



at the UNIVERSITY of CHICAGO

## NORC WORKING PAPER SERIES

# Economic Voting in the 2012 U.S. Presidential Election: Attribution of Responsibility as a Mediating Factor for Economic Perceptions

WP-2015-005 | MAY, 2015

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## Table of Contents

<b>Overview</b> .....	<b>1</b>
<b>Abstract</b> .....	<b>1</b>
<b>Introduction</b> .....	<b>2</b>
<b>A Focused Approach to Assignment of Responsibilities</b> .....	<b>4</b>
Hypothesis 2: Germaneness effect .....	5
Hypothesis 3: Asymmetric Effects of Responsibility .....	5
Data and Measures .....	6
<i>Survey Data</i> .....	6
<i>Uniqueness of the Data</i> .....	6
<i>Analysis Methods</i> .....	7
Analyses and Results .....	9
<i>Univariate and Bivariate Analysis</i> .....	9
<i>Multivariate Analysis</i> .....	11
Discussion .....	16
<i>Finding 1: Strict Mediation of Responsibility Effect</i> .....	17
<i>Finding 2: Germaneness effect</i> .....	17
<i>Finding 3: Asymmetric effects of responsibility</i> .....	17
<b>Appendix A</b> .....	<b>19</b>
<b>Appendix B</b> .....	<b>21</b>
<b>References</b> .....	<b>23</b>

## List of Exhibits

- Figure 1:** Response distribution for the battery of questions included on the 2012 NORC Presidential Election Study that measure attribution of credit or blame for prevailing economic conditions. .... 10
- Figure 2:** First differences - and their associated 95% Confidence Intervals – on the probability of voting for President Obama (relative to Mitt Romney). Top line (“Worse”) presents the difference in probabilities between an individual that perceives the economy to have worsened relative to an individual who perceives the economy to have remained the same, both conditional on not attributing responsibilities for the state of the economy. Bottom line (“Better”) presents corresponding comparison with individuals who think the economy to have improved..... 12
- Figure 3:** First differences - and their associated 95% Confidence Intervals – on the probability of voting for President Obama (relative to Mitt Romney). Panel A presents the difference in probabilities between an individual who attributes credit for economic conditions to the indicated actor and an individual who does not attribute credit, conditional on perceiving economic conditions to have improved. Panel B presents corresponding comparison for attribution of blame for perceived negative economic conditions. .... 14
- Figure 4:** First differences - and their associated 95% Confidence Intervals – on the probability of voting for President Obama (relative to Mitt Romney) for an individual who attributes indicated levels of blame to President Obama conditional on perceiving the economy to have worsened. .... 16

## Overview

This paper will address issues related to economic voting theories, in particular, conditional economic voting. The study will use data from a nationally representative pre-election survey conducted by NORC at the University of Chicago in 2012.

## Abstract

The literature on economic voting—which relates the state of the economy to vote choice—operates under the assumption that voters can and do assign responsibility to candidates and parties on the ballot for economic conditions. Yet, the validity of this notion has not been fully explored to date. The few previous studies on this matter have only analyzed attribution of blame, but never of credit, for economic conditions. Another limitation of existing studies is that they have not been able to look simultaneously at all actors to whom voters may attribute responsibility. Using unique data from the 2012 NORC Presidential Election Survey conducted between September 24 and October 22, 2012, we overcome these limitations. This paper analyzes whether the effect of economic assessments on vote choice is mediated by assignment of responsibility for economic conditions. In particular, we find that respondents' attribution of blame mediates the effects of negative economic conditions on vote choice, but attribution of credit has no such mediating effect. We also find that the full effect of negative economic conditions mediated by blame attributed to the incumbent President is strong, but non-existent for blame attributed to other actors. Finally, we find the full effect of negative economic conditions on vote choice is stronger than that of positive economic conditions.

## Introduction

Ever since the seminal study by Kramer (1971) on the relationship between observed economic conditions and election outcomes at the aggregate level, researchers have posited a discernible relationship between the prevailing state of the economy and vote choice (e.g., Anderson, 2007; Lewis-Beck & Stegmaier, 2000; Linn, Nagler, & Morales, 2010; Stegmaier & Lewis-Beck, 2013). Yet, the links between both variables at the individual level has remained elusive. The field has seen several approaches to gain more clarity as to the origins of this relationship (e.g., Downs, 1957; Fiorina, 1981; Hibbs Jr & Vasilatos, 1981; Key, 1966; Kiewiet, 1983; Kinder & Kiewiet, 1981; Powell Jr & Whitten, 1993; Tucker, 2006). But one question derived from Kramer's aggregate analysis on the relationship between economic conditions and midterm elections has received less attention: namely, to whom do voters attribute responsibility for the state of economic conditions at the time the vote is cast? (Duch & Stevenson, 2008; Stegmaier & Lewis-Beck, 2013).

Perhaps the most relevant effort in the contemporary literature to address this question is what Powell and Whitten (1993) have denominated "clarity of responsibility" hypothesis. This notion suggests that the nexus between the state of the economy and vote choice should be stronger when the responsibility of specific offices for economic conditions is less ambiguous (Anderson, 2000; Powell Jr & Whitten, 1993; Rudolph, 2003a, 2003b). Nonetheless, the vast majority of research conducted to investigate such a nexus has been carried out in a comparative manner, looking at different institutional arrangements across countries. Little published research exists on the "clarity of responsibility" mechanism in terms of perceptions, personal assessments of the economy, and stated voting preferences (D'Elia & Norpoth, 2014; Lewis-Beck & Nadeau, 2009; Rudolph & Grant, 2002). Part of the difficulty in evaluating this mechanism has been the lack of suitable data for empirical testing at the individual level.

The link between the state of the economy and vote choice has been studied under what is commonly known as economic voting theories. In its classical elaborations (Downs, 1957; Fiorina, 1981; Key, 1966), voters compare assessments about the state of the economy under different candidates to determine for whom they will vote. In the retrospective version of the theory, voters evaluate the state of the economy under the incumbent candidate or party and imagine a counterfactual current state of the economy had a challenger been in office. They select the candidate under which the economy would perform better. Hence, embedded in the theory is the assumption that voters can generate these assessments, and that they can assign credit or blame for the state of the economy to the candidates on the ballot.

The literature on economic voting assumes that voters do form an interpretation of who is responsible for the state of the economy, and use this interpretation to mediate the effects of their perception of the economy on their vote choice. It would be nonsensical to reward an incumbent President for an economy over which they believe he has no influence. Scholars have taken a direct approach, asking voters in representative surveys whether they think the President or other political actors bear any responsibility for the state of the economy, along with their economic perceptions.

Using this approach, researchers have analyzed the 2000, 2008 and 2012 Presidential Elections in the United States. Lewis-Beck and Nadeau (2009) examined the 2008 Presidential election, and found that attributed responsibility for prevailing economic conditions “reinforces the general strength of the retrospective sociotropic vote”, thus deepening our understanding of the link between economic conditions and vote choice. D’Elia and Norpoth (2014) analyzed the 2012 Presidential election and found that voters who did not blame President Obama for poor economic conditions were more likely to vote for him, while those who blamed former President Bush for poor economic conditions were also more likely to vote for President Obama. However, analyses in both studies do not address the issue that the effects of retrospective assessments of the economy could be conditional on attributing responsibility to the President or other actors. Instead, they studied each variable independently, which limits our understanding of the interactions between both variables (i.e., assignment of responsibility and economic assessment) and, therefore, the mechanics underlying economic voting.

Rudolph and Grant (2002) focused on the 2000 Presidential Election and found that economic perceptions have an effect on vote choice only when responsibility for the state of the economy is attributed to the President. Their study, however, does allow for the effect of economic perceptions to be mediated by attribution of responsibility. Yet, their assignment of responsibilities is analyzed looking only at blame for negative economic conditions, without considering the possibility that voters may assign credit for positive economic conditions, which may render unbalanced results in their study. Although their results provide insights to advance our knowledge, they leave key questions unanswered.

The present study looks at unique individual-level survey data that reveals who voters consider responsible for the current state of the economy in the context of the 2012 Presidential election in the United States, distinguishing between assignment of credit or blame. The data allow us also to assess whether individuals assigned responsibility for the state of the economy to incumbent President Obama, to former President George W. Bush, to Democrats or Republicans in Congress, to the Federal Reserve, or to banks and financial institutions.

## A Focused Approach to Assignment of Responsibilities

As discussed in our introduction, progress has been made discussing contextual factors that affect the clarity with which voters may assign responsibility for economic conditions and the individual-level relationship between attributed responsibility and vote choice. However, existing studies are, for the most part, silent on three critical mechanisms that may explain more clearly the effects of assignment of responsibility on voting preferences:

- (1) Whether there are effects of economic assessments that are *not* mediated by attribution of responsibility,
- (2) whether the full effects of economic evaluations *mediated* by responsibility attributed to the incumbent President generate *stronger* effects on vote choice than responsibility attributed to other actors, and
- (3) whether *negative* economic assessments mediated by blame have stronger composite effects than those of *positive* economic assessments mediated by credit.

If voters assign responsibility for economic conditions to a political actor (as implicitly assumed by economic voting theory) we should expect the effect of economic assessments on vote choice to be mediated by this responsibility. Furthermore, we should expect these mediations to operate in distinct ways depending on the interrelation between economic assessments, the nature of the attribution of responsibility, and the actor(s) held responsible. In this paper, we hypothesize and test three mechanisms derived from this interactive dynamic.

### Hypothesis 1: Strict mediation of responsibility effect

Under classical economic voting theory (Downs, 1957; Fiorina, 1981; Key, 1966), voters are assumed to have an assessment about the state of the economy, and a belief about who is responsible for that particular state of the economy. Under these conditions, rationality would dictate that individuals punish or reward with their vote those candidates they believe have a stake on economic performance. Therefore, it would only be natural that the effects of economic assessments on vote choice be conditioned, such that punishment or rewards should *only* matter for those actors who are perceived responsible for the state of the economy. Therefore, we derive our first hypothesis.

*H1: Economic assessments do not have a direct or indirect effect on vote choice among individuals who do not attribute responsibilities for the state of the economy.*

## **Hypothesis 2: Germaneness effect**

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When economic voting occurs in the context of a Presidential election, we would expect the effects of economic assessments —conditional on attributing responsibility— to be stronger for the incumbent President than for any other political or non-political actors. That is, we have no grounds on classical economic voting theory to think that people would punish or reward a Presidential candidate based on the responsibility attributed to other political actors, or to financial institutions. Therefore, we come to our second hypothesis.

*H2: The effect of economic assessments on vote choice is stronger when the relationship is mediated by the responsibility attributed to the incumbent President than when the relationship is mediated by the responsibility attributed to other actors.*

## **Hypothesis 3: Asymmetric Effects of Responsibility**

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Scholars in various disciplines have theorized that individuals respond asymmetrically to negative and positive information, typically giving a stronger weight to negative information (Kahneman & Tversky, 1979; Lau, 1982, 1985; Skowronski & Carlston, 1987, 1989). This intuition has also been applied to voting studies where scholars have found that individuals respond more strongly to negative information (Haller & Norpoth, 1994; Soroka, 2006; Stanig, 2013) or negative emotions (Conover & Feldman, 1986) when forming their assessments about the state of the economy.

Yet aside from a few studies that incorporate this notion to economic voting (Bloom & Price, 1975; Campbell, Converse, Miller, & Donald, 1960; Claggett, 1986; Kernell, 1977), the literature has seldom studied these effects in detail. Furthermore, neither of the aforementioned studies of attribution of responsibility for economic conditions in the U.S. has explored the possibility of asymmetric reactions to this responsibility. Based on these theoretical elaborations, we can conceive that the effects of blame are different from those of credit, and also that the latter would carry more weight in vote choice. Therefore, we propose our third hypothesis.

*H3: Negative economic conditions mediated by attribution of blame have stronger effects than positive economic conditions mediated by attribution of credit.*

## Data and Measures

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### Survey Data

The data for this study comes from a two-wave dual-frame (RDD and cell phone) nationally representative survey conducted by NORC at the University of Chicago among the general public. The study is a two-wave survey with pre- and post-election questionnaires focused on public policy issues. The first wave was conducted in the weeks prior to the 2012 presidential election (between September 24 and October 22, 2012) with 2,136 adults. The second wave was conducted in the weeks just after the 2012 presidential election with 1,125 respondents re-contacted from the first wave. Only the first wave portion (i.e., pre-election survey) is used for the analysis as it includes the relevant questions for this study. Methodology and key highlights from the survey are reported elsewhere (Wolter, Hansen, Campbell, & Ansolabehere, 2013).

### Uniqueness of the Data

It is important to note that the 2012 presidential election provides a particularly interesting setup for the survey questions used in this analysis, as the election takes place three years after the end of what has been dubbed the worst economic crisis since the Great Recession of 2007-2009. As such, the recession started during the last months of government of then-outgoing President George W. Bush. The incumbent President in 2012, Barack Obama, had presided entirely throughout the recovery efforts, and the economy had begun its recovery —albeit unequal throughout the country— at the time the survey was fielded.<sup>1</sup>

Unlike data used in previous studies, the 2012 NORC Presidential Election Survey has distinctive features that, when combined, make it a valuable instrument that is well aligned with the theoretical expectations we seek to analyze.

The survey includes a battery of questions that gathers assignment of responsibility to different political actors. The measurement of attribution of responsibility distinguishes between *credit* for good economic conditions and *blame* for bad economic conditions. This distinction of *credit* or *blame* in the phrasing of the question has not been available in previous published studies.

Interestingly, the battery uses questionnaire branching techniques that have been found helpful in the survey methodology literature for reducing respondent cognitive burden and for increasing reliability. The technique essentially decomposes a series or complex cognitive tasks into simpler evaluations to facilitate

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<sup>1</sup> The National Bureau of Economic Research's Business Cycle Dating Committee has determined that the recession lasted from December 2007 through June 2009.

the answering process (Krosnick & Berent, 1993; Malhotra, Krosnick, & Thomas, 2009). In the NORC survey, the battery first asks respondents to provide an overall assessment of the current economy (i.e., excellent, good, not so good, poor), and then it follows up on assignment of either *credit* or *blame* for such conditions (see Appendix B for actual questions).

The battery of questions asks respondents to provide assessments about responsibility for economic conditions for six *different* political and financial actors: incumbent President Obama, former President George W Bush, Democrats in Congress, Republicans in Congress, the Federal Reserve, and banks and other financial institutions.

The survey enables some important insights into the responsibility voters assign to a former President that was in office when an economic crisis erupted (George W. Bush), and that assigned to an incumbent President that presided over recovery efforts (Barack Obama). Most studies on retrospective voting—attending to the classical theory—study the choice between an incumbent president (or party) and a challenger. Seldom have studies looked into the previous President as a relevant consideration. Such features help us shed light on the length of economic responsibility attributed to previous presidents.

Similarly, and given the partisan tone in Congress during the discussion and approval of the economic recovery plans, the survey unpacks Congress—the institution—into its component parties (i.e., Republicans and Democrats), hence providing an opportunity to assess whether individuals distinguish between the performance of both parties in Congress, and also the degree of responsibility for economic conditions that each of them had.

Finally, the data allow us to gauge the responsibility respondents assign to the Federal Reserve, or banks and other financial institutions for economic conditions. Much can be added to our knowledge by determining the extent that respondents assign responsibility to these actors, and not to strictly political actors like the President or parties in Congress.

Additionally, the survey includes an *independent* standard question on retrospective economic evaluations that asks respondents to compare the economy that prevailed *a year ago* with the current economy to inform their assessments. This question gives an opportunity to find a possible link between a more comprehensive voter economic assessment and assignment of responsibilities.

### Analysis Methods

We fit a logistic regression model to simultaneously assess the mediating effects that attribution of responsibility has on economic perceptions. In other words, we want to estimate the effects that economic

assessments and attributed responsibility have independently on vote choice. Beyond this, we also want to estimate the effects that economic assessments have on vote choice *given* that a particular actor is deemed responsible for the perceived state of the economy. It is possible to do so with the following specification:

$$\text{Logit}(\Pr(Y_i = 1|X_{ij})) = \beta_0 + \sum_{k=1}^K \beta_{1k} REE_{ik} + \sum_{k=1}^K \sum_{j=1}^J \beta_{2jk} REC_{ijk} + \sum_{k=1}^K \sum_{j=1}^J \beta_{3jk} (REE_{ik} * REC_{ijk}) + \beta_4 Z_i$$

where

$Y_i$  = vote for Barack Obama vs. Mitt Romney

$REE_{ik}$  =  $k$  retrospective economic evaluations by individual  $i$

$REC_{ijk}$  = responsibility attributed by individual  $i$  to actor  $j$  for the  $k$  state of the economy

$Z_i$  = a vector of sociodemographic characteristics and Party ID for individual  $i$

$k \in (good, bad)$

The crucial features of this specification are the interactive terms (that is, assignment of responsibilities by retrospective assessment of the economy), which allow us to gauge conditional effects and, therefore, fully test our three hypotheses. As explained earlier, we are interested in studying different aspects of the mediating effects that attribution of responsibility can have on how economic assessments impact vote choice.

The interactive terms in the econometric specification that we estimated permit us to study these effects quite clearly. By multiplying our two variables of interest, we are able to estimate the effect of one of them on vote choice given a particular value in the other variable. To give a clearer example, we are able to assess whether the perceived state of the economy today as compared to the previous year impacts vote choice only if the respondent thinks that President Obama, for example, is responsible for the current state of the economy.

By having the multiplication along with its elements in the estimation, we can parse out the conditional effects and cleanly estimate the effects of one variable when the other one is null. In other words, we can

also estimate the effects on vote choice of thinking that the economy improved for respondents who do not attribute any responsibility to President Obama for it.<sup>2</sup>

Also, as recommended by the Public Use File documentation for the NORC study (NORC, 2013), this analysis uses survey design variables (i.e., strata, clusters and weights) to estimate variances of different point estimates. In other words, unlike traditional estimation methods working under the assumption of simple random sampling, we correct the estimated covariance matrix using survey design variables that account for the complex sampling design of the survey. These corrections are carried through to our calculations to estimate first differences of predicted probabilities<sup>3</sup>.

## Analyses and Results

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To provide a first view of results, the set of hypothesized relationships presented in our theoretical framework (H1-H3) are first analyzed with univariate and bivariate methods. In a subsequent analysis in this section, these relationships are assessed with multivariate regression methods.

### Univariate and Bivariate Analysis

Since we will be assessing vote choice models where the effect of economic perceptions mediated by attribution of responsibility is evaluated, it will be useful to begin by examining response distributions to our variables of interest, namely attribution of responsibility for economic conditions. This becomes particularly important, as attributions of blame, other than simple unconditional distributions, have not been deeply explored before, and this is—to the best of our knowledge—the first time that attribution of credit has been collected.

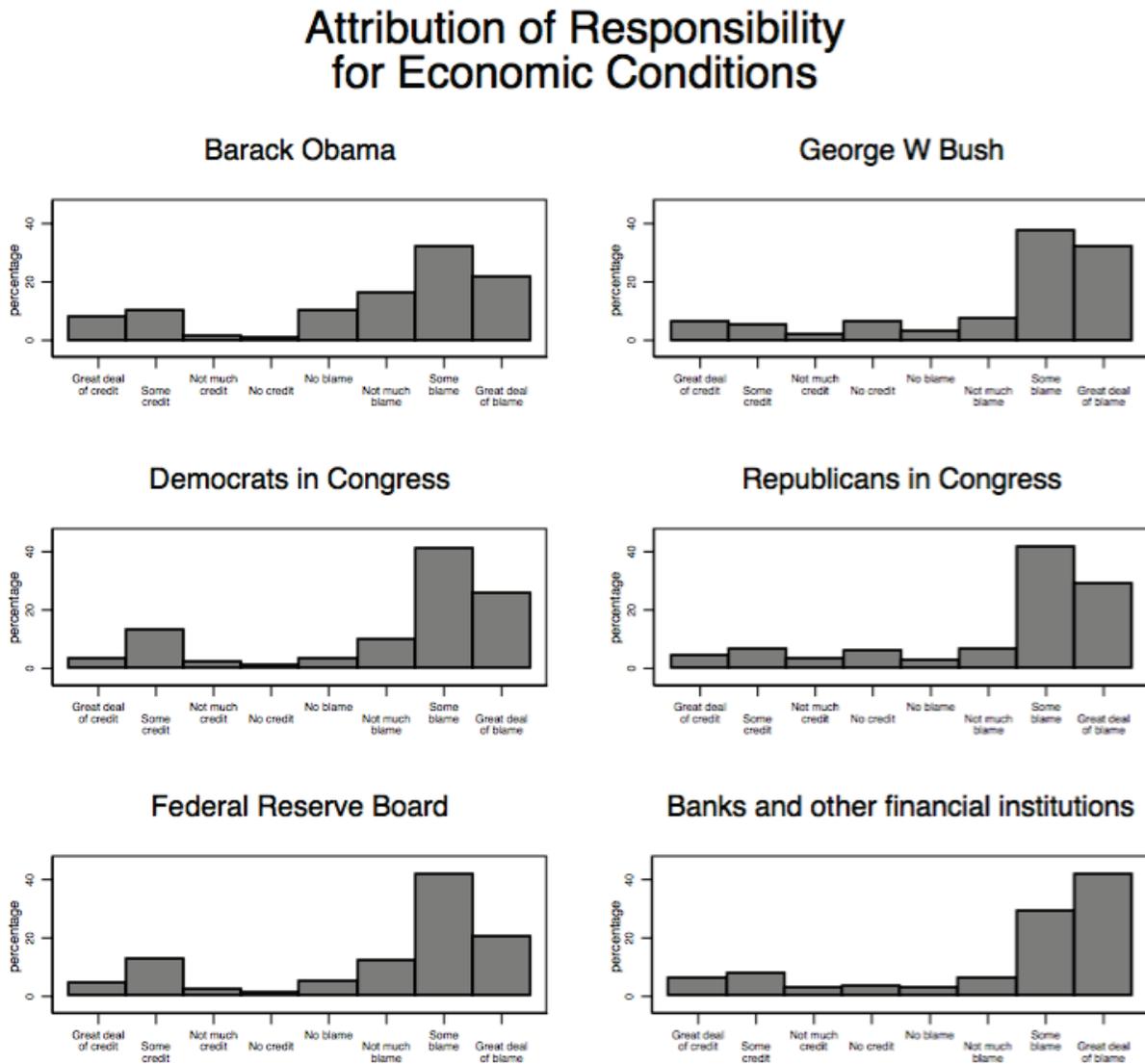
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<sup>2</sup> Responses to both variables of interest are categorical, either in assessments about the state of the economy (i.e. better, same worse) or in attribution of responsibility for the state of the economy (i.e. much/some/none credit or blame). Hence they are used on this fashion in the econometric estimation.

<sup>3</sup> To compute standard errors, we employ Stata-based user-written module MoreClarify. For documentation see Marquez, Javier. 2014. More\_Clarify: Stata module to estimate quantities of interest through simulation and resampling methods. In Statistical Software Components: <http://ideas.repec.org/c/boc/bocode/s457851.html>.

See Table A-1 on the Appendix for full estimates.

**Figure 1:** Response distribution for the battery of questions included on the 2012 NORC Presidential Election Study that measure attribution of credit or blame for prevailing economic conditions.



Source: 2012 NORC Presidential Election Survey

We begin looking at the unconditional distributions for attribution of responsibility on Figure 1. We seek to determine whether the assumption that individuals can and do assign both credit and blame for economic conditions gathers empirical support. Overall, Figure 1 shows that respondents are able to distinguish between assigning credit and blame for economic conditions. These data show that in 2012 the American public seemed much more likely to assign blame rather than credit. Also, respondents seem capable of distinguishing across actors when they assign credit and blame, as suggested by the different patterns displayed by the answers to each question.

In particular, and relevant to our interests here, respondents seem to assign more blame than credit (by a 3:1 ratio) to President Obama for economic conditions. They also assign more blame than credit to former President Bush. The latter is an intriguing finding considering that overall respondents assigned slightly more blame (75%) to former President Bush (who had been 4 years out of office) than to President Obama (70%) for bad economic performance.

In addition, respondents seem to assign a very similar degree of blame to both Democrats and Republicans in Congress (76%), yet we also see little difference in attribution of credit to Democrats and Republicans (approximately 17%). Finally, respondents seem also keen to assign a substantial degree of blame to the Federal Reserve Board (73%) and to banks and other financial institutions (73%).

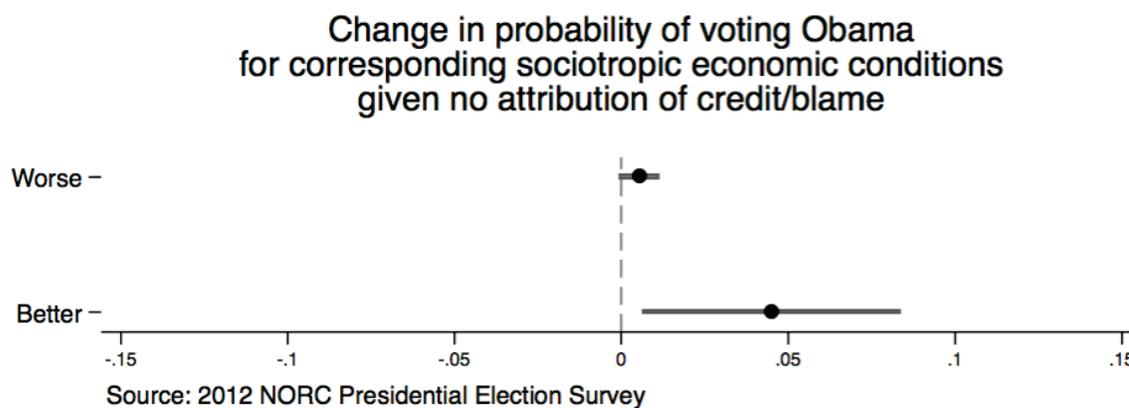
The evidence, thus far, suggests that economic voting theories were not misguided when assuming that people do assign both credit and blame for economic conditions, and that they are able to differentiate between actors they consider responsible for the current state of the economy relative to the past year. Our next step, then, is to see whether these conditional relationships bear any link, independent of other factors, with vote choice as classical economic voting theory would suggest.

### **Multivariate Analysis**

We can begin by testing the Strict Mediation of Responsibility Effect hypothesis (H1), which posits that we should only observe effects of economic assessments if respondents attribute responsibility for these effects to any particular actor. Or, alternatively, that we should not observe effects of economic assessments on vote choice among respondents who do not assign responsibility for the state of the economy.

Translated to our econometric specification, we can test this hypothesis by looking at the effects of our primary variable of interest (economic perceptions) giving the other interacted variable (attribution of credit/blame) —and the interaction by extension— null values.

**Figure 2:** First differences - and their associated 95% Confidence Intervals – on the probability of voting for President Obama (relative to Mitt Romney). Top line (“Worse”) presents the difference in probabilities between an individual that perceives the economy to have worsened relative to an individual who perceives the economy to have remained the same, both conditional on not attributing responsibilities for the state of the economy. Bottom line (“Better”) presents corresponding comparison with individuals who think the economy to have improved.



To ease interpretation of our estimates, we discuss results in terms of first differences (King 1998) on the predicted probability of voting for President Obama (relative to Mitt Romney), and the degree of uncertainty associated to them. Figure 2 shows first differences in the probability of voting for President Obama, given a change in perceptions about the state of the economy that is independent from attribution of responsibility for the state of the economy. To explain it more clearly, the top estimate (i.e., “Worse”) illustrates the difference in the probability of voting for Obama between an individual who perceives the economy as not having changed and an individual who perceives the economy to have worsened in the last year, conditional on neither of them assigning *blame* to the President – or any other actor – for the bad state of the economy. The bottom estimate (i.e., “Better”) displays the same conditional difference but this time between an individual who perceives no change in the economy and an individual who perceives an improved economy, conditional on neither assigning *credit* to any actor for this development.

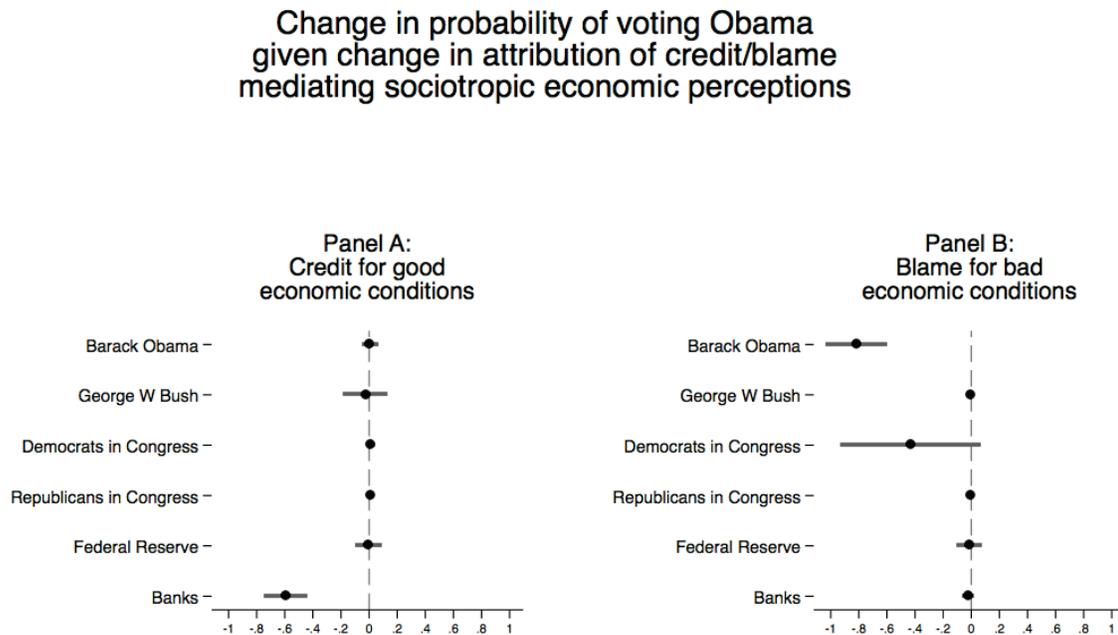
Interestingly enough, we observe that bad economic conditions do not have independent effects on vote choice; that is, when an individual does not assign blame to any actor for the bad economy she perceives, her voting preference is not likely to change. This in itself is a very important finding for economic voting theory, since we show here that it is not only important that individuals perceive a bad economic situation to vote against an incumbent candidate; they will only “punish” an incumbent President *if* they also blame him for these economic conditions.

A different case arises with positive assessments of the state of the economy. The analysis shows that a booming economy can increase —albeit slightly— the chances of voting for an incumbent President, even if respondents do *not* attribute credit to him (or other actors) for the economic conditions. In our study this effect is relatively mild, however, as the probability of voting for Obama vs. Romney increases by about 4%.

We can assess the Germaneness effect (H2) and the Asymmetric Effects of Responsibility (H3) hypotheses by looking at the full effects of the interactions between our variables of interest. In the first case, we are interested in knowing whether the full effects of economic perceptions mediated by attribution of responsibility to the President are stronger on vote choice relative to responsibility attributed to other actors. In the second case, we are interested in assessing whether the full effects of negative economic conditions mediated by attribution of blame are stronger on vote choice than the full effects of positive economic conditions mediated by attribution of credit.

With our econometric specification, we can test these hypotheses by looking at the compound effects of our primary variable of interest (positive/negative economic perceptions) given that the other interacted variable (attribution of credit/blame) —and the interaction by extension— takes positive values.

**Figure 3:** First differences - and their associated 95% Confidence Intervals – on the probability of voting for President Obama (relative to Mitt Romney). Panel A presents the difference in probabilities between an individual who attributes credit for economic conditions to the indicated actor and an individual who does not attribute credit, conditional on perceiving economic conditions to have improved. Panel B presents corresponding comparison for attribution of blame for perceived negative economic conditions.



Source: 2012 NORC Presidential Election Survey

Figure 3 presents the first differences in the probability of voting for President Obama conditional on a positive (Panel A) or negative (Panel B) perception of the economy mediated by attribution of credit (Panel A) or blame (Panel B) for those economic conditions. To explain it more clearly, Panel A shows the estimates of the difference in the probability of voting for Obama vs. Romney between an individual who perceives a good economy conditional on attributing “not much credit” (i.e., reference category) to the indicated actor (that is, Obama, Bush, Democrats, Republicans, Federal Reserve or banks) and an individual who perceives a good economy conditional on attributing a “great deal of credit” to the same actor. In essence, this difference represents the magnitude of the full effects of good economic perceptions mediated by attribution of credit. Similarly, Panel B shows estimates of first differences, but this time between individuals who perceive a bad economy and attribute “not much blame” (i.e., reference category) to the indicated actor and individuals who perceive a bad economy and assign a “great deal of blame” to the same actor.

On Figure 3 (Panel A) we see that good economic conditions mediated by credit attributed to President Obama do not change the likelihood of voting for him. Likewise, good economic conditions mediated by credit assigned to other actors have nil effect with one exception: banks and other financial institutions. The effect of attributing credit to banks for good economic conditions decreases the likelihood of voting for President Obama by nearly 60%. As shown in Figure 2, unmediated good economic conditions have a positive effect on the likelihood of voting for the incumbent President. However, Figure 3 shows that once we take into consideration assignment of credit, these effects vanish for *political* actors.

Interestingly, when we look at the effects of bad economic conditions mediated by blame attributed to President Obama (i.e., full effect of the interaction) the likelihood of voting for him decreases by almost 80% (Figure 3, Panel B). No other effect is cleaner or stronger. When blame is placed on Democrats in Congress, we observe a trend (although not outside the confidence interval) to decrease the likelihood of voting for the incumbent. Importantly, blame for economic conditions attributed to other actors does not affect the likelihood of voting for President Obama.

**Figure 4:** First differences - and their associated 95% Confidence Intervals – on the probability of voting for President Obama (relative to Mitt Romney) for an individual who attributes indicated levels of blame to President Obama conditional on perceiving the economy to have worsened.

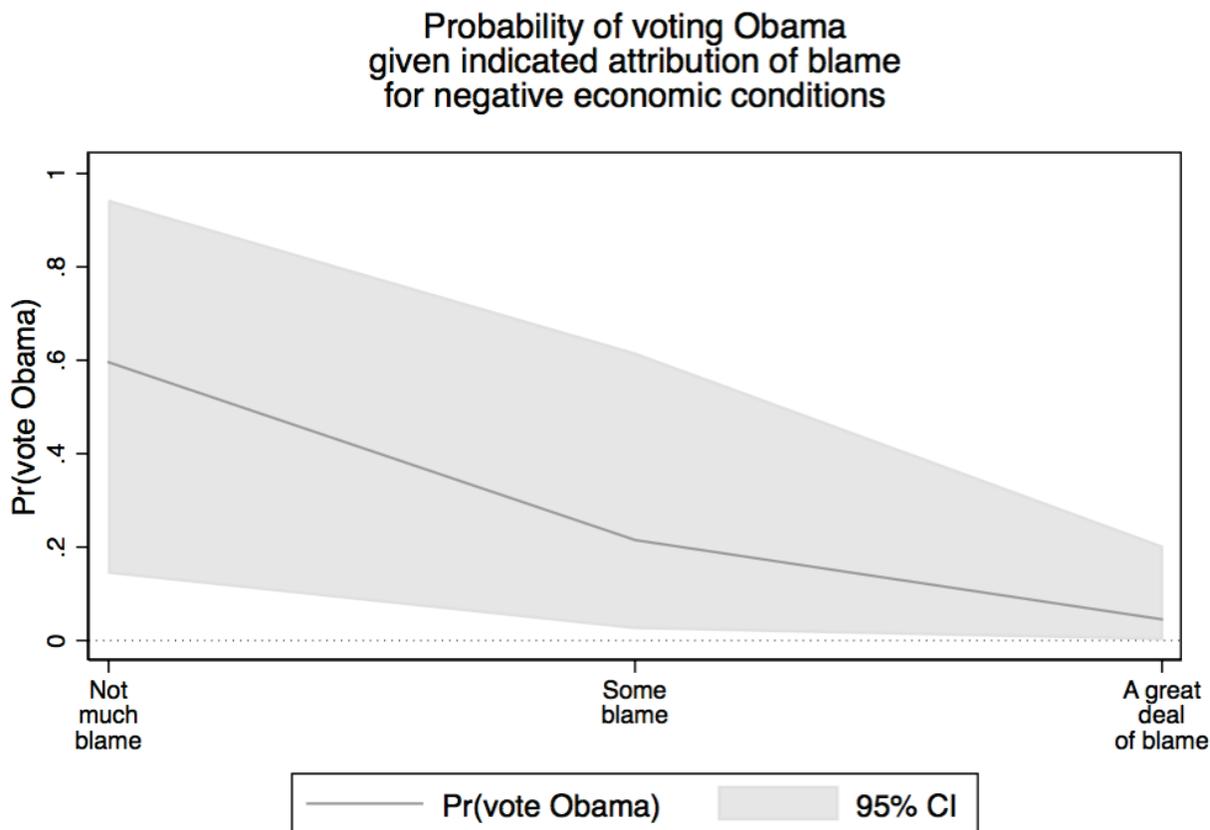


Figure 4 unpacks the first differences in the probability of voting for President Obama by presenting predicted probabilities. It shows the estimated probability of voting for him among respondents who perceive bad economic conditions across levels of the variable that captures blame attributable to the incumbent. It becomes clear that as blame attributed to the President for the perceived bad economic conditions increases, the likelihood of supporting his reelection decreases.

### Discussion

In this paper we examined a previously unavailable set of survey questions on attribution of responsibility for economic conditions. This battery was included on the 2012 NORC Presidential Election Survey, which was carried out a few weeks before the 2012 presidential election. The data helped us test

assumptions in classical economic voting theory, and explore plausible mechanisms to explain empirical regularities that have been found in the literature.

The results we have presented provide a more complete picture of the dynamics underlying economic voting. In particular, we have shown three important findings that help us refine our understanding of the usually elusive links between the state of the economy and vote choice. Some of them confirm intuitions and assumptions embedded on classical economic voting theory. Others shed light into previously uncharted territory, and pose potentially new and interesting venues in the study of economic voting.

### **Finding 1: Strict Mediation of Responsibility Effect.**

We find that economic perceptions are mediated by attribution of responsibility. Furthermore, we find a distinct path for credit and for blame. Good economic conditions affect vote choice independently of attribution of credit, but bad economic conditions affect vote choice *only* through attribution of blame. That is, respondents look for someone to blame—and punish—when the economy is perceived as worse, but a good economy naturally lifts the (incumbent) presidential vote.

### **Finding 2: Germaneness effect.**

We find that negative assessments of the state of the economy (mediated by attribution of blame to the President) impact vote choice, while attribution of blame to other actors does not. That is, the President alone is held accountable for bad economic conditions when voting for the Executive Office.

### **Finding 3: Asymmetric effects of responsibility.**

We find that negative assessments about the state of the economy (mediated by attribution of blame) carry substantially more weight than positive ones on vote choice. That is, respondents punish more heavily for bad economic performance than they reward for good economic performance—if they reward at all.

These results are favorable for economic voting theory, as we have confirmed that—at least regarding negative economic conditions and attribution of blame—the implicit assumption that individuals assign responsibility for economic conditions and vote accordingly finds empirical grounding. But the fact that blame for negative economic conditions follows a different logic than credit for positive economic conditions calls for revisiting dynamics described in classical economic voting theory, and refining them with a view to these empirical insights.

Our results permit us to speak about an idea that has appeared intermittently in the economic voting literature: people respond more strongly to negative economic conditions than to positive ones.

Asymmetric responses to economic conditions have been related to changes in the party holding the Presidency (Campbell et al., 1960), congressional election outcomes (Bloom & Price, 1975), and midterm declines in the share of representatives in Congress from party of the President (Claggett, 1986; Kernell, 1977). Scholars have observed a regular dynamic in aggregate data, but to the best of our knowledge such a clear link has not been established at the individual level. Our results confirm these dynamics by virtue of studying the conditional effects that attribution of responsibility has on economic perceptions. But they also provide some important discernment into the individual-level dynamics that could explain these findings.

Finally, it is entirely possible that the strength and clarity of our results is a function of the timing of this election relative to the 2008-2009 economic crisis. Our study takes place in the 2012 Presidential election, which occurred 3 years after the end of the recession. It is entirely possible that our results could have been different had the survey questions been fielded four years earlier in the midst of the worst global economic recession in recent history. Yet, we consider the results we present here illustrative. They show the dynamics of economic voting close enough to an economic crisis that the economy may still remain a very relevant factor in vote choice. But they also show dynamics that happen with sufficient distance from the recession, so that we are confident that we were not picking up the extraordinary voting behavior that may take place during a recession, but rather an enhanced version of them. For these same reasons, it is entirely possible that the magnitude and clarity of our results might be smaller if studied on later presidential elections. Yet we are confident that the clarity afforded to us by closeness to the economic crisis can be helpful to deepen research in future economic voting studies.

## Appendix A

DV: vote Obama	Coeff (se)
Retrospective Economic Assessment (better)	1.442* (0.45)
Retrospective Economic Assessment (worse)	3.704** (0.42)
Credit Obama	1.432 (0.74)
Credit GW Bush	0.979** (0.10)
Credit Democrats in Congress	-1.362* (0.28)
Credit Republicans in Congress	-1.732* (0.36)
Credit Federal Reserve	0.052 (0.16)
Credit banks & financial institutions	0.932** (0.13)
Blame Obama	-1.508** (0.24)
Blame GW Bush	1.053* (0.22)
Blame Democrats in Congress	-2.939* (0.60)
Blame Republicans in Congress	3.038*** (0.23)
Blame Federal Reserve	-0.038 (0.36)
Blame banks & financial institutions	-0.848** (0.13)
Retrospective Economic Assessment (better) * Credit Obama	-0.985 (1.29)
Retrospective Economic Assessment (better) * Credit GW Bush	-0.898 (0.52)
Retrospective Economic Assessment (better) * Credit Democrats in Congress	1.692* (0.31)
Retrospective Economic Assessment (better) * Credit Republicans in Congress	3.167** (0.53)
Retrospective Economic Assessment (better)* Credit Federal Reserve	0.267 (0.51)
Retrospective Economic Assessment (better)* Credit Banks	-2.474*** (0.06)

<b>DV: vote Obama</b>	<b>Coeff (se)</b>
Retrospective Economic Assessment (worse)* Blame Obama	-1.064+ (0.39)
Retrospective Economic Assessment (worse)* Blame GW Bush	0.294 (0.46)
Retrospective Economic Assessment (worse)* Blame Democrats in Congress	1.242 (1.04)
Retrospective Economic Assessment (worse)* Blame Republicans in Congress	-2.811*** (0.19)
Retrospective Economic Assessment (worse)* Blame Federal Reserve	0.074 (0.93)
Retrospective Economic Assessment (worse)* Blame Banks & Financial Institutions	0.315 (0.23)
Male	-1.102*** (0.07)
Married	-0.937* (0.20)
Hispanic	0.426 (0.21)
Age 18-29	-0.455 (0.80)
Age 30-54	0.724** (0.11)
Age 55-64	0.731** (0.11)
College graduate	0.614 (0.34)
Income > 50K	1.02 (1.03)
50K < Income < 100K	0.647 (1.12)
Income > 100K	0.566+ (0.19)
PID (Democrat)	1.324 (0.92)
PID (Republican)	-2.732* (0.69)
Constant	1.325* (0.26)
N	1,374

+ p<.10, \* p<.05, \*\* p<.01, \*\*\* p<.001

Note: Variance estimates (standard errors) are properly adjusted to account for the complex sample survey design. Results are weighted.

## Appendix B

The battery of questions that measure responsibility for economic conditions included on the 2012 NORC Presidential Election Survey read as follows:

(US\_ECON) Now I want you to think about the economic conditions currently facing the United States as a whole. Would you describe the state of the nation's economy these days as excellent, good, not so good, or poor?

1. EXCELLENT
2. GOOD
3. NOT SO GOOD
4. POOR

*I am going to read you a list of people and groups, and I want you to tell me how much [credit/blame] (from US\_ECON : IF CHOSE EXCELLENT/GOOD IN QUESTION THEN CREDIT; IF CHOSE NOT SO GOOD/POOR THEN BLAME) you think each of them deserves for current economic conditions.*

- a. *(CREDIT\_BLAKE\_1) Let's start with President Barack Obama. Does President Obama deserve a great deal of [credit/blame], some [credit/blame], not much [credit/blame], or no [credit/blame] at all for the economic conditions currently facing the country?*
- b. *(CREDIT\_BLAKE\_2) How about President George W. Bush?*
- c. *(CREDIT\_BLAKE\_3) The Democrats in Congress?*
- d. *(CREDIT\_BLAKE\_4) The Republicans in Congress?*
- e. *(CREDIT\_BLAKE\_5) The Federal Reserve Board?*
- f. *(CREDIT\_BLAKE\_6) Banks and other financial institutions?*

The exact phrasing of the sociotropic retrospective economic assessment question used in the analysis is as follows:

*(ECON\_PAST) Thinking about the economy in the country as a whole, would you say that over the PAST YEAR the nation's economy has gotten BETTER, stayed ABOUT THE SAME, or gotten WORSE?*

1. BETTER
2. STAYED ABOUT THE SAME
3. GOTTEN WORSE

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