew Research Center for the People & the Press survey. April 27, 2008
Time Poll. Aug. 24-26, 2004.	Pew Research Center for the People & the Press survey. Feb. 20-24, 2008
Time/CNN Poll. May 12-13, 2004.	Pew Research Center for the People & the Press survey. May 21-25, 2008
	Pew Research Center for the People & the Press surveyl. July 23-27, 2008
	Rasmussen Reports. Apr 16, 2008.
	Rasmussen Reports. Apr. 11-13, 2008.
	Rasmussen Reports. Mar 21-23, 2008.
	Time Poll. June 18-25, 2008
	USA Today/Gallup Poll. June 15-19, 2008
	USA Today/Gallup Poll. Nov. 30-Dec. 2, 2007

Appendix 2: Polls on policies

Poll
ABC News Washington Post Poll. May 8-11, 2008.
ABC News/Washington Post Poll. June 12-15, 2008.
Associated Press-Ipsos poll conducted by Ipsos Public Affairs. Oct. 23-25, 2007.
CBS News Poll. May 30-June 3, 2008.
CBS News Poll. Oct. 12-16, 2007.
CBS News/New York Times Poll. April 25-29, 2008.
CBS News/New York Times Poll. May 2008.
CNN/Opinion Research Corporation Poll. June 26-29, 2008
CNN/Opinion Research Corporation Poll. Mar 14-16, 2008
Fortune Magazine poll conducted by Abt SRBI. Jan. 14-16, 2008.
FOX News/Opinion Dynamics Poll. June 17-18, 2008.
FOX News/Opinion Dynamics Poll. Oct. 23-24, 2007.
Gallup Poll. May 8-11, 2008.
Gallup Poll. Oct. 4-7, 2007.
Los Angeles Times/Bloomberg Poll. Jan. 18-22, 2008.
Los Angeles Times/Bloomberg Poll. June 19-23, 2008.
Los Angeles Times/Bloomberg Poll. Oct. 19-22, 2007.
NBC News/Wall Street Journal Poll. Jan. 20-22, 2008.
NBC News/Wall Street Journal Poll. June 6-9, 2008.
NPR/Kaiser Family Foundation/Harvard School of Public Health survey. Feb. 14-24, 2008.
Pew Research Center for the People & the Press survey. April. 23-27, 2008.
Pew Research Center for the People & the Press survey. December 19-20, 2007.
Pew Research Center for the People & the Press survey. Feb. 20-24, 2008.
Pew Research Center for the People & the Press survey. June 18-29, 2008.
Pew Research Center for the People & the Press survey. November 20-26, 2007.
Pew Research Center for the People & the Press survey. October 17-23, 2007.
Quinnipiac University Poll. August 7-13, 2007.
Quinnipiac University Poll. July 8-13, 2008.
Quinnipiac University Poll. May 8-12, 2008.
Quinnipiac University Poll. Oct. 23-29, 2007
The Harris Poll. Oct. 16-23, 2007.
Time Poll conducted by Abt SRBI. June 18-25, 2008
USA Today/Gallup Poll. Feb. 21-24, 2008.
USA Today/Gallup Poll. Feb. 8-10, 2008.

Appendix 3: Polling data, indexes, and predicted election winner for the elections 1996, 2000, and 2008

Year		Social Welfare Issues			Foreign Policy / Defence Issues						Economic Issues							Social Issues and other														Predicted winner based on sum of indexes
		Education	Health Care	Social Security	Foreign Policy	Middle East	Iraq	Iran	Terrorism /Homeland Security	Military	Economy	Jobs	Taxes	Budget Deficit	Gas Prices	Housing	Trade	Immigration	Crisis Management	Moral values in general	Same-sex marriage	Abortion	Environment	Stem cell research	Crime	Guns	Government reform	Campaign Finance Reform	Representing women	Privacy	Sum	
1996	No. of polls	1	1	1	1						1		1	1					1	1					1		1					Democrats (Clinton)
	Rep. voter support	31.0	36.0	38.0	41.0						30.0		32.0	42.0					31.0	45.0					40.0		33.0					
	Dem. voter support	62.0	59.0	55.0	47.0						45.0		40.0	50.0					49.0	34.0					52.0		42.0					
	Rep. Index	0	0	0	0						0		0	0					0	1					0		0				1	
	Dem. Index	1	1	1	1						1		1	1					1	0					1		1				10	
2000	No. of polls	2	4	2	1	1					3	1	1	2	2				8			1	1		1	4		1	1	1		Democrats (Gore)
	Rep. voter support	38.0	32.8	39.0	45.0	45.0					42.0	42.0	50.0	43.0	41.5				44.4			40.0	31.0		51.0	40.8		38	28	47		
	Dem. voter support	46.0	47.8	49.5	45.0	42.0					43.3	37.0	39.0	45.0	38.5				41.0			41.0	59.0		37.0	40.3		43	56	41		
	Rep. Index	0	0	0	1	1					0	1	1	0	1				1			0	0		1	1		0	0	1	9	
	Dem. Index	1	1	1	1	0					1	0	0	1	0				0			1	1		0	0		1	1	0	10	
2004	No. of polls	4	7	3	7		7		8	1	7	5	5	2	1		1		3	3	2		2	1			1					Republicans (Bush)
	Rep. voter support	43.3	37.7	35.3	45.9		49.4		54.5	50.0	43.3	39.6	45.6	39.0	32.0		38.0		50.3	45.0	41.5		34.5	26.0			46.0					
	Dem. voter support	42.8	48.0	46.7	42.0		39.7		35.0	42.0	45.7	47.8	42.2	50.0	39.0		39.0		33.7	42.7	37.5		52.5	53.0			36.0					
	Rep. Index	1	0	0	1		1		1	1	0	0	1	0	0		0		1	1	1		0	0			1				10	
	Dem. Index	0	1	1	0		0		0	0	1	1	0	1	1		1		0	0	0		1	1			0				9	

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