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Looking to the future: Prospective economic voting in 2008 Presidential Elections☆

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ABSTRACT

Despite the economic turmoil of the time, a typical study of vote choice in the 2008 US Presidential Election would (falsely) find little evidence that voters' opinions about the future state of the economy affected their vote choice. We argue that this misleading conclusion results from serious measurement error in the standard prospective economic evaluations survey question. Relying instead on a revised question, included for the first time in the 2008 American National Election Study, we find that most respondents condition their prospective economic evaluations on potential election outcomes, and that these evaluations are an important determinant of vote choice. A replication in a very different political context – the 2008 Ghanaian election – yields similar results.

1. Introduction

On November 4th, 2008, United States voters went to the polls to elect a new president amidst a sudden financial crisis, deemed many months later to be the onset of the *Great Recession*. If ever future economic considerations should affect voting behavior, this was the election. However, a standard analysis of the effects of prospective economic evaluations on the vote in this election using American National Election Study (ANES) data would have us believe that voters' thoughts about the near-term economic future had little impact on their voting decisions (see Table 2 in Section 5.2).

This result is at odds with much of the large body of literature on economic voting as well as conventional wisdom about elections and the economy. In this paper we identify a methodological problem that explains these puzzling results and apply a novel remedy which confirms what most people intuitively expect: prospective economic evaluations did indeed have an important and substantively meaningful effect on vote choice in the 2008 US Presidential Election.

The culprit, we believe, is measurement error. More specifically, we argue in Section 2 that the measure traditionally used to capture prospective economic evaluations in election studies is fundamentally flawed when used in pre-election surveys. Asking voters to indicate their near-term economic expectations fails to account for the fact that voters' beliefs about the future state of the economy

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will in many instances be *conditional* on who wins the election. Since this traditional question does not take into consideration how a respondent is conditioning on the outcome of the election – e.g., is she answering the question with the expectation that the leading candidate will win? her favorite candidate? the incumbent? etc. – the measure is both noisy, and, ultimately, not interpretable.

We argue instead that evaluations about the future state of the economy in the context of a pre-election survey ought to be conceived as a *candidate-specific* variable, much like candidate traits (e.g., honesty) or policy competence (e.g., foreign policy expertise), rather than a *respondent-specific* variable such as age.

To remedy this problem, we employ an alternative measurement strategy. Taking advantage of the fact that the ANES now allows researchers to submit questions for inclusion, we proposed that the following two questions be added to the 2008 ANES:

1) *What about the next 12 months? If Barack Obama wins the election, do you expect the economy, in the country as a whole, to get better, stay about the same, or get worse? Much better or somewhat better? Much worse or somewhat worse?*

2) *What about the next 12 months? If John McCain wins the election, do you expect the economy, in the country as a whole, to get better, stay about the same, or get worse? Much better or somewhat better? Much worse or somewhat worse?*

The ANES accepted our alternative measurement strategy for prospective economic evaluations and these questions were included in the pre-election study in a split sample design, whereby half of the respondents randomly received the old, standard prospective economic evaluation question, and the remaining half of the sample received our two new candidate-specific prospective economic evaluation questions.

In the remainder of this paper, we demonstrate that prospective economic evaluations, when treated as a candidate-specific variable, were indeed an important factor in citizens' electoral choices in the 2008 US Presidential Election. We proceed in the following manner: In Section 2, we discuss why prospective economic evaluations ought to be considered a candidate-specific variable in election studies. After describing our data in Section 3, Section 4 demonstrates that many respondents do indeed give different answers to candidate-specific questions about prospective economic evaluations. With this finding in hand, we demonstrate the very strong relationship between candidate-specific prospective economic evaluations and vote choice in the 2008 US Presidential Elections in Section 5. In order to address potential endogeneity concerns, we also replicate our analysis across a wide range of subpopulations (e.g., undecided voters, independents, etc.) who are significantly less likely to be engaging in such projections and we again find clear evidence of a relationship between prospective economic evaluations and vote choice. In Section 6, we replicate our analysis using an original survey carried out in Ghana, which also held an essentially two-party Presidential Election in 2008, but which otherwise offers a significantly different political context from the United States. In Ghana, we again come to the same conclusion: when properly measured, prospective economic evaluations are an important predictor of vote choice.

Taken together, we offer an important contribution to the study of economic voting by: (1) illuminating how the standard measurement of prospective economic evaluations is fundamentally flawed, (2) proposing a better suited measurement strategy, and (3) demonstrating that there is very good evidence to believe that voters were indeed motivated by prospective economic concerns in the 2008 US Presidential Elections as well as the 2008 Ghanaian Presidential Elections.

2. Theories of prospective economic voting

By our count there have been over 50 published articles in the last 20 years that offer an empirical test of the prospective economic voting hypothesis. Most generally, this hypothesis proposes that voters' beliefs about the future performance of the economy influence their vote choices. While a healthy proportion of these studies have analyzed voting in the United States, studies can be found in wide range of countries including Hungary, Taiwan, and Turkey.[1] The results of these studies, however, are far from consistent. Many find support for prospective voting.[2] Others falsify the prospective voting hypothesis.[3] Still others find some support for prospective voting, but either claim that it is much weaker than retrospective economic voting (the theory that citizens reward or punish the incumbent government for past economic performance) or report different results across different elections.[4]

We believe that these inconsistent empirical findings are at least in part a product of measurement error in the standard survey question used to measure individuals' beliefs about the future state of the economy. Typically, voters are asked an economic evaluation question that takes the generic form of "How do you think the economy will perform over the next 12 months?" The answer to this question, however, is likely to depend on who wins the coming election. Thus, without knowing the "political future" on which voters are conditioning in providing their assessment of the "economic future," it is unclear how we ought to interpret any answer to the standard question. Time-series studies of the economic determinants of pre-election candidate approval ratings face similar concerns.

Indeed, consider the following five different plausible "response regimes" that might guide an individual's thinking when confronted with the standard prospective

[1] See Harper (2000), Hsieh et al. (1998) and Hazama (2006) respectively.

[2] See, for example, the studies of Abramowitz (1985), Lewis-Beck (1988), Bartle (2003), and Carey and Lebo (2006).

[3] See, for example, Lanoue (1994), Norpoth (1996), or Nannestad and Paldam (2000).

[4] See, for example, Kuklinski and West (1981), Clarke et al. (2000), Harper (2000), Duch (2001), Denemark and Bowler (2002), Veiga and Veiga (2004), Goodman and Murray (2007) and Hazama (2006).

economic evaluation question in a pre-election survey.[5] We begin with some simple heuristics that a voter might use:

- She may answer based on the *incumbent* winning the election.
- She may answer based on her *preferred* candidate winning the election.
- She may answer based on the *first candidate who happens comes to mind* winning the election.[6]

Of course, we can also consider less myopic response regimes where respondents take account of available information about the likely winner of the election:

- She may answer based on the *leading candidate* in the polls winning the election.
- She may employ a *weighted average*, whereby she conditions on the likelihood of each candidate winning the election based on current levels of support in the polls.

The use of these various response regimes to answer the standard prospective economic evaluation question is very likely to befuddle vote choice studies testing the strength of the prospective economic voting theory. The problem is twofold. First, because the standard prospective economic evaluations question is not conditional on a particular candidate winning, researchers have no way of knowing which response regime respondents are utilizing.[7] Second, it therefore becomes very difficult to know how to interpret the results.[8]

Let us consider the standard prospective economic theory tested in the literature. This theory holds that those expecting the economy to improve in the future will be more likely to support the incumbent party than those who believe the economy is going to get worse.[9] In order to test this 'prospective incumbent hypothesis' using the traditional version of the prospective economic evaluation question, the assumption has to be made that all respondents are answering that question using the incumbent response regime, i.e. conditioning on the incumbent being in office twelve months from now. At many times during a legislative term, that is a perfectly reasonable assumption to make. It is not, however, a reasonable assumption in a pre-election survey, when the office holder in question is going to be determined by that election.

What happens when voters are using a different heuristic to answer the standard question? If voters are using the leading candidate response regime and an opposition candidate is currently leading, then voters are answering the economic expectations question on the assumption that the incumbent is going to lose and that future economic conditions will depend on the economic competence of this opposition candidate. If we then observe no (positive) relationship between positive future economic expectations and voting for the incumbent, should this result indicate the individuals are not prospective economic voters? Of course not. It may very well be that people expected the economy to decline if the incumbent stayed in power and therefore voted against the incumbent. Despite this being the case, most studies using a traditional economic expectations survey question would (falsely) conclude that prospective economic voting did not occur because there was no relationship between expectations for improved economic conditions in the next 12 months and voting for the incumbent.[10]

A second problem is that different groups of respondents may be using different response regimes within the same sample. For instance, voters informed about the probability that each candidate may win may use the weighted average response regime, while voters with no such information may answer according to the preferred candidate response regime. For another example, voters using the leading candidate response regime may believe different candidates will win and answer the standard question conditioning on different candidates.

An alternative, yet nonetheless problematic, approach to prospective economic voting is to ask respondents to identify the party or candidate they believe would be best at handling the economy. The ANES has occassionaly included this question and variants also appear in Hsieh et al. (1998) in a Taiwanese National Election Study, Shaefer (2008), and Malhotra and Krosnick (2007). This question offers some advantages because it provides some information about relative perceptions of economic competence, but it still leaves a lot of information off the table. The question is most useful in a two party context, as it at least provides a ranking of all the parties. However, we still lack the more detailed information about the "range"

[5] This may not be a collectively exhaustive set of response regimes, but these seem most likely and are sufficient for demonstrating the problem.

[6] See Zaller (1992).

[7] Note that respondents themselves may not be cognizant of their own response regime.

[8] We are not the first to point out this problem, although we are the first to fully explicate the problem and propose a solution. Indeed, Welch and Hibbing (1992) mention in footnote 7 on p.204 that their "questions are asked in the preelection survey, and one cannot know what assumptions voters are making about who will win when projecting economic conditions a year hence. This is particularly true in years such as 1980 when the election outcome was uncertain." See as well Lockerbie (1991) and Clarke et al. (1998).

[9] The theoretical origins of this hypothesis lie in work by Key and Fiorina on economic voting. The basic claim presented by Key (1966), and refined and popularized by Fiorina (1981), is that voters reward or punish incumbent politicians based the health of the economy. Key and Fiorina further assert that voters utilize retrospective evaluations of economic conditions in vote choice; voters evaluate incumbents based on recent economic conditions and reward them for positive evaluations or punish them for bad evaluations. Building off this work, numerous scholars moved on to evaluate the hypothesis that voters reward or punish incumbents not on retrospective performance, but on expectations about the future performance of the economy.

[10] Ladner and Wlezien (2007) also considers the relationship between electoral and economic expectations. This study demonstrates that responses to the traditional question reflect both support for the party in power and expectations about the outcome of the upcoming election. These results speak directly to our concerns with the traditional measure of prospective economic evaluations: citizens (at least those with knowledge of upcoming election results) tend to condition their expectations on belief about the coming election results.

between evaluations of the economy under each party, which alternative-specific questions can provide (e.g. is party A "improve" and party B "stay the same" the same as party A "improve" and party B "worsen"?). Moreover, in a multiparty context, we lose even more information because we have only a ranking of one party against all others and no ranking between the remaining parties.

Yet another problematic approach combines responses to the standard question with respondents' beliefs about the likely outcome of the election, an approach used in Lanoue (1994). If an individual is certain about who will win the election, then this approach provides a reasonable estimate of prospective evaluations for that candidate. It provides no information, however, on respondents' beliefs about the economic competence of other candidates, such that one has no way of knowing whether respondents' expectations about the leading candidate's economic performance are superior to that of the other candidates'. Moreover, this approach *assumes* that all voters are using the leading candidate response regime. For respondents who are unsure about the outcome of the election, like the 74% of 2008 ANES respondents who thought the US Presidential Election would be close, this alternative approach is clearly problematic.

Our proposed solution is to ask voters a series of questions about their prospective evaluations of the economy if each viable party wins office. Just as we would not ask a question about whether the president will be empathetic (or intelligent, or support abortion rights, etc.) in 12 months without conditioning on each hypothetical president, we should not ask respondents what the state of the economy will be in 12 months without conditioning on who occupies the office of the presidency. Otherwise, we make the assumption that prospective economic evaluations are *respondent-specific* variables (like a respondent's age, gender, education, etc.) that are fixed to the respondent, and will not change regardless of the outcome of the election. Thus conceptually, as long as there is an election within the window of the prospective evaluation (e.g., here in the next 12 months), it makes more sense to think of measures of policy outcomes within that time as *alternative-specific* (i.e., candidate or party specific) data than respondent-specific. Such an approach nicely solves the measurement error concern identified above. Instead of guessing as to what response regime voters are using in the standard respondent-specific prospective economic evaluation question, our new alternative-specific measure *explicitly indicates* the hypothetical outcome of the election on which the respondent is to base her evaluation (e.g., if Obama wins…; if McCain wins…).

Equally important, we have good theoretical reasons for considering prospective economic evaluations as a candidate-specific concept. Indeed, any study concerned with attempting to measure expected future utility as a basis of vote choice should embrace the concept. For Downs (1957), the original advocate of voting as an expected utility maximizing enterprise, voters are prospectively oriented, selecting the candidate whom they believe will provide them with the greatest utility in the future from their performance in the economy. Utility from these prospective economic evaluations along with any other utility from candidate-specific performance issues important to the voter (e.g. prospective foreign policy evaluations, prospective gay rights policy evaluations) are aggregated up for each candidate and the candidate providing the highest utility is the vote choice of the voter. Thus the Downsian approach to economic voting essentially requires that we collect candidate-specific measures for prospective economic evaluations.[11]

Reassuringly, our conjectures that prospective economic evaluations should be conceived as candidate-specific and that they are a determinant of vote choice may be falsified. First, one can test whether voters believe that the economy would perform the same or differently if various candidates won the election, a question we turn to in the next section. Second, one may test whether a relationship exists between believing the economy would perform better under one candidate and voting for that candidate, a question tackled in Section 5.

3. Data

As noted previously, data from the United States are available thanks to the ANES's new policy of enabling users of the study to propose questions. Our new prospective economic evaluation questions (one conditioning on an Obama victory and one on a McCain victory) were randomly assigned to half of the survey respondents, and the traditional prospective economic evaluation question assigned to the other half. We also analyze data from an original pre-election survey conducted in the capital city of Ghana leading up to that country's December 2008 National Elections (Michelitch, 2012).

We supplement our US analysis with the Ghana data for two reasons. First, by subjecting the theory of prospective economic voting to empirical testing in two very diverse settings – one established democracy and one much newer West African democracy – we hope to convince readers of the viability of the prospective economic voting model cross-nationally. Second, and equally important, these are the only two surveys of which we are aware that contain candidate-specific prospective economic evaluation questions. Indeed, we hope this study will encourage collection of candidate/party-specific prospective economic evaluations in future election studies so scholars can replicate and build on the analysis presented here.

4. Do voters condition prospective economic evaluations? Yes.

Fig. 1 shows the distribution of differences in responses to our new conditional prospective economic evaluations questions. To identify this distribution in the US, we simply subtracted each respondent's expectation for the state of the economy (ranging from 1, get much worse, to 5, get

[11] See Alvarez et al. (1995). In fact, truly testing the Downsian model would also require that we collect alternative-specific *retrospective* economic evaluations (some of which would have to be hypothetical), a point we set aside for now as beyond the purview of the current study but which we return to in the conclusion.

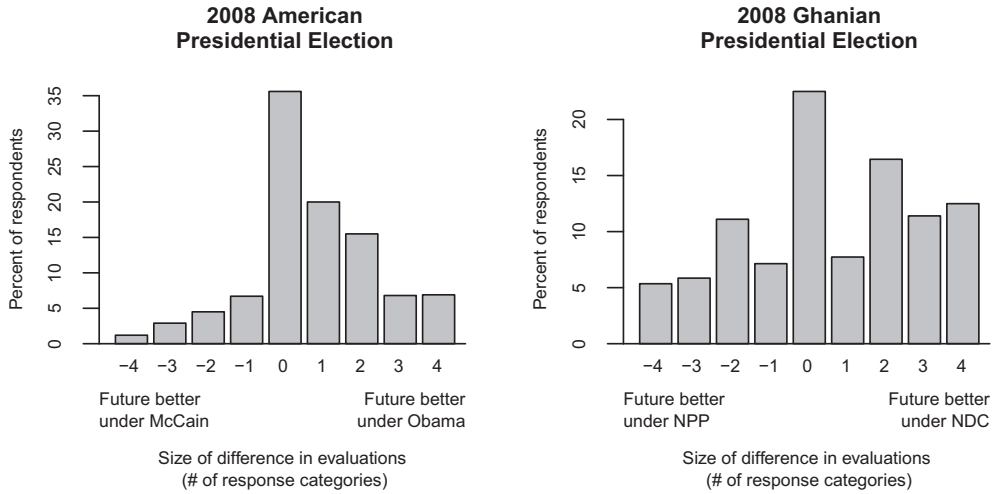

Fig. 1. Difference in prospective economic evaluations. *Notes*: This figure displays the distribution of the difference in responses to the two candidate-specific prospective economic evaluations questions. The difference in economic expectations from the American data is simply the difference in each respondent's response to the 'if McCain wins' question and their answer to the 'if Obama wins' question in the US case. For the Ghana data we calculated the difference between 'if NDC wins' and 'if NPP wins' responses. Since each question includes five valid responses, the maximum difference in responses is four categories (i.e. 'much better' under Candidate X and 'much worse' under Candidate Y). These results clearly indicate that a majority of people in both countries believe the short-term economic future depends on who wins the upcoming election.

much better) if 'McCain wins' from their expectation if 'Obama wins'; in Ghana we subtracted the expectation if 'NPP wins' from if 'NDC wins'. Given that both questions include five valid responses, the maximum possible difference in responses is four categories (i.e. 'much better' under Candidate X and 'much worse' under Candidate Y). In both countries, the patterns are clear: when given the opportunity, a majority of individuals indicate *different* economic expectations when asked to condition on different electoral outcomes.

Additionally, the ANES data also allow us to examine whether respondents give different answers to the traditional prospective economic voting question and our new candidate-specific prospective economic voting question. Table 1 presents the distribution of responses to the three prospective economic evaluation questions in the United States.[12] Since question assignment was random and the number of observations is large, the individuals receiving the traditional versus the new candidate-specific questions are, in expectation, identical. We can thus compare the distribution of answers of the traditional versus the conditional questions with the knowledge that the two groups of respondents are balanced even on unobservable characteristics.

The evidence is clear: people do answer conditional prospective economic evaluation questions differently from the standard prospective economic evaluation question. The first column in Table 1 reports the distribution of responses to the traditional question and this pattern of responses clearly differs from distributions of answers to both conditional questions. Kolmogorov–Smirnov tests confirm that the distribution of responses the two candidate-specific questions are different from the distribution of responses to the standard question. Mann–Whitney difference in mean tests also confirm that the means of the distributions are significantly different. Worryingly for studies evaluating the traditional prospective incumbent hypothesis, we can conclude that, since the traditional and the McCain-specific distributions are significantly different, it is not true that all respondents are using the incumbent party response regime.

5. Prospective voting in the 2008 US Election

Next we test whether there is a relationship between candidate-specific prospective economic evaluations and vote choice. Fig. 2 represents a first cut at this task relying simply on the raw data in the US case.

The horizontal axis of Fig. 2 is each respondents' prospective economic evaluation conditional on Obama

Table 1
Responses to prospective economic evaluations questions USA.

	Traditional	Given Obama Victory	Given McCain Victory
Much worse	13.2	9.1	15.0
Somewhat worse	17.8	10.6	13.8
About the same	41.0	39.7	51.0
Somewhat better	20.4	26.2	16.3
Much better	8.6	14.5	4.0
N	1160	1085	1086

Notes: The table shows the distribution of respondents' prospective economic evaluations for each question type: the traditional question used to measure prospective economic evaluations, and the two new questions conditioning prospective economic evaluations on each candidate in turn. The distributions are significantly different from each other according to Mann–Whitney and Kolmorgorov–Smirnov tests.

[12] The table includes sample weights to reflect the overall characteristics of the US population because the ANES design includes an oversample of both African Americans and Hispanic Americans.

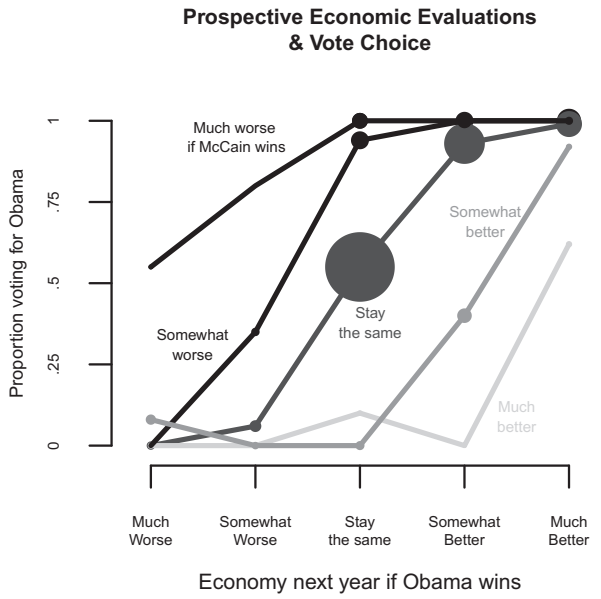

Fig. 2. Proportion of respondents voting for Obama by prospective economic evaluations. *Notes*: This figure offers a first look at the relationship between prospective economic evaluations and vote choice in the 2008 US Presidential Election by presenting the proportion of people who intended to vote for Obama in each of the groups defined by the intersection of responses to the two candidate-specific prospective economic evaluations. Respondents were first classified based on their responses to the 'if Obama wins' question (represented by the *x*-axis) and then 'if McCain wins' (represented by the different lines) and the proportion of each group voting for Obama was identified and plotted on the *y*-axis. The size of the circles at each point indicate the proportion of the total sample who had a particular combination of prospective economic evaluations for the two candidates.

winning the election. Each line holds the value of prospective economic evaluations conditional on McCain winning constant at different levels. Thus, different combinations of prospective economic evaluations for the candidates are revealed by the horizontal axis and the line type. The size of each circle indicates the proportion of the total sample size that had a particular combination of prospective economic evaluations for the two candidates. The location of the circles along the vertical axis shows the proportion of respondents who voted for Obama given the prospective economic evaluations for the candidates.

The figure reveals two important findings. First, we see evidence of many different combinations of prospective economic evaluations for McCain and Obama; some combinations, however, are clearly more popular than others. The most popular combination was that the economy would stay the same under both candidates (24% of the sample) and a large share of the public felt things would remain the same under McCain but be somewhat better (13%) or much better (8%) with Obama in office. More importantly, the figure clearly shows that, holding the prospective economic evaluation for McCain constant, the proportion of those voting for Obama increases as prospective economic evaluations for Obama improve. Moreover, the size of these effects appear to be quite substantial. Respondents who felt the economy would stay the same under each candidate were slightly more likely to vote for Obama than McCain in the aggregate. In contrast, almost all respondents who thought the economy would stay the same under McCain but get better under Obama voted for Obama, and, conversely, almost all respondents who thought the economy would get better under McCain and stay the same under Obama voted for McCain. These data thus offer evidence of a bivariate relationship between prospective economic evaluations and vote choice. Such an assessment of course tells us nothing conclusive about the direction of the causal arrows nor about whether the relationship holds when we control for other factors, but it is certainly consistent with the claim that voters are more likely to support the candidate under which they believe the economy will better perform over the next 12 months.

In the remainder of this section, therefore, we evaluate whether prospective economic evaluations were a determinant of vote choice in 2008 US Presidential Elections in a more fully specified multivariate model.

5.1. Model specification and description of variables

As per usual, we assume an individual votes for the candidate who yields the highest utility. Utility from a given candidate is a function of (1) characteristics of individuals (e.g. an individual's income), (2) characteristics of the candidates (e.g. how well the voter believes the economy will perform under a particular election winner), and (3) a random (or unmodeled) component. Note that characteristics of individuals are "fixed," regardless of candidate characteristics, while characteristics of candidates vary across candidates.[13]

Following Hausman and Wise (1978) and Alvarez et al. (1995), we define the utility of each voter i over each of the two candidates j:

$$U_{ij} = \beta \mathbf{X}_{ij} + \psi_j \mathbf{a}_i + \varepsilon_{ij} \quad (1)$$

The first term in the equation captures the effect of the candidate-specific characteristics on utility for candidate j, whereby $\mathbf{X}_{ij}$ is a vector of traits that individual i perceives about candidate j, and β is the vector of coefficients to be estimated associated with candidate-specific characteristics. The coefficient gives the effect of a change in the variable on the individual's utility of voting for (any) candidate j. The second term captures the effect of individual-specific characteristics on utility for candidate j. $\mathbf{a}_i$ is the vector of characteristics of individual i and ψ_j the vector of coefficients to be estimated associated with those individual-specific characteristics. The coefficient gives the effect of a change in the variable on the individual's utility of voting for Obama relative to McCain. Lastly, ε_{ij} represents the disturbances, or random component of unobserved utility i receives from candidate j, with normally distributed and homoskedastic error variances.

To analyze the data, we use an alternative-specific multinomial probit model, which allows us to account for candidate-specific and individual-specific variables in our

[13] Though note that some voters could potentially assign the same characteristics to all candidates. For example, one could believe that both John McCain and Barack Obama are "very moral".

Table 2
Effects of prospective economic evaluations on vote choice in the 2008 US Election.

Variable	Model.1	Model.2	Model.3	Model.4	Model.5	Model.6
	Standard question	Candidate-specific question	w/ideological distance	w/issue proximities	w/emotional responses to candidates	w/candidate traits
Equation 1: Alternative-specific						
Prospective Econ. Eval.	n/a	5.153**	4.768**	3.247**	2.459**	2.921**
		(0.565)	(0.613)	(0.822)	(0.647)	(0.924)
Equation 2: Respondent-specific						
Prospective Econ. Eval.	−0.266	n/a	n/a	n/a	n/a	n/a
	(0.157)					
Retro. Econ	−1.15**	−1.803**	−1.728**	−2.332*	−1.613*	−0.716
	(0.233)	(0.587)	(0.629)	(0.939)	(0.670)	(0.798)
Partisanship	0.525**	−0.704**	−0.548**	−0.650**	−0.555**	−0.694**
	(0.024)	(0.0699)	(0.0882)	(0.135)	(0.0927)	(0.132)
Age	−0.014**	−0.0245**	−0.0141†	−0.0184	−0.0171†	−0.00324
	(0.03)	(0.00723)	(0.00809)	(0.0135)	(0.00950)	(0.0122)
Female	0.169*	−0.0509	−0.0860	0.404	0.0354	−0.220
	(0.087)	(0.231)	(0.257)	(0.410)	(0.293)	(0.372)
Education	−0.796*	1.312	2.272*	0.911	1.494	1.079
	(0.319)	(0.917)	(1.019)	(1.765)	(1.141)	(1.432)
Union	0.001	0.402	0.283	0.254	0.507	0.764
	(−0.140)	(0.330)	(0.358)	(0.629)	(0.444)	(0.555)
Black	1.919**	2.501**	2.408**	1.382†	1.886**	3.344*
	(0.221)	(0.607)	(0.633)	(0.826)	(0.658)	(1.329)
Hispanic	0.542**	0.534**	0.763*	0.661	0.364	0.484
	(0.113)	(0.296)	(0.338)	(0.518)	(0.378)	(0.497)
Income	−0.368**	−1.269*	−1.190	−0.896	−0.797	−1.745
	(0.242)	(0.631)	(0.649)	(1.040)	(0.937)	(1.423)
Constant	3.311**	3.034**	1.282	3.177†	2.062†	1.927
	(0.328)	(0.923)	(1.017)	(1.720)	(1.179)	(1.407)
N	946	867	732	425	846	568

Significance levels: †: 10%, *: 5%, **: 1%.
Notes: The table shows estimation results from different specifications of presidential vote choice models using data from the 2008 ANES. Model 1 displays the estimates from a standard approach. Even though the respondents are in the midst of the *Great Recession* of 2008, this approach shows that there is no relationship between prospective economic evaluations and vote choice. Models 2 through 6 present alternative-specific multinomial probits of vote choice. In addition to a standard set of respondent-specific control variables, each model controls for a different set of confounding factors posited by the literature. Regardless of the controls included in these models, the effect of prospective economic evaluations remains a substantively significant determinant of vote choice in each specification. Full results are presented in the online appendix.

model of vote choice.[14] Using data from the 2008 ANES, we have included the following individual-specific characteristics in $\mathbf{a}_i$: age, gender, education in years, union membership, black, hispanic, and household income. Note as well that we also control for party identification – using the standard seven point ANES scale from Strong Democrat to Strong Republican – in all of our models, so the effects we report are present *after* controlling for partisan predispositions; we return to this point in greater detail shortly. For candidate-specific-characteristics $\mathbf{X}_{ij}$, in addition to prospective economic evaluations we consider (1) ideological distance to each candidate (2) absolute distance to each candidate on particular issues multiplied by the importance individuals assign to each issue: government aid to black Americans, the level of government environmental regulation, as well as government spending on health care, defense, and services,[15] (3) emotions conjured up in the individual by the candidate – anger, hopefulness, fear, and pride; and (4) candidate traits: strength in leadership, caring about people 'like you', knowledgeable, intelligent, honest, and optimistic. The exact survey questions and coding are listed in the online appendix.

5.2. Estimation with the improved prospective Economic evaluation question

The results from the standard test of prospective economic voting, using the conventional question, indicate no relationship between economic expectations and vote choice (see Col. 1 of Table 2). What happens when we instead use our conditional prospective economic

[14] See Hausman and Wise (1978). This model is useful because it may be used for candidate choice in any party system with two or more parties. For more on the use of multinomial probit in analyzing data from multiparty elections, see appendices 1 and 2 of Alvarez et al. (1995). Note that in the special case of a two-party election, it is possible to operationalize the variables differently (i.e., transform the two candidate-specific prospective evaluations into a single measure of the difference between the two candidates) and instead run a probit analysis. We conduct this alternative operationalization and estimation and report the results in footnote 18.

[15] This operationalization of issue distance is according to the Downsian theory of proximity voting. Because of the Rabinowitz and Macdonald (1989) theory of directional voting, we reran all our tests a second time operationalizing distance in line with the Rabinowitz and MacDonald directional voting approach. Doing so does not change any of our conclusions regarding the effect prospective economic evaluations.

evaluations? Table 2 reveals the estimation results adding a variety of different control variables at the alternative-specific level. In Model 2, we include only prospective economic evaluations along with the individual-level control variables discussed in the previous subsection. In subsequent models we add: ideological distance between the respondent and each candidate (Model 3), distance on a variety of policy issues (i.e., the traditional spatial model) (Model 4), emotional responses inspired by each candidate (Model 5), and candidate personality traits (Model 6).[16]

The bottom line is remarkably clear: prospective economic evaluations are strongly related to vote choice in every model specification. As an individual's prospective economic evaluations under candidate *j* improve, she is more likely to vote for candidate *j*. This finding is exactly what our intuition would predict: voters care about future economic performance, and beliefs about how the economy will perform under the stewardship of each candidate are a significant predictor vote choice. Moreover, these findings are robust to the inclusion of a wide range of other candidate-specific variables in our models in addition to all the standard respondent-specific control variables.[17]

Having established that prospective economic evaluations conditional on candidate *j* winning the election are statistically significant predictors of vote choice, we now consider the substantive magnitude of these effects. Fig. 3 shows how the probability of voting for Obama changes for different combinations of prospective economic evaluations for the candidates using the estimates from Model 2 of Table 2 and holding all other variables at the median.[18] The vertical axis is the probability an individual will vote for Obama and, on the horizontal axis, prospective economic evaluations given an Obama win. The different lines show the probability of voting Obama holding prospective economic evaluations for McCain constant at different levels.

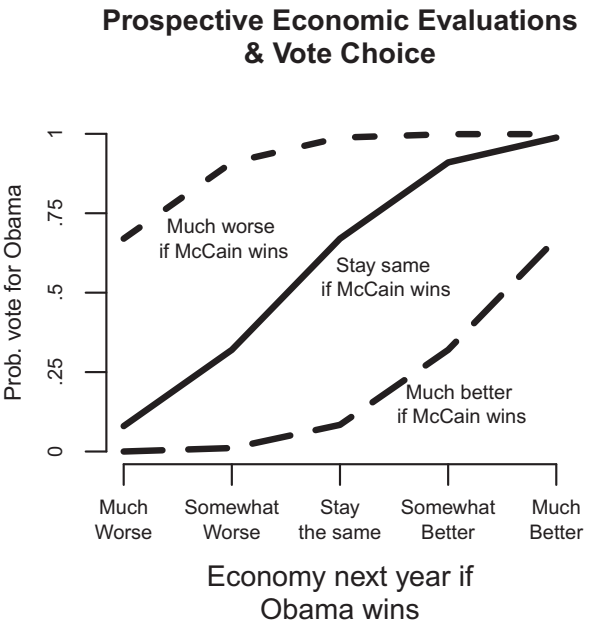

Fig. 3. Predicted probabilities of voting Obama conditional on prospective economic evaluations. *Notes*: This figure presents estimates of the relationship between prospective economic evaluations for the two candidates in the 2008 US Presidential Election and intended vote choice. The plotted data are predicted probabilities of voting for Obama at different expectations about the economy under Obama and McCain. These predicted probabilities were calculated using the regression estimates presented in Model 2 of Table 2. To produce these estimates we varied a hypothetical respondent's McCain- and Obama-specific economic expectations while holding all other variables constant at their median. Each line indicates a different response to the McCain prospective economic evaluation question and location on the x-axis indicates responses to the equivalent question about Obama. These results clearly demonstrate the strong relationship between candidate-specific economic expectations and vote choice.

Clearly, the substantive magnitude of these effects is large. If our median respondent believes the economy will stay the same under Obama, then changing from a belief that the economy will get much worse under McCain to much better under McCain results in moving from almost no chance of voting for McCain to near certainty of voting for McCain. The inverse conclusion holds true if one believes that the economy will stay the same under McCain: changing from believing the economy will get much worse under Obama to betting much better under Obama almost completely flips the likelihood of voting for Obama.

5.3. Causal validity and the potential for endogeneity

Within the scholarly literature on electoral behavior there is growing acceptance that many causal claims based on observational survey data are vulnerable to concerns about endogeneity. While the vast majority of existing studies do little to address the possibility that outcomes such as candidate preference and vote choice are, for some

[16] Estimation procedures were run in STATA 11 and graphs produced with R.

[17] Models 1 and 2 in Table 2 clearly demonstrate that the improved approach to measuring prospective economic evaluations yields very different conclusions about the influence of these opinions on vote choice than does the conventional approach. Directly comparing these estimates, however, is not possible because of the different statistical models employed. While we believe the alternative-specific multinomial model is most appropriate to the data and generalizable to different electoral contexts (i.e. multiparty elections), we ran an auxiliary regressions to provide an alternative comparison of the conventional and revised prospective economic evaluation measures. Specifically, we first created a single variable measuring the distance between the two candidate-specific questions and then included this new variable in a probit model of vote choice that is identical to Model 1 in Table 2 except that the new prospective economic evaluation measure replaces the old. Results from this analysis are consistent with the central claim of this paper. The conventional model yields a small ($b = 0.266$) and statistically insignificant ($p = 0.230$) coefficient and the change in the predicted probability of voting for Obama associated with a shift in prospective evaluations from 'much worse' to 'much better' is only 0.04. In contrast, the same model with the new measure capturing the distance in candidate-specific expectations produces a large ($b = 3.64$) statistically significant coefficient ($p = 0.000$). The change in probability of voting Obama associated with a shift in Obama-specific evaluations from 'much worse' to 'much better', while holding McCain-specific evaluations at 'stay the same', is quite large at 0.59. The improved model also fits the data better. The conventional model has a pseudo *R*-squared, in this case McFadden's *R*-squared, of 0.54 and the same figure for the revised model is 0.72.

[18] The median respondent in this case is a white 47 year old female with 13 years of education, a household income of $38,000, and who does not live in a union household. Alternate specifications yield similar magnitudes, with the exception that there are ceiling effects as we move towards populations (e.g., African-Americans) who tended to vote overwhelming for one candidate.

respondents at some times, causally prior to attitudes such as perceptions of candidate traits, a number of recent studies compellingly call for greater attention to these concerns.[19] Rather than presuming that nothing much can be learned from observational surveys that lack a significant panel component or simply wishing away the problem by ignoring it, we ran additional analyses designed to ameliorate, if not definitively reject, endogeneity concerns.[20]

There are two main ways that the relationship between prospective economic evaluations might not cause vote choice and still produce the results in Table 2. First, an omitted variable could be causing *both* candidate-specific prospective economic evaluations and vote choice. If beliefs about candidates' abilities to produce better economic outcomes were unrelated to the decision to prefer one candidate to another - and recall that this election took place at the high water mark of the Great Recession, so that may be a big "if" – then this raises the question of what it is exactly that caused both? By far and away the most likely candidate is partisanship, which, for this reason, we have included as a control variable in all of our analyses. If it is the case that partisanship causes vote choice both directly and indirectly through prospective economic evaluations and that candidate preference has no causal effect on these evaluations, then a model which controls for partisanship, such as those in Table 2, allows us to correctly identify the causal effect of prospective economic evaluations on vote choice.[21]

In fact, since partisanship is significant and its inclusion weakens the effect of prospective economic evaluations on vote choice, this result indicates an independent effect of prospective economic evaluations on vote choice, and an indirect effect of partisanship through prospective economic evaluations. This finding means that even after we "remove" or "hold constant" the effect of people's partisan proclivities by controlling for them in the model, a belief that economy is likely to perform better under one candidate than the other is still highly related to voting for that candidate. If the inclusion of partisanship had rendered prospective economic evaluations insignificant while partisanship was significant, then prospective economic evaluations would have no independent effect on vote choice and our claims about prospective economic evaluations causing vote choice would be false.[22]

Second, it may be that intended vote choice causes prospective economic evaluations or that they both causally reinforce each other. It seems intuitively plausible that for some subgroups in society some issues other than prospective economic evaluations cause vote choice which, in turn, causes prospective economic evaluations, while for other subgroups, prospective economic evaluations cause vote choice with no endogeneity problem at all. For example, it is possible to imagine that for some people being a strong Democrat leads to preferring Obama to McCain and that in turn leads to thinking that Obama would be better at everything – including managing the economy – than McCain. Another example would be if someone liked McCain better than Obama because of foreign policy, then thinks that McCain would be better at everything including managing the economy in the future.

Indeed, there is a body of political-psychology theory that provides two reasons why we might actually expect reverse causality. The first suggests that individuals value *cognitive consistency*. That is to say, once someone has selected Obama as their preferred candidate, they want to believe that he will be better at everything so as to reaffirm the "correctness" of their original decision to prefer Obama and therefore make the respondent feel more comfortable with that decision.[23] The second is the "halo" or "projection" effect: here, a positive general evaluation of Obama translates into a positive evaluation of everything associated with Obama.[24] While these two different processes posit slightly different mechanisms at work, for our purposes they raise the same concern in interpreting the findings in Table 2: the possibility that economic evaluations are a consequence, rather than a cause, of the political preferences or behaviors they are presumed to determine. However, these concerns also point us in interesting directions for extending our analysis.[25]

We begin by examining the effect of prospective economic evaluations on the vote choice of people who are unlikely to be merely projecting partisanship onto both vote choice and candidate-specific prospective economic evaluations: self-declared independents. Since partisanship can color individuals' perceptions of reality (Campbell et al., 1960; Bartels, 2002) and is indeed a consistently strong predictor of vote choice, we should expect the greatest possible endogeneity problem among those who most closely identify with a political party. Among individuals who do not identify with a party, however, this perceptual screen ought to be less of a problem and thus we should get a cleaner look at the economic evaluations-vote choice relationship. Thus in Models 1 and 2 of Table 3, we rerun our models using only self-declared independents (Model 1) or independents and leaners (those who indicate a weak preference for either party) (Model 2). For simplicity's sake, all of the replications in Table 3 build off of the most parsimonious model in Table 2 (Model 1). We find

[19] See for example Wlezien et al. (1997), Anderson et al. (2004), Evans and Andersen (2006), Lewis-Beck (2006), Ladner and Wlezien (2007), Lewis-Beck et al. (2008) and Evans and Pickup (2010).

[20] We do not attempt to instrument for prospective economic evaluations because we remain very skeptical that there are any stable instruments available that could predict how respondents are likely to believe the economy will perform following an Obama victory but not predict vote choice, nor are we aware of any instrument that has ever been proposed in this regard. In the future, one might take the experimental approach – the "ideal instrument" if done correctly – and attempt to influence prospective economic evaluations by providing, for example, information from neutral reports about prospective economic conditions conditional on a candidate winning.

[21] Morgan and Winship (2007).

[22] See Malhotra and Krosnick (2007) who takes a similar approach to retrospective evaluations, vote choice, and overall approval of candidates and Baron and Kenny (1986) for the original approach.

[23] See Festinger (1957).

[24] Beckwith et al. (1978), Martinez (1988), and Barker and Hansen (2005).

[25] For approaches using panel data, see Lewis-Beck et al. (2008) and Evans and Pickup (2010).

Table 3
Prospective economic voting among selected subgroups.

Variable	Model.1	Model.2	Model.3	Model.4	Model.5	Model.6
	Indep.	Indep. + Leaners	No FT diff.	≤10pt FT diff	Indep.	≤10pt FT diff
Equation 1: Alternative-specific						
Prospective Econ. Eval.	8.050**	5.464**	4.511**	4.178**	7.532*	2.532*
	(2.384)	(0.820)	(1.572)	(1.006)	(3.215)	(1.037)
Equation 2: Respondent-specific						
Retro. econ	−5.295*	−2.024*	−3.872*	−2.339*	−2.177	1.220
	(2.162)	(0.890)	(1.531)	(0.915)	(2.899)	(0.980)
Demographic variables	Included	Included	Included	Included	Included	Included
Constant	0.748	3.330*	−1.406	0.0419	5.282	3.526*
	(3.698)	(1.347)	(1.683)	(1.398)	(3.674)	(1.735)
N	73	302	565	73	52	108

Significance levels: †: 10%, *: 5%, **: 1%.
Notes: The table shows the estimation results for prospective economic evaluations in alternative-specific multinomial probits of vote choice in the 2008 US Presidential Election. Each model estimates the impact of prospective economic evaluations for a different subgroup of individuals for whom endogeneity is less likely to be a problem. The substantive effect of prospective economic evaluations remains a strong and significant determinant of vote choice in each subgroup. Models 1 through 4 use vote intention from the campaign wave of the ANES and Models 5 and 6 use reported vote from the post-election wave. Full results from all models are available in the online appendix.

that the strong relationship between prospective economic evaluations and vote choice is very robust across the subsamples of true independents versus partisans, and independents and leaners. In fact, prospective economic evaluations turned out to be a stronger determinant of vote choice for independents than leaners or partisans.

Nonetheless, we might be worried that even for independents, a strong personal preference for one or another candidate may drive intended vote choice which may drive prospective economic evaluations (although remember that this is *after* controlling for partisanship). Accordingly, we can use the candidate feeling thermometers to divide the sample into people who have very different overall evaluations of the two candidates from those who have similar overall candidate evaluations. If both candidates are equally preferred, then there is neither a need to bring other positions into line with favoring one candidate in order to maintain cognitive consistency, nor is there likely to be a projection effect of one candidate being superior to the other across traits, abilities, etc. The specific measure we use to get at the relative overall evaluation of the two candidates is the absolute difference in candidate feeling thermometer ratings.[26] Thus in Models 3 and 4 of Table 3 we rerun our statistical model using only respondents who had no difference in their thermometer scores across the two candidates (Model 3) and a difference of less than 10 points (Model 4). Again, the results are quite clear: among voters whom we do not believe likely to be engaging in either cognitive rationalization or projection, there is a strong relationship between prospective economic evaluations and vote choice.

While the ANES is unfortunately not a panel of the type that we would truly desire to conclusively resolve these types of questions (i.e., a panel surveying respondents every few weeks in the year leading up to the election), we can however take advantage of the fact that it does have a two-wave design. Thus in Models 5–6, we look at the effect not on intended vote choice from the pre-election survey but instead on reported vote choice in the post-election survey for both independents (Model 5) and those whose feeling thermometer candidate evaluations differ by less than 10pts (Model 6). This puts at least a few weeks between when respondents answered the prospective economic evaluation questions and when they reported their vote choice, at the very least eliminating the possibility that they answered the prospective economic evaluation questions in a manner that was intended to rationalize their vote choice; more generally, by putting time between the two interviews, we decrease the chance that answers to the two questions are affecting each other. Once again, the results are very clear: for independents and those with no difference in their evaluation of the two candidates, a better view of economic prospects under one candidate in the pre-election survey made the respondent much more likely to have reported voting for that candidate in the post-election survey.

Moreover, both the cognitive consistency and halo/projection theories predict that these effects should be consistent across all candidate-centered evaluations. If anything, research has suggested that projection effects may be more prevalent among low salience issues.[27] However, results from our analysis of vote choice show that it is simply not the case that all candidate-specific traits are statistically related to vote choice. Indeed, a number of these candidate-specific traits (e.g., preferences over government services, a sense that the candidate makes you feel afraid, a belief that the candidate is intelligent) appear to have no relationship to vote choice.[28] Put another way, it was considerably more likely that someone would plan to vote for McCain even if she felt Obama was

[26] This measure of ambivalence comes directly from Mayer (2007), who canvasses the available measures of vote ambivalence and identifies feeling thermometer difference as the preferred approach.

[27] See Barker and Hansen (2005), Beckwith et al. (1978), though these findings are from marketing rather than political science.

[28] Full results from these models are available in the online appendix.

more intelligent than McCain than if she thought the economy would perform better under Obama.

Lastly, one of the biggest challenges in sorting out the direction of the causal arrows in the relationship between prospective economic evaluations and vote choice is that most Democrats (a) assign a better prospective economic evaluation to Obama and (b) vote for Obama. However, there are a small number of Democrats (defined here as strong or weak Democrats, thus excluding leaners) in the ANES – 3% of the total, to be precise – who believed the economy was likely to perform better under McCain than Obama. Of these 22 respondents, 90% voted for McCain. Similarly, of the 7% of Republicans who believed the economy would perform better under Obama, 62% (16 out of 26 respondents) voted for Obama.[29] While again we cannot rule out a confounding factor influencing both the decision to defect from one's partisan inclination and a belief that the candidate from the other party would do a better job managing the economy than the candidate from your party – racial preference might be one possibility – the findings are at the same time consistent with a picture of the world where one of the factors that could cause Democrats (Republicans) to defect to McCain (Obama) was a belief that he would do a better job than the other candidate of managing the economy over the next 12 months.[30]

Taken together then, we conclude the following. In the 2008 US Presidential Election, there was a very strong relationship between believing that the economy would perform better under one candidate than the other over the next 12 months and voting for that candidate. Over 60% of respondents – correctly or incorrectly – perceived that there would be a difference in the future state of the economy should Obama or McCain win the election, and the vast majority of those people voted for the candidate under whom they believed the economy would perform better. Undoubtedly, in some cases – most likely for strong partisans or those who strongly preferred one candidate to the other – the effect flowed from the preference for the candidate to beliefs about future economic performance. That being said, there are important reasons to think that for most voters, the causal arrows flowed in the opposite direction. In particular, subpopulations in which we would not expect either cognitive consistency or halo/projection effects to be at work also provide strong evidence of the relationship between prospective economic evaluations and vote choice. Moreover, all of our results are reported *after* controlling for partisan identification. Finally, our findings in regard to other candidate-specific variables are not consistent with a world in which respondents are simply updating all candidate-specific traits to be in accord with their overall vote choice; respondents do not seem to do this systematically across the board.

6. The 2008 Ghanaian Presidential Elections

The methodological issue we raise here, and our proposed solution, is relevant for all pre-election studies of vote choice. One question that often emerges in studies of political behavior in the United States is whether we are simply witnessing American exceptionalism. We expect that our new approach to prospective economic voting is generally applicable across competitive democracies (and indeed is part of the reason why we have adopted an estimation strategy that is flexible enough to encompass multiparty systems; see footnote 15). We therefore present a robustness test of the external validity of our findings in an extremely different political context: the 2008 National Elections in Ghana.

In this election, citizens vote for a presidential candidate and a constituency representative in what is largely a two party system. The National Democratic Congress (NDC), the opposition party, narrowly won the 2008 election in a tight runoff against the New Patriotic Party (NPP).[31] This election constituted the fourth free and fair election and the second peaceful executive turnover.

We expect that citizens in Ghana may be prospective economic voters like their American counterparts. First, the economy is a continually salient issue in political discourse. The level of poverty in Ghana is high, whereby 31% of adult citizens have never been to school and the average annual household income is $1327.[32] Campaign topics included a variety of national economic development programs.[33] Second, party-voter electoral courtship involves a substantial degree of clientelism. Many citizens believe that if they vote for the winning party, they will enjoy favorable access to state resources in the form of transfers at the individual or local level. Third, findings from previous authors indicate that future economic assessments may figure prominently into vote choice. Youde (2005) finds evidence that retrospective and prospective assessments of the economy govern approval of the incumbent in a time period that does not encompass an election, while Lindberg and Morrison (2008) conclude

[29] The results look basically the same when we include leaners as well (85% of Democrats and 73% of Republicans).

[30] Since we are advocating a new survey question, it is worth considering survey question design effects in the context of endogeneity. Some readers may wonder if the mere mention of candidates' names in the conditional prospective economic evaluations question cues or primes general preferences for the candidate and triggers a response endogenous to general feelings towards the candidate. By contrast, the traditional question does not mention the name of a candidate. However, if merely mentioning candidates and parties create such a priming or cuing problem, we should be worried that it would contaminate all questions that mention the candidates' names or parties from being determinants of vote choice, and perhaps yet other questions following those questions. By our count, the words "Obama", "McCain", "Democrat", and "Republican" occurs over 50 times *each* in the course of the 2008 ANES. Indeed it is hard to imagine that a respondent participating in an election survey such as this could be marginally primed from our proposed questions. Moreover, most surveys, including the 2008 ANES, put the vote choice question towards the very end of the survey to decrease a potential for responses to independent variables to be endogenous.

[31] For a more detailed description of the Ghanaian political system, see Lindberg and Morrison (2008). See Gyimah-Boadi (2009) on the particulars of the 2008 elections.

[32] In 2008 US dollars. Data from the 2008 Ghana Living Standards Survey 5 by the Ghana Statistical Service.

[33] The parties discussed health insurance, employment, infrastructure such as roads and wells, whether free education would be expanded from primary to secondary school, and developing newfound oil deposits.

Table 4
Effects of prospective economic evaluations on vote choice in the 2008 Ghanaian election.

Variable	Model.1	Model.2
Equation 1: Alternative-specific		
Prospective economic evaluations	0.979** (0.073)	0.861** (0.081)
Equation 2: Respondent-specific		
Retrospective economic evaluations	−0.303** (0.101)	−0.268* (0.118)
NDC partisanship		2.634** (0.329)
Age	−0.003 (0.008)	−0.004 (0.009)
Female	0.238 (0.208)	0.449† (0.241)
Education	0.051 (0.057)	0.075 (0.066)
Ashanti	−0.490† (0.297)	−0.398 (0.335)
Ewe	0.528† (0.283)	0.639 (0.319)
Muslim	0.781* (0.384)	0.600 (0.467)
Catholic	−0.065 (0.291)	−0.016 (0.331)
"Income"	0.116 (0.098)	(0.331) (0.104)
Constant	0.206 (0.595)	−0.785 (0.686)
N	824	824

Significance levels: †: 10%, *: 5%, **: 1%.
Notes: The table shows the estimation results of alternative-specific multinomial probits of vote choice in the 2008 Ghanaian Presidential Election. The effect of prospective economic evaluations is a statistically and substantively significant determinant of vote choice in both model specifications.

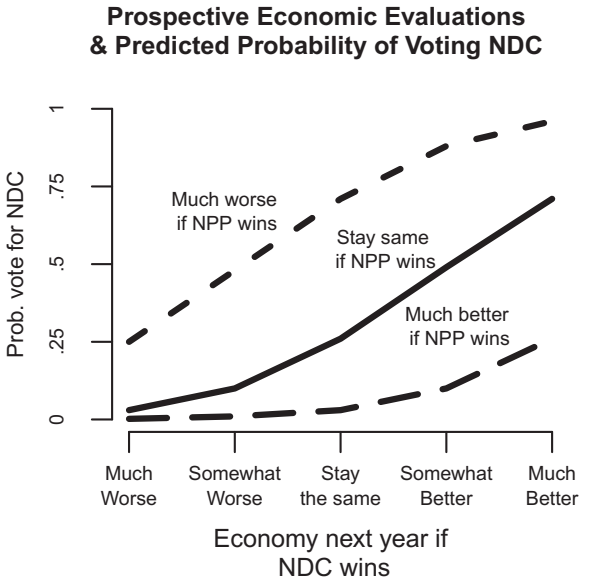

Fig. 4. Predicted probabilities of Voting NDC conditional on prospective economic evaluations. *Notes*: This figure presents estimates of the relationship between prospective economic evaluations for the two parties in the 2008 Ghanian Presidential Election and intended vote choice. The plotted data are predicted probabilities of voting for the NDC at different expectations about the economy under the NDC and NPP. These predicted probabilities were calculated using the estimates presented in Model 2 of Table 4, controlling for partisanship. To produce these estimates we varied a hypothetical respondent's NPP- and NDC-specific economic expectations while holding all other variables constant at their median. Each line indicates a different response to the NPP prospective economic evaluations and location on the x-axis indicates responses to the equivalent question about the NDC. These results clearly demonstrate the strong relationship between candidate-specific economic expectations and vote choice in this election.

from open response interviews that the modal reason behind vote choice in the 1996 and 2000 elections is based on prospective evaluations.

Whether resting on clientelistic or programmatic appeals, citizens have reason to believe that the state of the economic future depends critically on which party comes to power. As Fig. 1 in Section 4 confirms, the majority of Ghanaians believe the future state of the economy is dependent on the election winner.

Do prospective economic evaluations determine vote choice? In Table 4, we replicate the ANES analysis as closely as possible while respecting the Ghanaian context.[34] The party-specific coefficients should be interpreted as the effect of the variable on the probability of voting for any party, while the respondent-specific coefficients should be interpreted as the effect of the variable on the probability of voting NDC. Model 2 differs from Model 1 in that partisanship is added as a control variable.[35] In both models, prospective economic evaluations are significant determinants of vote choice. Age, gender and income (proxied by one's ability to pay children's educational fees) are generally insignificant as determinants of vote choice. Historical core ethnic constituencies of the NPP and NDC reveal their significance as a vote choice determinant. We can see that while partisanship is a significant determinant of vote choice in Model 2 and renders ethnicity variables insignificant, prospective economic evaluations continue to be statistically significant.[36]

What of the substantive significance of changes in prospective economic evaluations for a party on the probability of voting for that party? Looking at the predicted probabilities in Fig. 4, we can observe, as in Fig. 3 for the US, the effect of changes in prospective economic evaluations for the NDC on the probability of voting for the NDC given three different levels of prospective economic evaluation for the NPP. The predicted probabilities are estimated using Model 2 for the median respondent. Similarly to the 2008 American election, prospective economic evaluations were large determinants of vote

[34] Similarly to the American case, certain ethnic group constituencies regularly vote for certain parties – here the Ashanti have long been associated with the NPP and the Ewe and Muslims with the NDC in leadership and followership. See Fridy (2007). See the online appendix for question wording and coding.

[35] Partisanship may have a direct impact on vote choice and an indirect impact on vote choice through prospective economic evaluations.

[36] Given that the party system formed around the dominant social cleavages in this society – ethno-regional cleavages – ethnicity is highly correlated with partisanship.

choice in the 2008 Ghanaian Presidential Election even after controlling for partisanship. Thus in two very diverse political and economic contexts, we find both that many voters expect the future state of the economy to be dependent on which party takes power, and that this difference is closely related to vote choice.

7. Conclusions

In the preceding pages we have identified an important methodological problem that plagues individual-level research on prospective economic voting, proposed a theoretically motivated solution to this problem, and demonstrated that when prospective economic evaluations are properly treated as candidate-specific perceptions we find strong evidence of prospective economic voting in the 2008 US Presidential Election. Through a replication in the 2008 Ghanaian Presidential Election, we have introduced an initial example of external validity of the empirical results, further bolstering our claims. We hope this analysis will serve as the first of many employing this revised approach.

If future election studies include candidate-specific economic evaluations questions, then a host of interesting questions will be available for study. For example, along the lines of Powell and Whitten (1993), is prospective economic voting more influential in political systems where the government is more responsible for economic policy? We have presented evidence of this relationship in two countries with presidential systems, but the impact of prospective evaluations in parliamentary systems and/or in countries where coalition governments are the norm remains an open question. Moreover, scholars may also consider additional contextual factors that moderate the impact of prospective economic voting within particular countries. It would be fascinating, for example, to compare the magnitude of prospective economic voting within a single country during both good and bad economic times, as voters may turn to other issues when wallets are padded. One may also gain leverage on some old questions of whether voters are egotropic or sociotropic economic voters, especially if in the future we ask candidate-specific retrospective economic evaluation questions.[37] Future research can also further explore the formation of prospective economic evaluations and gain leverage on the extent to which the halo effect is operating for strong partisans, perhaps through experimental means.

But absent the ability to begin asking these larger theory building questions, for now we are reassured to know that political science research can in fact deliver the answer we suspected was true: prospective economic evaluations were indeed very closely related to vote choice in the 2008 US Presidential Elections, something political scientists would have falsely concluded was not the case had they simply relied on the standard prospective economic evaluation question.

[37] Although, we should add the caveat that such a research question would certainly benefit from some study of how respondents would actually answer a candidate-specific hypothetical retrospective evaluations (e.g., "Had John Kerry been elected president in 2004, do you think the economy over the last 12 months would have..."?).

Appendix A. Supplementary material

Supplementary data related to this article can be found online at doi:10.1016/j.electstud.2012.04.002.

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