Facing up to the facts: what causes economic perceptions?

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Abstract

The link between individual perceptions of the economy and vote choice is fundamental to electoral accountability. Yet, while it is well-established that economic perceptions are correlated with voting behaviour, it is unclear whether these perceptions are rooted in the real economy or whether they simply reflect voters' partisan biases. This study uses time-series data, survey data and unique experimental evidence to shed new light on how British voters update their economic perceptions in response to economic change. Our findings demonstrate that while partisanship influences levels of economic optimism, people respond to information about real economic changes by adjusting their economic perceptions.

Models of economic voting assume that voters respond to changes in the real economy by updating their economic perceptions and rewarding or punishing the incumbent government accordingly (for an overview see Lewis-Beck and Stegmaier 2000). While views differ on how exactly the economic vote works, scholars generally agree that economic conditions are important determinants of incumbent vote choice (Duch and Stevenson 2008; Lewis-Beck 1988; Van Der Brug et al 2007; Lewis-Beck and Whitten 2013). Yet, a burgeoning literature suggests that this link between the economy and voters' sanctioning of governments is largely illusory. Instead of basing evaluations of economic performance on facts, it is argued that it is partisanship that shapes economic perceptions. As partisans tend to perceive the economy in a way that credits their own party, the relationship between the real economy and perceptions of the economy is weakened (Wlezien et al. 1997; Evans and Andersen 2006; Lavine et al 2012; Bartels 2002; De Boef and Kellstedt 2004; Evans and Pickup 2010; Enns et al. 2012).

We revisit the debate about the degree to which people's economic perceptions are rooted in economic reality or partisan biases by exploring a question that has been largely overlooked: do people adjust their economic perceptions when information about the economy changes? By complementing the analysis of existing time-series data with a unique survey that includes an embedded experiment, we examine how citizens update their perceptions when new information arrives. We show that while partisanship influences the level of economic optimism and pessimism, people's perceptions of the economy do respond to information about changes in real economic indicators. Specifically, we report three main findings. First, real world conditions profoundly shape economic perceptions. Economic growth is strongly related to how people view the state of the economy. Moreover, while government partisans are consistently more optimistic than opposition partisans, everyone reacts in a similar way to changes in the real economy. Second, people's views and knowledge of real economic

indicators shape their perceptions of general economic performance, even when accounting for partisanship. Third, people who hold inaccurate views about the real economy update their general economic perceptions when confronted with correct information about unemployment and growth.

These results have important implications for our understanding of the ability of voters to use elections to hold governments accountable for economic outcomes. The core intuition of the economic voting model is that voters punish governments for bad economic performance and reward them for good performance (Lewis-Beck 1988, Nannestad and Paldam 1994). For this reward-punishment mechanism to work, people need to update their knowledge about real economic indicators, change their subjective economic evaluations and then decide whether to throw the rascals out or not. Our findings suggest that while partisan biases exist and are persistent, changes and signals from the real economy do change people's general perceptions in line with economic developments. Thus, partisan biases can co-exist with economic voting and electoral accountability.

This study proceeds as follows. First, we briefly introduce the ongoing debate about the extent to which individuals' economic perceptions are rooted in economic reality or partisan biases. We develop our argument that although partisan biases influence the level of economic optimism, information about changes to the economic reality nonetheless shapes people's economic perceptions. Next, we present three empirical tests of this argument using recent data from Britain. First, we use time series data from the British Election Study Continuous Monitoring Surveys (BES-CMS) 2004-2013 to examine whether people's economic perceptions track real world economic conditions, and how partisanship colours these perceptions. Second, we analyse an original survey of a representative sample of the

British population to examine how specific knowledge of unemployment and growth rates affects general economic perceptions. Third, we design a survey-embedded experiment that allows us to examine how people respond to new information about the economy, and disentangle the causal relationships between real-world economic information, partisanship and economic perceptions. We conclude by highlighting the importance of our findings for the study of economic voting and the origins of economic perceptions.

What shapes economic perceptions?

Perceptions of the economy matter when voters decide which party to support. Economic perceptions are highly correlated with vote choice: voters are more likely to oust an incumbent when they perceive the economy to have deteriorated (for overviews see Lewis-Beck and Stegmaier 2000; Lewis-Beck and Whitten 2013). This raises the question of what information people use to generate these evaluations of the economy. This question is crucial to models of economic voting that rely on the assumption that there is a relationship between changes in the real economy, people's economic perceptions and ultimately their behaviour at the ballot box. For the economic vote to exist, people need to use recent economic information to update their economic evaluations (Gerber and Green 1998, 1999).

The degree to which people's economic perceptions are in fact rooted in economic reality is a topic of much debate. A large body of work suggests that economic reality does affect economic evaluations. For instance, when inflation or unemployment rates rise, people's economic evaluations become more pessimistic (Fuhrer 1988; Krause 1997). Moreover, MacKuen and colleagues show that although voters may have hazy factual knowledge about the state of the economy, their overall sense of macro-economic improvement and decline (or 'mood' of the economy) is often remarkably acute (MacKuen et al 1992, Erikson et al 2002).

Finally, Lewis-Beck and colleagues (Lewis-Beck 2006; Lewis-Beck et al. 2008; Lewis-Beck and Whitten 2013; Nadeau et al. 2013) have repeatedly shown that economic perceptions are both linked to economic reality and influence people's decisions at the ballot box.

Nonetheless, other studies have cast doubt on the competency of voters to punish or reward governments on the basis of economic performance. For example, Blendon et al. (1997) suggest that only one out of eight US respondents can correctly cite the rate of inflation and unemployment within half a percentage point. Similarly, Conover et al (1986) show that US voters know little about unemployment and inflation rates (although they do also show that trends, particularly in unemployment, are picked up much faster). Nannestad and Paldam (2000) report similar findings for Denmark. Equally, Ansolabehere and colleagues (2013) show that while people hold quite accurate views of familiar economic quantities like petrol prices, more abstract quantities, like unemployment levels, are difficult to grasp. Healy and Lenz (2014) demonstrate that voters may intend to hold governments to account for cumulative growth, but given that this information is not readily available to them, they simply use economic conditions at the end of the electoral cycle. Related studies of misinformation have found that widespread misinformation can lead to collective preferences that are far different from those that would exist if people were correctly informed (Kuklinski et al. 2000). All in all, this evidence suggests that people may actually be rather ill-informed about the state of the real economy.

What is more, people's perceptions about economic conditions may not just be inaccurate, but also strongly distorted by political confounders (Conover et al 1986, Wlezien et al 1997, De Boef and Kellstedt 2004, Bartels 2002, Evans and Andersen 2006; Tilley et al 2008; Enns et al 2012; Bisgaard 2015). This alternative view to the 'rational voter' model claims that

partisanship leads people to resist new information (Zaller 1992; Taber and Lodge 2006; Lavine at al 2012).[1] Partisanship provides a lens through which individuals view the political world (Campbell et al. 1960; see also Johnston 2006) and produces systematic biases in what political information citizens attend to and how that information is interpreted, processed and evaluated (Downs 1957; Fiorina 1981; Erikson et al. 2002; Tilley and Hobolt 2011). Thus, people largely ignore facts about the economy, and economic perceptions stem primarily from partisan attachments. People who prefer governing parties are on average more positive about the economy than people who prefer an opposition party. For example, Bartels (2002) argues that Democrats and Republicans have drastically different views of objective economic conditions such as the budget deficit or unemployment rates. Over half of Democrats in 1988 claimed that inflation had worsened since 1980 even though it had actually significantly improved (Bartels 2002). Ansolabehere et al (2013) show that partisans of the incumbent party underestimate unemployment figures while opposition partisans overestimate them. Other research has also shown that individuals are reluctant to update their beliefs when presented with corrective information if that information runs counter to their ideological predisposition (Nyhan and Reifler 2010). Finally, Evans and colleagues have more generally shown that partisan biases consistently skew general perceptions of economic performance (Evans and Andersen 1996; Evans and Pickup 2010; Pickup and Evans 2013).

In contrast to the classic model of the rational economic voter, the consensus in these studies

[1] A complicating factor here is that economic information is often provided by political actors who have an incentive to actively distort perceptions about the actual state of the economy (Besley and Prat 2006, Larcinese et al 2011). Indeed Alt et al (2016) show that information from a source with high credibility based on institutional expertise and little incentive to deceive, such as an independent central bank, affects voters more than information from partisan sources.

is that the link between real world economic conditions and economic perceptions is rather weak, while strong links exist between partisanship and economic conditions. We suggest that both causes of economic perceptions are in fact simultaneously at work. Our argument is simple. We maintain that although partisan biases distort economic perceptions, changes to economic reality still cause changes to people's perceptions. In other words, while government partisans are likely to remain more positive about the economy than opposition partisans, they nonetheless adjust their perceptions downwards when receiving negative economic news, such as in times of economic crisis.

In order to empirically examine our argument, we thus focus on the *malleability* of economic perceptions in response to (information about) changes in the real economy. We test our argument in three ways. First, we assess whether people's economic perceptions track real world economic conditions. Second, we examine how specific knowledge of unemployment and growth rates affects general economic perceptions. Third, and finally, we disentangle the causal relationship between real-world economic information and economic perceptions by means of a survey experiment.

Economic perceptions and changes in the real economy: time-series analysis

For the first part of our analysis, we use monthly national surveys of the British electorate, from the British Election Study Continuous Monitoring Surveys (BES-CMS) from 2004 to 2013. There are two distinct advantages to looking at British data from 2004 to 2013. First, there was a severe and unexpected economic crisis in the UK in the middle of the time period. As a result, people were given new unambiguous information about the state of the economy. Second, there was a change of government in May 2010 which allows us to examine responses to economic change for different groups of government partisans.

In order to examine if economic evaluations follow real world economic conditions, we regress people's general economic perceptions against real economic performance and partisanship. The economic perceptions question is the standard retrospective evaluation that asks people whether they think that the general economic situation in the UK has changed over the last 12 months, with response categories of 'got a lot better', 'got a little better', 'stayed the same', 'got a little worse' and 'got a lot worse'. Government partisans are those who identify with the Labour Party from 2004 up to May 2010 and those who identify with the Conservative or Liberal Democrat parties after May 2010.[2] All others who gave a valid response (i.e. that mentioned another party) are counted as opposition partisans.

In order to get a sense of the degree to which people's economic evaluations track real world conditions, Figure 1 plots the mean economic evaluation per month against the predicted mean retrospective economic evaluations from a regression model between 2004 and 2013. The latter are based on an OLS regression model which predicts retrospective economic evaluations using real monthly economic growth figures[3] (full results are displayed in Table A1 in the Appendix). The figure shows that when real economic growth rates change, so do economic perceptions. In the aggregate at least people appear to be able to grasp, and respond to, changes in real world economic conditions.

[2] Partisan identity is measured using the standard question in Britain of: "Generally speaking, do you think of yourself as Conservative, Labour, Liberal Democrat or what?" Those respondents that did not provide an answer to this question, they responded no or don't know, received a follow-up question in which they were asked if they felt closer to any particular party. We use both questions to establish the share of Conservative, Labour, and Liberal Democrat identifiers.

[3] The growth estimates are obtained from the Office of National Statistics in the United Kingdom, see http://www.ons.gov.uk/ons/site-information/using-the-website/time-series/index.html.

FIGURE 1 ABOUT HERE

This does not preclude the presence of strong partisan effects, however. Figure 2 shows retrospective economic evaluations based on partisanship. Specifically, it plots evaluations for government partisans - that is to say respondents who identify with Labour before the 2010 general election and with the Conservative or Liberal Democrats after - and opposition partisans. The predicted mean retrospective economic evaluations are estimated from a regression including partisanship, month and an interaction between the two as well as a set of socio-demographic controls such as education, social class, age and gender (full results are presented in Table A2 of the Appendix). The results in Figure 2 clearly show that government partisans always hold more optimistic views about the economy compared to opposition partisans.[4] When Labour lost office in 2010, Labour partisans who were previously more optimistic than the average voter, suddenly become more pessimistic. Partisanship thus exerts a powerful influence on perceptions of economic conditions.[5] This is in line with other time-series analyses of economic perceptions, such as Enns et al. (2012), which have shown that

[4] The only exception to this pattern is government partisans in mid-2010. This is presumably due to the fact that retrospective evaluations of these government partisans, Conservative and Liberal Democrats supporters, still reflect a bias towards the perceived failures of the previous Labour government.

[5] There is some weak evidence here that partisan biases are reduced when the information people receive is relatively unambiguous (i.e. during the financial crisis). This would accord with Parker-Stephen's (2013) claims that disagreement between partisans in the US on the state of the economy was greater when economic conditions were "ordinary" rather than when they were "glorious" or "abysmal". It is difficult to reject the possibility that these are merely floor effects of the measure however. Almost every opposition partisan thought things had 'got a lot worse' during 2008. If a further option of 'got enormously worse' had been available it seems likely that many opposition partisans would have taken it.

partisanship shapes consumer sentiments.

FIGURE 2 ABOUT HERE

This partisan effect appears largely constant however. People certainly view the economic world through a partisan lens, but when circumstances change people change their opinions. The pattern of change that we see in Figure 1 is very similar for government and opposition partisans, even though partisan biases persist over time. At the aggregate level, people thus react to poor economic news in a sensible manner. The next step is to examine the micro-mechanisms of how changes in the economy translate into changing individual-level perceptions of behaviour.

How economic knowledge affect perceptions of the economy: survey evidence

To examine the individual-level determinants of economic perceptions, we examine whether people's knowledge of economic indicators affects their general economic perceptions. At the micro-level we expect that people rely on some understanding of changes in key economic indicators, such as growth and unemployment, when generating their own general perceptions of economic performance (MacKuen et al 1992, Erikson et al 2002). We test this by analysing an original survey of a representative sample of the British population conducted in December 2013.[6] The first step is to ascertain the accuracy of people's

[6] The sample was recruited by YouGov, and it is representative of the British population by sex, region, age, partisanship and occupational social class. Total sample size was 4,088. Our survey questions were embedded in a larger survey not dedicated only to questions about politics and economics. Respondents were sampled from an online research panel of over 750,000 adults living in the United Kingdom. YouGov uses sophisticated recruitment and weighting schemes in efforts to offset sampling biases and offers modest financial incentives to bolster response rates, which are comparable to face-to-face surveys in the United Kingdom. A study comparing

perceptions of the economy. We focus on the two primary indicators generally used to measure a country's economic performance: growth and unemployment. Rather than asking respondents to give us the precise growth and unemployment figures, which is a tall order even for the most politically savvy voter, we provide them with actual information on growth and unemployment for the previous year as a benchmark, and ask them to tell us the figure for the current year. This means that an informed citizen, who was aware that conditions had been improving, would be able to give a reasonable estimate of growth and unemployment using the benchmark information. Ultimately, this provides us with an appropriate measurement of whether voters are competent to engage in economic voting. Civic competence does not require one to have an encyclopaedic knowledge of the exact growth rate in the third quarter of this year, rather it means that one knows whether things are better or worse than they were previously. If things are better, one can reward the government; if things are worse, one can punish the government.

To ensure that the information is highly credible and non-partisan, we provide respondents with actual figures from the Office of National Statistics, which is recognized as the UK's independent national statistical institute. The questions for growth and unemployment are worded as follows:

a) Growth question

According to the Office for National Statistics, between January and September in 2012 the economy grew by 0.1% (a growth rate of +0.1%). The Office for National Statistics recently released the economic growth figures for the nine months from January to September 2013.

What do you think the growth rate was for the January-September period in 2013?

YouGov surveys with the British Election Study showed only small differences in the distributions of key explanatory variables in models of turnout and party choice (Sanders et al 2007).

b) Unemployment question

According to the Office for National Statistics, the UK unemployment rate for the July to September 2012 period was 7.8%. The Office for National Statistics recently released the unemployment figures for July-September 2013.

What do you think the unemployment rate was for the July-September period in 2013?

By looking at the distribution of people's responses to the questions on unemployment and growth, we can assess whether most people had a good idea of how the economy changed over the last 12 months. Figure 3 shows the distribution of answers along with the correct answer and the benchmark, of the previous 12 months rate, given in the question.

FIGURE 3 ABOUT HERE

For unemployment, which changed little over the period, most people gave an answer that was fairly close to the actual outcome. Nearly half of respondents estimated the unemployment rate within 0.5 per cent of the actual rate. Of course, since unemployment had changed little, this also means that nearly half of people put the unemployment rate within 0.5 per cent of the benchmark figure given. For growth, there is much more divergence between the benchmark and the outcome, and we see the distribution centred around the benchmark not the correct rate. Nearly half of respondents gave an answer between 0 and 0.5 per cent, and less than a fifth of people gave an answer within 0.5 per cent of the correct rate. Nonetheless, people's sense of the direction of change for economic growth was quite good. Few people said growth was lower (16 per cent) or the same (15 per cent) as the benchmark, most people thought growth was higher.

TABLE 1 ABOUT HERE

How do these specific views of unemployment and growth relate to general perceptions of economic performance? As with the time series data we examine general subjective perceptions of the economy, using the standard retrospective economic evaluation question: 'Thinking generally about the economy, how would you say that economic conditions have changed over the last 12 months?'. Table 1 shows the results of two OLS regression models predicting general economic perceptions for a subset of the whole sample. Ordered logit models give very similar substantive results (see Table A3 in the Appendix for the full results). Economic perceptions are measured on a scale running from 0 (things had got a lot worse over the last 12 months) to 3 (things over the last 12 months have got better).[7] We include the estimates of unemployment and growth relative to their benchmarks in model 1. Both these effects are statistically significant: people who thought growth was higher and unemployment was lower are those who have a rosier view of the general economic situation. Importantly, this still holds when we control for partisanship and vote choice at the previous general election. Model 2 includes current party identification, vote choice in the 2010 election and several other control variables, not shown in the table that may relate to economic perceptions (educational qualifications, occupational social class, age and gender).[8]

[7] Very few people said that economic conditions had improved a lot so the categories of the original question that indicted 'improved a little' and 'improved a lot' have been combined.

[8] Party identification is measured using two questions. The first asks respondents 'Generally speaking, do you think of yourself as Conservative, Labour, Liberal Democrat or what?'. For those who answer 'no party', there is a follow up question that asks 'Do you generally think of yourself as a little closer to one of the parties than the others?'. All people who answered the first or second question with Conservative or Liberal Democrat are coded as government partisans, people who answered any other party (mostly Labour) are opposition partisans

The effects of people's estimates of growth and unemployment are slightly reduced by the inclusion of these other variables, but it is quite clear that the relationship between estimates of specific economic change and general economic change remains.

FIGURE 4 ABOUT HERE

Moreover, these effects are comparable in size to the effects of partisanship on economic perceptions. Figure 4 shows the effects of partisanship and people's economic estimates on their general economic perceptions as derived from Model 2 in Table 1. The effects of unemployment and growth estimates represent a two standard deviation increase from the benchmark. The magnitude of the effects is non-trivial. Increasing someone's growth estimate by two standard deviations increases their score on the 0-3 economic perceptions scale by nearly half a point. The difference between people who thought growth had increased compared to those who thought it remained static is about the same as the difference between government and opposition partisans. It is not that partisanship does not matter, it clearly does, but perceptions of specific facts about the real economy drive perceptions of general economic change, even when we account for partisanship and previous vote.

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and people who gave no party identity to either question are non-partisans. Education is a five category measure of highest qualification (degree; some higher education; A-level or equivalent; O-Level or equivalent; less than O-level). Occupational class is a four category measure of social grade and self-employment (AB grade; C grade; DE grade; self-employed). Age is categorised into six age groups (18-30; 31-40; 41-50; 51-60; 61-70; 71+). The demographic control variables are not shown in Table 1, but are poor predictors of general economic perceptions in the main, although women are less positive than men and people with no qualifications are less positive than the more educated.

How new information about the economy shapes economic perceptions: experimental evidence

The findings based on the observational data tell a compelling story about how changes in the economy shape individual economic perceptions. However, some doubts about the causal relationships remain. The time-series analysis rests on the assumption that partisan groups remain broadly unchanged over time (Bisgaard 2015), but people may well self-select into partisan groups based on economic performance. Equally, a single survey of any population makes it difficult to disentangle causal relationships. The third part of our analysis is therefore based on a randomized experiment embedded in the survey discussed above. In this experiment, respondents are randomly assigned to groups that receive different information about the economy. The aim is to establish whether people who gave incorrect estimates of growth and unemployment update their general economic perceptions when given the *correct* information (see Nyhan and Reifler 2010).

The experiment consists of two treatments, and a control group, randomly assigned to three groups of respondents.[9] First, as discussed in the previous section, people are asked about their own assessments of the unemployment and growth rate. The treatments then present information about the actual level of growth and unemployment according to the independent Office for National Statistics. Finally, respondents were asked the general economic perceptions question. People in the control group were not given any information, but were

[9] Table A5 in the Appendix shows balance statistics for the treatment and control groups by the main independent variables. The three groups are highly balanced, as expected given the randomization of the treatments.

simply asked the general economic perceptions question. This is the same group that we looked at in the previous section. This allows us to examine whether people update their general economic perceptions in line with actual information about the economy. The growth and unemployment treatments are worded as follows:

a) Growth treatment

The Office for National Statistics calculated that the actual growth rate for the January-September period in 2013 was +1.9%, a higher rate than the +0.1% in the same period in 2012.

Thinking more generally about the economy how would you say that economic conditions have changed over the last 12 months?

b) Unemployment treatment

The Office for National Statistics calculated that the actual unemployment rate for the July-September period in 2013 was 7.6%, a lower rate than the 7.8% in the same period in 2012.

Thinking more generally about the economy how would you say that economic conditions have changed over the last 12 months?

To assess the impact of new information about the economy on economic perceptions, we analyse how participants dealt with information that contradicted their earlier assessments of growth and unemployment rates. To model this we group people by their previous estimates of the economic statistics. For unemployment we have three categories, people who thought unemployment had got worse (i.e. their estimate of unemployment was higher than a year ago), had stayed the same (i.e. their estimate of unemployment was about the same rate as a year ago) or had got better (i.e. their estimate of unemployment was lower than a year ago). For growth we categorize people into those who thought growth was worse (i.e. their estimate of the growth rate was lower than a year ago), stayed the same (i.e. their estimate of the growth rate was about the same rate as a year ago), had got better (i.e. their estimate of the growth rate was higher than a year ago), or had got better at a rate greater than had actually

happened (i.e. their estimate of the growth rate was higher than a year ago, and higher than the actual rate of 1.5 per cent). Table 2 summarizes those groupings.

TABLE 2 ABOUT HERE

For unemployment, which had changed little, we compare whether people's over- and underestimates of change are corrected by new information, but for growth which had changed dramatically we want to see whether it is people that overestimate relative to the benchmark change or those that overestimate relative to the new rate. Table 3 shows the results of two OLS regression models[10] predicting economic perceptions using the unemployment and growth estimates, the main effect of treatment and the interaction between treatment and the estimates.[11] The reference category for the estimates is no change.

TABLE 3 ABOUT HERE

The important terms to look at here are the interactions between the treatment and people's estimates of unemployment (in Table 3a) and growth (in Table 3b). For unemployment, there is a negative and statistically significant interaction between treatment and a previously

[10] As shown in Table A4 in the Appendix ordered logit models give very similar results.

[11] The slight discrepancy in the number of observations across the models in Tables 3a and 3b is mostly based on chance variation, but also due to the data cleaning. In the quality control process we excluded responses that were clearly typing errors or deliberate attempts to go through the questionnaire without answering the questions. The questionnaire did not include a 'don't know' answer option to the growth and unemployment estimation question, but some respondents were nonetheless unwilling to answer the questions and thus gave unusable answers (e.g. 99.99 per cent growth or unemployment levels below 0). These responses were excluded from the analysis, and accounted for 7 per cent of the total sample in response to the unemployment question and 4 per cent of responses in response to the growth question.

positive assessment of unemployment. People in the control group who thought unemployment was falling gave a rosier assessment of general economic performance than people who also thought unemployment was falling, but were confronted with new information that unemployment had actually not changed very much. Similarly for growth, people in the control group who thought that the growth rate had increased beyond the actual rate were more positive about the economy than similar people who were told that while growth had increased, it had not increased by as much as they originally thought. There is also an interaction between the treatment and people with negative growth estimates.

Overall, these findings suggest that people are willing to be corrected when they receive new economic information. Those with overly optimistic views of unemployment and growth relative to the reality downgrade their estimates of economic performance. For growth, there is also evidence that people upgrade their assessments of economic performance when the reality is substantially better than they originally thought. Hence, in contrast to some of the more pessimistic assessments of voters as blinkered by their partisanship, we find that people respond rationally to new information on the economy.[12]

Conclusion

Research on electoral behaviour has consistently shown that people's economic perceptions are highly correlated with their vote choices in elections. Economic voting is thus one of the primary explanations for electoral outcomes, and it is rooted in the classic notion of democracy in which elections serve as mechanisms for the people to hold their governors to

[12] Note that these effects are very similar across partisan groups. Figure A1 in the appendix breaks down the effects of new information by party affiliation, and we see very similar patterns of responses for government and opposition partisans.

account for their performance (Key 1966; Fiorina 1981; Manin 1997). A core assumption is that voters' perceptions of the economy correspond to actual performance. But do those economic perceptions reflect changes in the actual economy or are such perceptions simply reflections of partisan predispositions? This question of whether voters' perceptions of the economy are responsive to information about the real world, regardless of partisan attachment, is of key importance to any assessment of electoral accountability.

The argument put forward in this article is that government partisans are almost invariably more optimistic about the economy than opposition partisans. But people, regardless of partisanship, also respond to changes in the economy and update their economic perceptions accordingly. We have used a combination of observational and experimental data to examine how new information about the economy shapes economic perceptions. Our results show that economic perceptions are influenced by the real economy. At the aggregate level, economic growth and economic evaluations move together. At the individual-level, people's assessments of economic indicators, holding partisanship constant, are good predictors of general economic perceptions. Moreover, correcting people's information about these economic indicators shifts their general economic perceptions. Overall, our observational and empirical evidence tells a consistent story: while partisan biases exist, changes to economic perceptions are rooted in the real economy.

Is this good news? Some might argue that a lack of factual knowledge is not a problem in and of itself. It may be that people can make complex, reasoned choices on the basis of quite limited informational cues and without having to know many concrete facts (Lupia and McCubbins 1998; Goren 2013). Nonetheless, it seems difficult to argue that civic competence does not increase when general perceptions of the economy are at least partially rooted in

economic reality. Our findings thus have important implications for models of economic voting and democratic accountability as they suggest that relationships between economic perceptions and vote choice are related to actual economic performance.

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References

Alt, James E., John Marshall, and David D. Lassen. 2016. "Credible Sources and Sophisticated Voters: When Does New Information Induce Economic Voting?" *The* Journal of Politics 78.2: 327-342.

Ansolabehere, Stephen, Marc Meredith, and Erik Snowberg. 2013. "Asking about Numbers: Why and How." Political Analysis 21 (January): 48-69.

Bartels, Larry M. 2002. "Beyond the Running Tally: Partisan Bias in Political Perceptions." Political Behavior 24(2): 117-150.

Besley, Timothy and Andrea Prat. 2006. "Handcuffs for the Grabbing Hand? Media Capture and Government Accountability." American Economic Review 96(3): 720-736.

Bisgaard, Martin. 2015. "Bias Will Find a Way: Economic Perceptions, Attributions of Blame, and Partisan-Motivated Reasoning during Crisis." Journal of Politics, 77(3): 849-860

Blendon, R.J., Benson, J.M., Brodie, M., Morin, R., Altman, D.E., Gitterman, D., Brossard, M., James, M., 1997. "Bridging the gap between the public's and economists' view of the economy". Journal of Economic Perspectives 11 (3), 105–118.

Campbell, Angus, Philip Converse, Warren Miller and Donald E. Stokes. 1960. The American Voter. Chicago: University of Chicago Press.

Chzhen, Kat, Geoffrey Evans, and Mark Pickup. 2014. When do Economic Perceptions Matter for Party Approval? Political Behavior 36: 291{313.

Conover, Pamela Johnston, Stanley Feldman, and Kathleen Knight. 1987. "The Personal and Political Underpinnings of Economic Forecasts." American Journal of Political Science 31(3):559-83.

Conover, Pamela Johnston, Stanley Feldman, and Kathleen Knight. 1986. "Judging Inflation and Unemployment: The Origins of Retrospective Evaluations." Journal of Politics 48(3):565-88.

De Boef, Suzanna and Paul M. Kellstedt. 2004. ‘The Political (and Economic) Origins of Consumer Confidence’, American Journal of Political Science, 48, 633–49;

De Vries, Catherine and Nathalie Giger. 2014. “Holding Governments Accountable? Individual Level Heterogeneity in Performance Voting.” European Journal of Political Research 53(2): 345-362.

Downs, Anthony. 1957. An Economic Theory of Democracy. New York: Harper.

Duch, Raymond M. 2001. “A Developmental Model of Heterogeneous Economic Voting in New Democracies.” American Political Science Review 95:895–910.

Duch, Raymond M., and Randy Stevenson. 2008. The Economic Vote: How Political and Economic Institutions Condition Election Results. Cambridge: Cambridge University Press.

Duch, Raymond M., and Randy Stevenson. 2010. Context and Economic Expectations: When Do Voters Get It Right? British Journal of Political Science 41: 1-31.

Enns, Peter K., Paul M. Kellstedt, and Gregory E. McAvoy. 2012. "The Consequences of Partisanship in Economic Perceptions." Public Opinion Quarterly 76(2): 287-310

Erikson, Robert S., Michael B. MacKuen, and James A. Stimson. 2002. The Macro Polity. New York: Cambridge University Press.

Evans, Geoffrey, and Robert Andersen. 2006. “The political conditioning of economic perceptions: Evidence from the 1992-97 British electoral cycle.” Journal of Politics 68: 194-207.

Evans, Geoffrey and Mark Pickup. 2010. “Reversing the Causal Arrow: The Political Conditioning of Economic Perceptions in the 2000-2004 U.S. Presidential Cycle.” Journal of Politics 72(4): 1236-1251.

Fiorina, Morris P. 1981. Retrospective Voting in American National Elections. New Haven: Yale University Press.

Gaines, Brian J., James H. Kusklinski, and Paul J. Quirk. 2007a. “The logic of the survey experiment re-examined.” Political Analysis 15 (1): 1-20.

Gaines, Brian J., James H. Kuklinski, Paul J. Quirk, Buddy Peyton, and Jay Verkuilen. 2007b. “Same Facts, Different Interpretations: Partisan Motivation and Opinion on Iraq.” Journal of Politics 69 (November): 957-74.

Gerber, Alan and Donald P. Green. 1998. Rational Learning and Partisan Attitudes. American Journal of Political Science 42(3): 794-818.

Gerber, Alan and Donald P. Green. 1999. Misperceptions about Perceptual Bias. Annual Review of Political Science 2: 189-210.

Gomez, Brad T. and J. Matthew Wilson. 2001. “Political Sophistication and Economic Voting in the American Electorate: A Theory of Heterogeneous Attribution.” American Journal of Political Science 45:899–914.

Healy, Anthony and Neil Malhotra. 2013. “Retrospective Voting Reconsidered.” Annual Review of Political Science 16: 285-306.

Healy, Anthony and Gabriel S. Lenz. 2014. “Substituting The End for The Whole: Why Voters Respond Primarily to Election-Year Economy.” American Journal of Political Science 58(1): 31-47.

Johnston, Richard (2006) “Party Identification: Unmoved Mover or Sum of Preferences?” Annual Review of Political Science, 9, 329–51.

Key, V.O. 1966. *The Responsible Electorate*. New York: Vintage.

Lewis-Beck, Michael S., Nicholas F. Martini, and D. Roderick Kiewiet. 2013. “The nature of economic perceptions in mass publics.” Electoral Studies 32(3): 524-528.

Kinder, Donald R., and D. Roderick Kiewiet. 1981. "Sociotropic Politics: The American Case." British Journal of Political Science l1 (2): 29-6l.

Kuklinski, J. H., Quirk, P. J., Jerit, J., Schweider, D., & Rich, R. F. (2000). Misinformation and the currency of democratic citizenship. The Journal of Politics, 62(3), 790–816.

Krause, George A. 1997. "Voters, Information Heterogeneity, and the Dynamics of Aggregate Economic Expectations." American Journal of Political Science 41 (4): 1170-200.

Larcinese, Valentino, Riccardo Puglisi and James N. Snyder. 2011. Partisan Bias in Economic News: Evidence on Agenda-Setting Behaviour of US Newspapers." Journal of Public Economics 95(9): 1178-1189.

Lavine, Howard G., Christopher D. Johnston, and Marco R. Steenbergen. 2012. The Ambivalent Partisan: How Critical Loyalty Promotes Democracy. Oxford University Press.

Lewis-Beck, M.S., 1988. Economics and Elections: The Major Western Democracies. Michigan University Press, Ann Arbor.

Lewis-Beck, Michael S. 2006. "Does Economics Still Matter? Econometrics and the Vote." Journal of Politics 68(1): 208-212.

Lewis-Beck, Michael S., and Mary Stegmaier. 2000. "Economic Determinants of Electoral Outcomes." Annual Review of Political Science 3: 183–219.

Lewis-Beck, Michael S. and Guy D. Whitten 2013. "Special symposium. Economics and elections: Effects deep and wide." Electoral Studies 32(3): 391-562.

Lewis-Beck, Michael S., Richard Nadeau and Angelo Elias. 2008. "Economics, Party, and the Vote: Causality Issues and Panel Data." American Journal of Political Science, 52(1): 84-95.

Lupia, Arthur. 2006. 'How elitism undermines the study of voter competence'. Critical Review 18 (1): 217–32.

Lupia, A., McCubbins, M.D., 1998. The Democratic Dilemma: Can Citizens Learn what they Need to Know? Cambridge University Press, Cambridge.

MacKuen, Michael B., Robert S. Erikson, and James A. Stimson. 1992. "Peasants or

Bankers? The American Electorate and the U.S. Economy." American Political Science Review 86(3) :597- 611.

Manin, Bernard. 1997. *The Principles of Representative Government.* Cambridge: Cambridge University Press.

Nannestad, Peter, and Martin Paldam. 1994. "The VP function: A survey of the literature on vote and popularity functions after 25 years." Public Choice 79 (3): 213-45.

Nadeau, Richard, Michael Lewis-Beck and Eric Bélanger. 2013. "Economics and elections revisited." Comparative Political Studies 46(5): 551-573.

Nyhan, Brendan and Jason Reifler. 2010. "When Corrections Fail: The Persistence of Political Misperceptions." Political Behavior 32(2): 303-330.

Parker-Stephen, Evan. 2013. "Tides of Disagreement: How Reality Facilitates (and Inhibits) Partisan Public Opinion." Journal of Politics 75(4): 1077-88.

Sanders, David , Harold D. Clarke , Marianne C. Stewart , and Paul Whiteley . 2007 .'Does mode matter for modeling political choice? Evidence from the 2005 British Election Study'. Political Analysis 15 (3): 257.

Taber, C. S., and M. Lodge. 2006. "Motivated skepticism in the evaluation of political beliefs." American Journal of Political Science 50 (3): 755-769.

James Tilley, John Garry and Tessa Bold (2008), "Perceptions and reality: Economic voting at the 2004 European Parliament elections." European Journal of Political Research 47(5): 665-686.

Tilley, James, and Sara B. Hobolt. 2011. "Is the government to blame? An experimental test of how partisanship shapes perceptions of performance and responsibility." The Journal of Politics 73(2): 316-330.

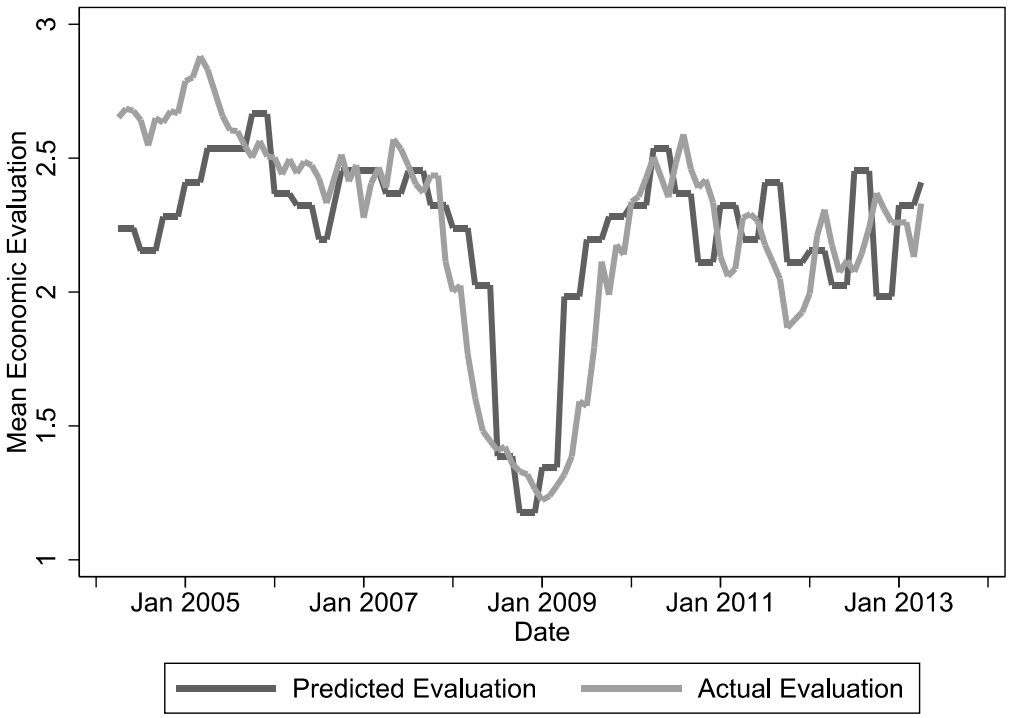
Van Der Brug, Wouter, Cees Van Der Eijk, and Mark N. Franklin. 2007. The Economy and

the Vote: Economic Conditions and Elections in Fifteen Countries. New York, NY: Cambridge University Press.

Wlezien, Christopher, Mark Franklin, and Daniel Twiggs. 1997. “Economic perceptions and vote choice: Disentangling the endogeneity.” Political Behavior 19 (1): 7-17.

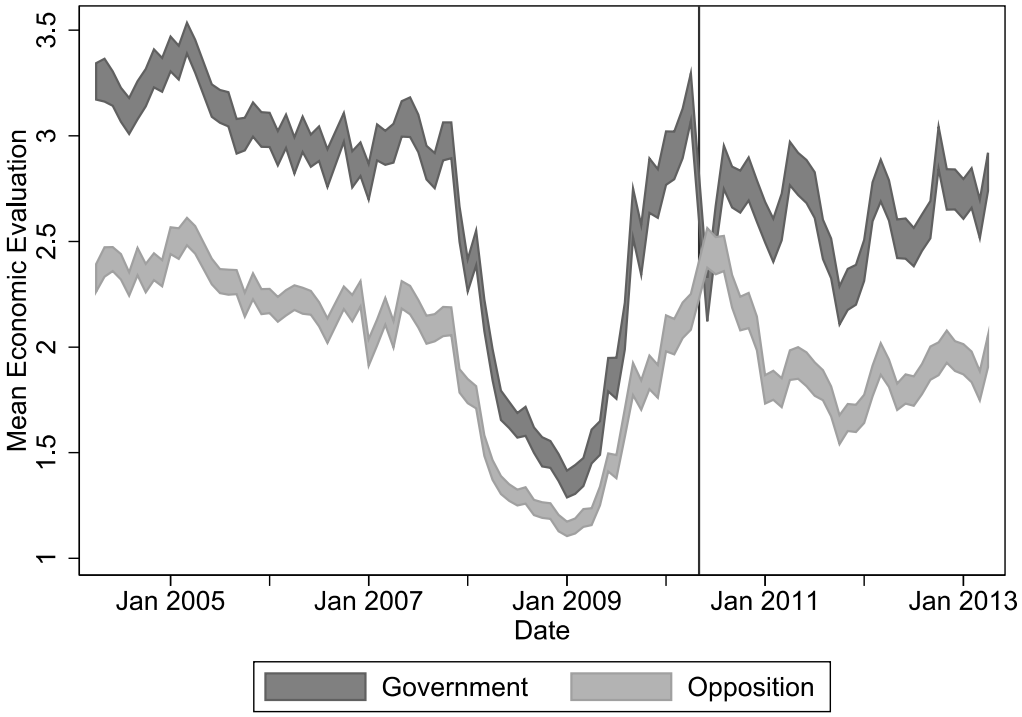
Zaller John, R. 1992. The Nature and Origins of Mass Opinion. Cambridge: Cambridge University Press.

FIGURE 1: *Relationship between growth and retrospective economic evaluations*



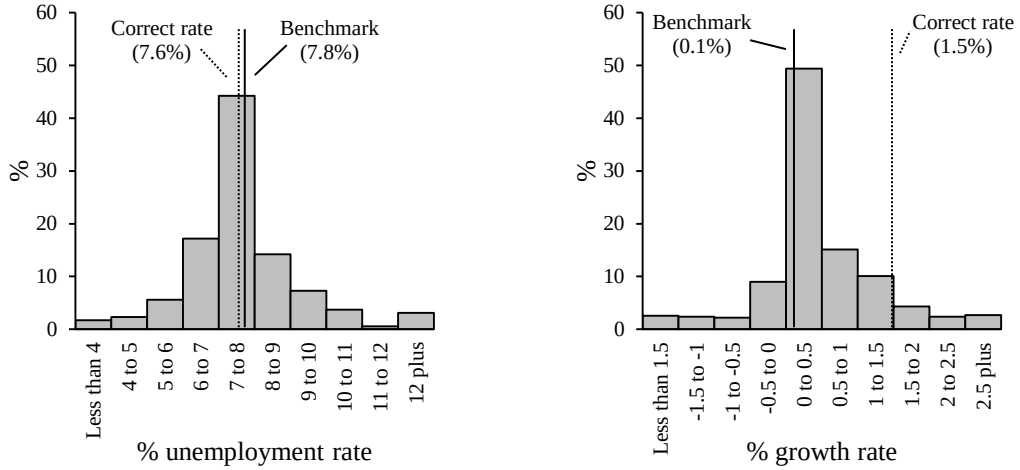
Note: This figure show the actual mean retrospective economic evaluations (Actual Evaluation) against the predicted mean retrospective economic evaluations from a regression model (Predicted Evaluation). The predicted mean retrospective economic evaluations are based on an OLS regression model (full results are displayed in Table A1 in the supporting information document) including actual growth rates. The actual rates of growth are taken from the Office for National Statistics.

FIGURE 2: *Retrospective economic evaluations by government and opposition partisans*



Note: This figure plots the predicted mean retrospective economic evaluations estimated from a regression by partisanship. Specifically, the model regresses retrospective economic evaluations against partisanship, time (i.e. month), an interaction between the partisanship and time as well as a set of socio-demographic controls (full results are presented in Table A2 of the supporting information document). Vertical line refers to the 2010 general election which resulted in a change of government from a Labour government to a Conservative-led coalition government.

FIGURE 3: *Distribution of responses about the current rate of unemployment and the current rate of growth*



Note: These figures show the distribution of responses to the questions 'what do you think the growth rate was for the January-September period in 2013?' and 'what do you think the unemployment rate was for the July-September period in 2013?'. Respondents were given the benchmark figure from a year prior to that asked about. This benchmark rate is marked on the graphs. The correct rates of growth and unemployment are also marked on the graphs and are taken from the Office for National Statistics.

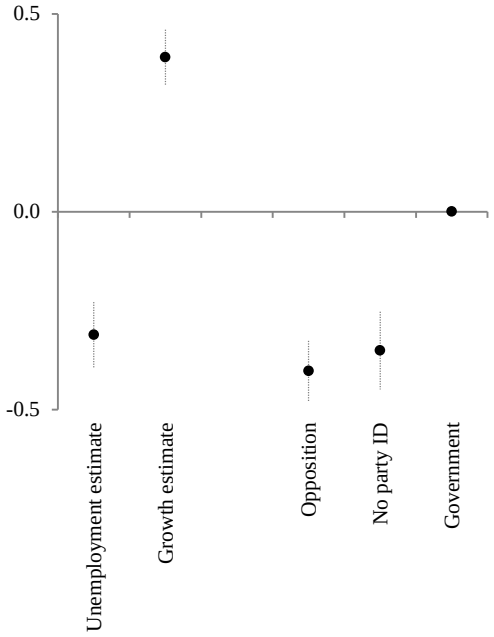
TABLE 1: *OLS regression models predicting economic perceptions*

	Model 1		Model 2	
	B	SE	B	SE
Growth estimate (relative to benchmark)	0.28*	0.03	0.22*	0.03
Unemployment estimate (relative to benchmark)	-0.12*	0.01	-0.10*	0.02
Opposition party identification			-0.55*	0.07
No party identification			-0.31*	0.09
Government party identification (reference)			-	-
Voted Labour 2010			-0.16	0.09
Voted Conservative 2010			0.08	0.09
Voted Liberal 2010			0.04	0.09
Voted other 2010			-0.38*	0.13
Didn't vote 2010 (reference)			-	-
Intercept	1.88*	0.03	2.45*	0.12
R-square	0.14		0.28	

* p< .05. N = 990.

Note: This table shows the results of two OLS regression models that predict people's economic perceptions on a 0-3 scale. 0 represents economic conditions getting a lot worse and 3 represents economic conditions getting a little or a lot better. People's estimates of growth and unemployment are relative to the benchmark provided to them, thus positive numbers indicate an improvement in growth and a worsening of unemployment relative to a year ago. Also included in model 2, but not shown here, are controls for education, occupational class, age and gender.

FIGURE 4: *Predictors of economic perceptions*



Note: This figure shows the predicted impact of different independent variables on economic perceptions using the coefficients from model 2 of Table 1 (including controls for education, occupational class, age and gender) and holding constant all independent variables listed. Economic perceptions are measured on a 0-3 scale, where 0 represents economic conditions getting a lot worse and 3 represents economic conditions getting a little or a lot better. The effects of growth and unemployment are for a two standard deviation increase in both compared to no change. The bars around the point estimates are 95 per cent confidence intervals.

TABLE 2: *Categorizing estimates of growth and unemployment*

	Growth range	% of control group	Unemployment range	% of control group
More positive than actual change	1.5 to 7	9%		
Positive change	0.2 to 1.5	44%	1 to 7.1	29%
No change	0 to 0.2	31%	7.1 to 8	37%
Negative change	-7 to 0	16%	8 to 15	35%

Note: This table categorizes people's estimates of growth and unemployment relative to the rate of growth and unemployment one year ago.

TABLE 3: *OLS regression models predicting economic perceptions*

(a) Unemployment treatment (unemployment rate is 7.6 per cent)

		B	SE
Unemployment estimate	Positive change	0.02	0.07
	No change (reference)	-	-
	Negative change	-0.62*	0.07
Treatment		0.12	0.06
Interaction	Treatment*positive change	-0.29*	0.10
	Treatment*no change (reference)	-	-
	Treatment*negative change	-0.17	0.10
Intercept		2.20*	0.05
R-square		0.10	

* p<.05. N = 2240.

(b) Growth treatment (growth rate is 1.5 per cent)

		B	SE
Growth estimate	More positive than actual change	0.48*	0.10
	Positive change	0.33*	0.06
	No change (reference)	-	-
	Negative change	-0.95*	0.08
Treatment		0.11	0.07
Interaction	Treatment*more positive than actual change	-0.35*	0.14
	Treatment*positive change	0.01	0.09
	Treatment*no change (reference)	-	-
	Treatment*negative change	0.22*	0.11
Intercept		1.95*	0.05
R-square		0.18	

* p< .05. N = 2406.

Note: These tables show the results of OLS regression models that predict people's economic perceptions on a 0-3 scale. 0 represents economic conditions getting a lot worse and 3 represents economic conditions getting a little or a lot better. People's estimates of growth and unemployment are relative to the rate of growth and unemployment one year ago. The treatment is information on the actual levels of growth (1.5 per cent) and unemployment (7.6 per cent).