MOTIVATED REASONING, AMBIVALENCE, AND THE LOCAL ECONOMY: ASYMMETRIC BIASES IN THE FORMATION OF ECONOMIC PERCEPTIONS

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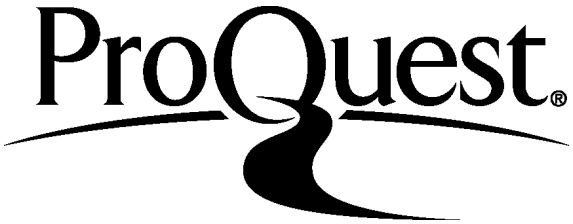

ABSTRACT

Through motivated reasoning, citizens tend to process information in ways that confirm their prior beliefs. This motivation is seen perhaps most clearly in how voters view the economy – citizens identifying with the incumbent party view the economy favorably, while those opposed to the incumbent party view the economy unfavorably. Thus, while all citizens exist within the same national economy at a given point in time, they also display wide variations in how they perceive that same economy. This study investigates the role the direction of partisan attachments, levels of political knowledge, and the local economic environment play in the formation of national economic perceptions. The findings show that, first, out-partisans are more prone towards motivated reasoning than in-partisans when evaluating the national economy, both retrospectively and prospectively. Second, the effect of in-party attachments on national economic perceptions becomes stronger with levels of political knowledge, but not for out-partisans. And third, changes in economic performance at the county and state levels shape the effect of in-party identities on economic perceptions, while out-party identities remain mostly isolated from the local economic environment.

DEDICATION

I dedicate this dissertation to my loving wife Kristen, the most patient woman I have ever met.

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER 1

INTRODUCTION

In 2008 the United States' economy slipped into the worst recession since the 1930s. Politicians and pundits debated the causes of and solutions to the financial crisis, a theme which resonated well into Barack Obama's presidency. But the effects of the recession were not uniform across the nation. For example, between November 2008 and November 2009 unemployment in the state of Michigan increased by four and a half percentage points, reaching one of the highest state unemployment rates in the nation. During that same time period, North Dakota's unemployment rate rose by only half of a percentage point. Obviously many citizens in Michigan were hit much harder by the recession than those in North Dakota. Even within states, economic performance often varies rather dramatically across local communities. In the state of Texas between 2008 and 2009, net changes in local unemployment rates ranged from an 8.7 percentage point increase in Morris County to a 0.3 percentage point *decrease* in King County.

How did these different local experiences shape how individual citizens perceived the national economy? Voters routinely view the economy in ways that satisfy their existing political beliefs – those favoring the incumbent presidential party tend to view the economy more favorably than those opposed to the incumbent party. But what role does the local context play in shaping these partisan tendencies? Were in-partisans in Michigan during the Great Recession less likely to view the economy favorably than in-partisans in North Dakota? Were out-partisans in King County, Texas less likely to hold negative economic opinions than out-partisans in Morris County, Texas?[1] Moreover, is some threshold level of information necessary for partisans to efficiently utilize party cues when evaluating the economy? Do levels of information also moderate the ten-

[1]Throughout this study, in-partisans are defined as individuals who identify with the party of the incumbent president during each survey year; out-partisans are those opposed to the party of the incumbent president.

dency for partisans to benchmark national economic evaluations on the performance of the local economy? This dissertation is an investigation into how levels of political knowledge, in addition to economic performance at the county and state levels, shape the process through which partisans form perceptions of the national economy.

Most national economic indicators reflect the aggregation of often wildly varying local conditions (Kramer 1983, Weatherford 1983). Thus, at any given point in time all voters face the same national economic reality – yet voters routinely display wide variations in how they view the national economy. A long line of literature has shown that a wide range of non-economic factors can explain some of this variation in national economic perceptions, such as media coverage (Goidel & Langley 1995, Harrington 1989, Hetherington 1996), personal financial situations (Fiorina 1978, Weinschenk 2010), demographic characteristics (Duch, Palmer & Anderson 2000), and, most importantly, partisanship (Bartels 2002, Dettrey & Palmer 2013, Evans & Anderson 2006, Evans & Pickup 2010, Wlezien, Franklin & Twiggs 1997). My focus here is on the latter. Three main questions are addressed by the following analyses. First, how does the direction of party identification shape the motivated reasoning of partisans when evaluating the national economy? This question hinges on psychological research that shows out-group identites to be more influential for opinion formation than in-group identities (Ditto & Lopez 1992, Ditto et al. 1998, Goren, Federico & Kittilson 2009). Second, how do partisans' levels of political knowledge shape the motivation to view the economy in belief-preserving ways? Political psychologists have shown that rather than citizens becoming more policy-oriented with higher levels of knowledge, they actually become better able to counter-argue facts which conflict with their prior beliefs (Taber & Lodge 2006, Taber, Cann & Kucsova 2009, Lodge & Taber 2013). I expect this role of knowledge to apply also to how partisans view the national economy – through a multiplicative interaction between party identification and political knowledge, the effects of partisanship should grow stronger with increasing levels of knowledge. Finally, how does the local economic environment shape the tendency for partisans to view the national economy in terms of their political identities? Moreover, how does the moderating influence of the local economy on national economic perceptions vary with an

individual's level of knowledge? These latter questions are addressed in the bulk of the following analyses and are explained in greater detail later in this chapter, as well as in their respective substantive chapters.

The findings presented in this study raise important implications for the study of economic voting and motivated reasoning. For decades scholars have debated whether voters have the ability to evaluate economic performance in an unbiased manner and hold elected officials accountable, or whether voters are restrained by the influence of partisanship and thus simply view the economy in ways congruent with their prior political beliefs. Advocates of both camps routinely use their arguments to make claims about the quality of democracy in the United States. If voters can recognize poor economic performance when they see it and hold the incumbent party accountable, then democracy is functioning well. If voters are never free from their partisanship and simply paint subjective pictures of the economy that satisfy their personal beliefs, then democracy may be in trouble. This dissertation demonstrates that scholars need to exercise much greater caution when making normative assessments of democracy. A range of both individual and contextual factors shape how citizens form opinions of the economy, and those opinion formation processes should not be expected to remain constant across individuals or over time.

The first chapter of this study proceeds as follows. Section 1.1 reviews the existing literature on economic voting and motivated reasoning in the United States. Section 1.2 describes the theoretical expectations that drive the following analyses, focusing first on the role that knowledge can be expected to play in the motivated reasoning of partisans and second on the role that the local economic environment can be expected to play for how partisans perceive the national economy. Section 1.3 then briefly outlines the structure of the rest of this dissertation and briefly describes the findings presented in each subsequent chapter.

1.1 Economic Voting in the United States

The relationship between politics and economics is a central component to gauging how

well democracy functions. By almost any definition of the word, 'politics' refers to a competition over the distribution of power and resources. This distribution of resources – the economy – is one of the most fundamental starting points for democratic accountability. Linking the economy to the democratic governance is the economic voter. In an ideal world, voters punish incumbent governments for poor economic performance and reward them for good performance. But in reality, how strong is that link? And how does the strength of that link change over time? Early research on economic voting highlighted the influence of national economic performance on government approval and election outcomes (Erikson 1989, Fair 1978, Fair 1988, Hibbs 1977, Kramer 1971, Lewis-Beck 1988, Tufte 1978). Whether economic performance was measured in terms of national unemployment, income, inflation, or national economic growth, these findings demonstrated seemingly routine effects of economic performance on both the popularity and electoral success of incumbent politicians and parties.

Despite the abundance of evidence of aggregate-level economic effects on election outcomes and government approval, the literature has also produced a surprising number of contradictory findings. For example, mass consumer sentiment tends to be shaped presidential approval and media coverage of the economy than vice versa (De Boef & Kellstedt 2004). Other findings have demonstrated evidence of a political business cycle in which political leaders strategically manipulate economic policy in an effort to sway public opinion and maximize electoral success (Nordhaus 1975, Tufte 1978)[2]. While the traditional model of aggregate-level economic voting assumes a causal impact of economics on politics, these findings highlight an endogenous relationship between the two. From a comparative perspective, contradictory findings on the relationship between economic performance and election outcomes have been explained in terms of the strength of party competition and the clarity of economic responsibility (Duch & Stevenson 2005, Duch & Stevenson 2008, Nadeau, Niemi & Yoshinaka 2002, G. Bingham Powell & Whitten 1993, van der Brug, van der Eijk & Franklin 2007, Whitten & Palmer 1999). The salience of economic issues has also been shown to vary with the direction of economic performance, with the economy becoming

[2]But see also Sargent & Wallace (1975) and McCallum (1978).

more important of an issue during times of economic crisis (Bloom & Price 1975, Stevenson 2002). The implication of such economic asymmetries is that incumbent governments are more likely to be punished for poor economic performance than they are to be rewarded for good economic performance.

In an attempt to unravel these aggregate-level inconsistencies, scholars have also addressed the economic vote at the individual-level. Theoretically, if economic performance is to have an influence on election outcomes, it inherently must occur through the economic perceptions of individual voters. At any given point in time, voters exist within the same national economy – yet scholars observe wide variations in how voters actually perceive national economic performance. Some studies argue that the aggregation of individual perceptions do represent objective economic performance, plus some idiosyncratic error (Converse 1990, Page & Shapiro 1992, Wittman 1989). Other studies have explained individual-level heterogeneity in economic perceptions in terms of political knowledge or sophistication (Bartels 1996, MacKuen, Erikson & Stimson 1992), media coverage and exposure (Hetherington 1996, Iyengar et al. 1984), and personal financial situations (Fiorina 1978). One of the most enduring debates among individual-level studies of economic voting has been the distinction between sociotropic versus pocketbook voting (Fiorina 1978, Fiorina 1981, Kiewiet 1983, Kinder & Kiewiet 1979, Kinder & Kiewiet 1981) – does the decision calculus of the economic voter place more weight on evaluations of the national economy or one's own personal finances? Moreover, does the economic voter behave retrospectively, responding to past economic performance, or prospectively, relying on rational expectations of future economic performance? These two dimensions of economic voting (sociotropic/pocketbook and retrospective/prospective) have in large part been explained in terms of individual levels of political sophistication. More sophisticated voters are more likely to base their electoral decisions on future expectations of their own personal finances, while less sophisticated voters respond more strongly to retrospective evaluations of the national economy (Gomez & Wilson 2001, MacKuen, Erikson & Stimson 1992). Even still, none of these findings go very far in explaining systematic variation in individual-level evaluations of an aggregate-level constant: the national economy.

As normatively appealing as the traditional conception of the economic voter is, its plausibility is regularly called into question. From a psychological perspective, citizens tend to process new information in ways that confirm their own prior beliefs (Kunda 1990, Lord, Ross & Lepper 1979). Thus, through motivated reasoning, voters are more likely to view the economy favorably when they identify with the incumbent political party. Democrats and Republicans interpret the same economic facts in dramatically different ways (Bartels 2002), and citizens tend to view the economy more favorably when identify with the party of the President (Evans & Anderson 2006, Evans & Pickup 2010) or the majority party in Congress (Gerber & Huber 2010). In particular, studies using longitudinal data have shown that apparent cross-sectional effects of economic evaluations on political attitudes and behaviors have been drastically over-stated (Evans & Pickup 2010, Wlezien, Franklin & Twiggs 1997).[3] These findings suggest that economic perceptions are more likely a result of partisan rationalization than subjective responses to real changes in the economy.

Such political biases in how citizens view the economy raise important implications for democracy in the United States. For decades scholars have used the relationship between political and economic attitudes to make broad, sweeping claims on the quality of democratic represrentation. On one hand voters evaluate the economy and update their political beliefs accordingly, thus holding incumbent officials accountable for economic performance. In this case democracy is functioning well. On the other hand, if voters simply view the economy through their partisan lense, then then democracy functions poorly. The primary purpose of this dissertation is to show that the relationship between partisanship and economic perceptions, and therefore the quality of democracy in the United States, is not constant and should not be interpretted as a normative signal about electoral accountability. Instead, I demonstrate in this study that this relationship between an individual's partisan identity and how they evaluate economic performance depends on the direction of the individual's partisanship, the individual's level of political knowledge, and the performance of the local economy in which the partisan exists.

[3]For a defense of cross-sectional economic effects, see Lewis-Beck (2006) and Lewis-Beck, Martini & Kiewiet (2013).

1.2 A Theoretical Framework of National Economic Perceptions

This section describes the theoretical expectations that drive each of the following analyses. These expectations are also described briefly in each respective substantive chapter. A theme that echoes through this entire study is that in-partisans and out-partisans, defined in terms of the incumbent presidential party, behave differently in terms of motivated reasoning. In a sort of cognitive defense mechanism, out-group members tend to feel a stronger need to defend their prior beliefs than in-group members. I expect these asymmetries to also apply to in-partisans and out-partisans faced with evaluating the national economy. I expect, and go on to demonstrate, that the moderating factors studied in the following analyses (political knowledge and local economic performance) apply more strongly to in-partisans than out-partisans. Even as local economic conditions improve or deteriorate, and regardless of levels of political knowledge, the effect of identifying with the out-party should change very little. For in-partisans, on the other hand, the effect of partisanship should be significantly different across levels of political knowledge and changes in local economic performance.

1.2.1 Asymmetrical Influences of Political Knowledge

The first part of this study focuses on the role of political knowledge for the formation of national economic perceptions. The role of political knowledge for public opinion in general has been the subject of intense debate for decades. Much of this debate stems from scholarly disagreement over how to properly measure knowledge and sophistication. It should be stated up front that this study is not a measurement study – I construct a general measure of political knowledge from American National Election Studies survey items which perform well on a single latent dimension. My focus here is on how knowledge shapes the motivation for partisans to view the economy in belief-preserving ways, not to make an argument about the appropriate operationalization of political knowledge. As discussed later in Chapter 2, the knowledge item constructed in this analyses

performs similarly to simple educational attainment.

Based on findings which show that individual's with higher levels of political knowledge are more prone to motivated reasoning (Taber & Lodge 2006, Taber, Cann & Kucsova 2009, Lodge & Taber 2013), I expect the effects of partisanship on economic perceptions to increase with levels of political knowledge. Studies have shown that citizens holding the highest levels of information tend to have the most stable opinions on political issues (Zaller 1992). Findings also show that the effects of knowledge on economic evaluations are washed out when partisanship is controlled for (Dettrey & Palmer 2013), but I expect this finding to be deceiving due to asymmetries between in-partisans and out-partisans. In particular, most standard measures of party identification effectively treat in-partisans and out-partisans as part of a single seven-point scale. In these analyses, I fold partisanship into separate measures of party strength for in-partisans and out-partisans (with pure independents treated as the baseline group). Doing so allows a model to capture different effect sizes between the two partisan groups.[4] Thus, an interactive effect of partisanship and knowledge on economic perceptions should only apply to in-partisans, as the effects of out-party identities on economic perceptions should be stronger than in-party identities. Similarly, the effects of political knowledge on economic perceptions for in-partisans should increase with the strength of in-party identities. The strongest evidence for partisan motivated reasoning should be observed for individuals with strong attachments to the incumbent presidential party and the highest levels of political knowledge.

1.2.2 Asymmetrical Influences of the Local Economic Environment

The analysis then moves to an investigation of how changes in local economic conditions (measured at the county and state levels) moderate the effect of partisanship on national economic perceptions. The local economy represents a middle ground between the national economy and an individual's own personal finances. Objective measures of national economic performance are inadequate for explaining variation in subjective evaluations of the national economy, as such in-

[4]The measures of partisanship used here are described in greater detail in Chapter 2.

dicators do not vary across individuals. On the other hand, changes in an individual's personal finances are also inadequate as they fail to capture the subjective homogeneity of individual within a local context. Research has shown that citizens tend to form economic opinions similar to those within their immediate surroundings (Ansolabehere, Meredith & Snowberg 2014). Voters are exposed to economic signals from their local environment without necessarily possessing specific knowledge about their community's economic performance. An influence of local economic conditions on economic opinions and voting behavior is not new, but evidence has thus far been sparse. Indicators such as state-level unemployment rates (Books & Prysby 1999), local fuel prices, and foreclosures (Reeves & Gimpel 2012) have been shown to impact how citizens evaluate the national economy. Local unemployment rates in the British context have also been linked to vote choices in national elections (Johnston et al. 2000). However, none of these findings address the asymmetrical influences of the local economy for in-partisans and out-partisans. Moreover, these studies have tended to rely on static measures of economic performance, such as current levels of unemployment. I expect that *changes* in economic performance are a more appropriate measure of the local context than levels of performance at a given point in time. Thus, while preliminary evidence has been established for a role of the local economy on national economic perceptions, that evidence greatly needs to be expanded upon.

The theoretical mechanisms that should drive a moderating influence of the local economy can be found in the literature on political ambivalence, as well as the asymmetrical influences of positive and negative information on opinion formation. First, the literature on political ambivalence argues that when partisans are exposed to conflicting political or economic signals, confidence in partisanship as a heuristic for information processing is diminished (Basinger & Lavine 2005, Delli Carpini, Cook & Jacobs 2004, Druckman & Nelson 2003, Lavine 1998, Lavine 2001, Lavine, Johnston & Steenbergen 2012, Mutz 2002). For example, a Republican voter leading up to the 2008 presidential election who disapproved of the Bush administration's handling of the economy was less likely rely on their partisanship when asked to evaluate the president's job performance, the performance of the national economy, or ultimate vote decision (Lavine,

Johnston & Steenbergen 2012). Second, negative information has been shown to exert a stronger influence on opinion formation than positive information (Baumeister et al. 2001, Hetherington 1996, Soroka 2006, Taylor 1991). The following example demonstrates how ambivalence and the influence of negative information can combine to create a moderating effect of the local economy for how partisans view the national economy. Consider four hypothetical voters: an in-partisan in a prosperous local economy; an in-partisan in a deteriorating local economy; an out-partisan in a prosperous local economy; and an out-partisan in a deteriorating local economy. First, the in-partisan in a prosperous economy does not experience conflicting signals between the local environment and her partisanship. Thus, this first in-partisan remains confident in party cues when asked to evaluate national economic performance. Second, the in-partisan in a deteriorating economy experiences conflicting signals between the partisan identity and information from the local environment. She feels warmly toward the incumbent party, but negative signals from the local environment reduce confidence in party cues when processing national economic information. Thus, the effect of partisanship on national economic perceptions should be diminished. Third, the out-partisan in a prosperous economy also experiences conflicting signals – an opposition to the incumbent party combined with positive information from the local environment. However, since this positive information is less influential for information processing than negative information, and since out-partisans are more prone to motivated reasoning than in-partisans, this out-partisan should retain a high degree of confidence in her partisanship when asked to evaluate the national economy. Finally, the out-partisan in a deteriorating environment does not experience conflicting signals and thus remains likely to view the national economy in terms of their partisanship.

1.3 Outline of the Study

Chapter 2 begins the analysis by investigating the ways in which political knowledge moderates the motivated reasoning of partisans when evaluating the national economy. I develop a unique measure of political knowledge based on a battery of survey items from the 1988 and 2012 American National Election Studies (ANES). I then model both retrospective and prospec-

tive evaluations of the national economy as a function of partisanship, political knowledge, and an interaction between the two, in addition to other individual characteristics that have been shown to shape economic perceptions. The results show that the tendency to view the economy in a belief-preserving manner increases with levels of political knowledge for in-partisans, but not for out-partisans. Out-group members have been shown to be more prone towards motivated reasoning than in-group members (Ditto & Lopez 1992, Ditto et al. 1998, Goren, Federico & Kittilson 2009), and this tendency rings true throughout all of the following analyses. Citizens opposed to the incumbent presidential party are about equally as likely to view the economy unfavorably across the entire range of political knowledge. Those identifying with the incumbent party, on the other hand, become more likely to view the economy favorably as levels of knowledge increase. Finally, these results only extend to the 2012 ANES – knowledge played no moderating rule for the motivated reasoning of partisans during the 1988 survey. The most likely explanation for these disparate findings are that as partisans have become more polarized over the past few decades, they have simultaneously become more polarized in how the utilize partisan identities when processing economic information.

Chapter 3 shifts its focus to the economic environment in which partisans exist. Using data from the pooled ANES Time-Series studies from 1980-2012 supplemented with state-level data on net changes in unemployment rates and per capita disposable income, I show that the effect of in-party identities on national economic perceptions is significantly weaker in states with rising unemployment than in states with declining unemployment. For out-partisans, the effect of partisanship on economic perceptions does not change greatly with net changes in state-level unemployment rates. Findings are relatively weaker for per capita disposable income. This is likely due to the fact that income levels vary over time with inflation, as well as across the national with the cost-of-living, suggesting that changes in unemployment rates are a more suitable measure for the local economy than income levels. These findings apply to both retrospective and prospective evaluations of the national economy.

Chapter 4 extends the previous chapter's analysis by shifting the local economic environ-

ment from the state-level to the county-level. While both state and county economic performance represent a middle ground between the individual and the national economy,[5] county-level performance is likely to hit closer to an individual's pocketbook than state-level performance. Data for Chapter 4 come from the 2006-2012 Cooperative Congressional Election Studies (CCES), which conveniently covers the time periods before, during, and after the Great Recession. The ANES surveys do not include near the sample sizes within counties as the CCES surveys, but question wordings between the two studies are almost identical. Chapter 4 uses the same measures of in-party and out-party strength used in Chapter 2 and Chapter 3, and measures the local economy in terms of twelve-month net changes in county-level unemployment rates. Income data were not available for all counties, but this shouldn't be problematic based on the null results for income in Chapter 3. Chapter 4 then goes on to test three-way interactions between partisanship, county-level economic performance, and political knowledge in order to estimate whether some sufficient level of knowledge is needed in order for respondents to be influenced by changes in the local economy. The results show non-significant changes for individuals with low, median, or high levels of knowledge – the moderating influence of the local economy for the effect of partisanship on economic perceptions is not conditional on levels of knowledge. This suggests one of two possibilities. First, and most likely, signals from the local economic environment are stronger and thus wash out the effect of political knowledge. Or second, the effects of knowledge wash out any effects of the local environment. The former is more likely since these findings in Chapter 4 apply equally to both in-partisans and out-partisans.

Chapter 5 concludes with a discussion of the results and their implications for the study of economic voting and the quality of democracy in the United States.

[5]The local economy has been referred to recently as the *geotropic* (Gimpel & Reeves 2012) or *mecro*-economy (Ansolabehere, Meredith & Snowberg 2014).

CHAPTER 2

POLITICAL KNOWLEDGE AND PARTISAN MOTIVATIONS IN NATIONAL ECONOMIC PERCEPTIONS

In a representative democracy, the ideal citizenry observes objective policy-relevant facts and translates that information into political beliefs – beliefs which aggregate to electoral accountability. These normative approaches to political reasoning describe a two-stage process in which prior beliefs are first taken into account, and then new information is integrated to produce an updated attitude or belief (Anderson 1981). However, the notion of an ideal Bayesian citizenry has been challenged on multiple fronts. Citizens have been shown to face difficulty in distinguishing between ideological positions on political issues (Converse 1964), and are generally uninformed on even the most basic political facts (Delli Carpini & Keeter 1996). The general lack of political knowledge in the American electorate doesn't prevent citizens from still holding relatively stable opinions. Partisan predispositions are routinely the strongest predictor of political attitudes and behaviors (Campbell et al. 1960), sometimes questioning the ability of voters to correctly process information in ways that hold elected officials accountable (Bartels 1996, Bartels 2002, Lau & Redlawsk 2001). More generally, prior beliefs serve as anchors in the processing of new information, motivating citizens to unevenly accept belief-confirming information while scrutinizing belief-inconsistent information (Kunda 1990, Lord, Ross & Lepper 1979). One area of public opinion in which motivated reasoning has been routinely demonstrated is economic voting – people who identify with the incumbent political party tend to view the economy more favorably than those opposed to the incumbent party, with little or no regard for objective economic performance (Evans & Anderson 2006, Evans & Pickup 2010, Wlezien, Franklin & Twiggs 1997). This has led to a debate among scholars as to whether voters are intellectually capable of holding elected

officials accountable for economic performance. In order to better understand how economic and political opinions relate to one another, the field needs to take a better account of the conditions under which the processing of economic information is most likely to be biased by prior political beliefs.

My goal in this chapter is to identify the conditions under which prior political beliefs are the most likely to shape economic opinions. A better understanding of motivational biases in economic perceptions will present a clearer picture of how voters respond to economic performance and when they are most (or least) likely to hold incumbent officials accountable. I argue that levels of political knowledge and the direction of party identification work together to shape the motivated reasoning of partisans. First, citizens with higher levels of knowledge tend to be better equipped to counterargue belief-inconsistent information than those with lower levels of knowledge (Taber & Lodge 2006, Taber, Cann & Kucsova 2009, Lodge & Taber 2013). Second, out-group members tend to be more sensitive to motivated reasoning than in-group members (Ditto et al. 1998, Goren, Federico & Kittilson 2009). I expect that together these findings can help explain heterogeneity in the economic perceptions of partisans. The impact of party signals on in-partisans' economic perceptions should grow stronger with levels of knowledge. Moreover, this conditional role of knowledge should grow as in-party attachments grow stronger.[1] Since members of the out-party tend to be more strongly influenced by party cues, the perceptions of out-partisans should vary less with knowledge than the perceptions of in-partisans.

The remainder of the chapter is structured as follows. In Section 2.1 I review the literature on the relationship between political knowledge and motivated reasoning. In Section 2.2, I describe my expectations for a moderating effect of knowledge and partisanship on motivated reasoning in economic perceptions. In Section 2.3, I describe the data and methodological approaches used to test my theoretical expectations. The third section also devotes attention to the operationalization of political knowledge, presenting an analysis of the underlying components of political knowledge. Section 2.4 presents the results of ordered logit analyses which test the impact

[1] In this study, in-partisans (out-partisans) are defined as individuals who identify with (oppose) the party of the incumbent president.

of partisanship on economic perceptions for both in-partisans and out-partisans across the range of political knowledge. Section 2.5 concludes with a discussion of the results and their implications for the study of motivated reasoning and economic voting.

2.1 Knowledge, Partisanship, and Economic Perceptions

Citizens face both accuracy and directional goals when processing political information.[2] Accuracy goals motivate citizens to objectively evaluate information in ways that lead to correct conclusions (Baumeister & Newman 1994, Chaiken, Liberman & Eagly 1989, Fiske & Taylor 1991). When motivated by accuracy goals, voters objectively evaluate the economy and hold elected officials accountable for economic performance. This is the central tenet of traditional models of economic voting, which view citizens as rational Bayesian actors who respond to economic performance by updating their political preferences (Fiorina 1981, Key 1966, Kiewiet 1983, Lewis-Beck 2006).[3] Directional goals motivate citizens to process information in ways that confirm their prior political beliefs (Ditto et al. 1998, Kruglanski & Webster 1996, Kunda 1990, Lord, Ross & Lepper 1979). When driven by directional goals, voters view the economy positively when they identify with the incumbent political party and negatively when they oppose the incumbent party, regardless of objective economic performance. A growing consensus in the economic voting literature is that directional goals routinely influence how citizens process economic information – in-partisans view the economy more favorably than out-partisans (Bartels 2002, Evans & Anderson 2006, Evans & Pickup 2010, Gerber & Huber 2010, Wlezien, Franklin & Twiggs 1997). These findings cast doubt on the ability of voters to evaluate economic performance independently of their predisposed political beliefs (Anderson 2007).

The impact of prior political beliefs on economic opinions is supported by a long line of psychological literature demonstrating an anchoring effect of prior beliefs on subsequent thought

[2]For more complete reviews of how individual goals and the information environment shape preference formation, see Chaiken & Trope (1999), Druckman & Lupia (2000), and Lau (2003).

[3]A more in-depth review of the traditional economic voting literature can be found in Lewis-Beck & Stegmaier (2000).

processes (Kunda 1990, Lord, Ross & Lepper 1979, Westen et al. 2006). Generally termed motivated reasoning, this tendency is described well in one of the early examinations of biased information processing:

> "...people tend to interpret subsequent evidence so as to maintain their initial beliefs. The biased assimilation processes underlying this effect may include a propensity to remember the strengths of confirming evidence but the weaknesses of disconfirming evidence, to judge confirming evidence as relevant and reliable but disconfirming evidence as irrelevant and unreliable, and to accept confirming evidence at face value while scrutinizing disconfirming evidence hypercritically." (Lord, Ross & Lepper 1979, pp. 2099)

At its core, Lord et al.'s argument was that people are motivated to accept facts that confirm their prior beliefs while rejecting facts that contradict prior beliefs. In the decades since, an abundance of observational (Federico 2005, Federico 2007, Federico & Schneider 2007) and experimental evidence (Ditto et al. 1998, Erisen, Lodge & Taber 2014, Lodge & Taber 2013, Taber & Lodge 2006, Taber, Cann & Kucsova 2009) for motivated reasoning has been produced. Citizens are quicker to process and more accepting of preference-consistent facts (Lodge & Taber 2005, Redlawsk 2002, Taber & Lodge 2006, Taber, Cann & Kucsova 2009) and overly criticial of preference-inconsistent facts (Ditto & Lopez 1992, Ditto et al. 1998). This tendency is reflected in a negativity bias among out-partisans – individuals who oppose the incumbent political party tend to be more sensitive to motivated reasoning than those who identify with the incumbent party (Goren, Federico & Kittilson 2009). The implication for economic voting is that the economic perceptions of out-partisans are likely to be more negatively biased than perceptions of in-partisans are positively biased.

The strength and direction of prior preferences, as well as levels of knowledge have been shown to moderate the influence of predispositions on information processing. First, the motivation to defend one's prior beliefs depends on the simple fact that those beliefs do exist and are strong enough to be worth defending. Without the presence of some strong prior preference, the motivation to interpret information in self-confirming ways is greatly diminished. As prior beliefs become stronger, so too does the motivation to defend them (Taber, Cann & Kucsova 2009, Westen

et al. 2006). The moderating role of the strength and direction of prior beliefs has been demonstrated on issues such as climate change (Jones & Song 2014, Kahan 2013, Kahan 2015), the death penalty (Lord, Ross & Lepper 1979), affirmative action, and gun control (Taber & Lodge 2006). In each case, individuals with the strongest prior policy preferences are the most skeptical of preference-inconsistent arguments. Strong partisans have also tend to place more weight on directional goals than accuracy goals when evaluating political facts (Lodge & Taber 2000). Experimental evidence also shows that the tendency for selective exposure grows with the strength of prior beliefs (Brannon, Tagler & Eagly 2007).

Second, the direction of prior beliefs relative to new information moderates their influence on how new facts are evaluated. Voters are subject to both confirmation and disconfirmation biases, generally accepting preference-consistent information while remaining skeptical of preference-inconsistent information (Kruglanski & Webster 1996, Kunda 1990, Lord, Ross & Lepper 1979). Yet experimental evidence shows that these biases are often asymmetrical, with preference-inconsistent facts having a stronger influence on the decision-making process than preference-consistent facts (Ditto & Lopez 1992, Ditto et al. 1998, Taber & Lodge 2006). The implication is that citizens are unevenly accepting of information that confirms their prior beliefs and skeptical of those that contradict prior beliefs. This results in a negativity bias among out-partisans so that out-party cues exert a stronger motivation for defending one's prior beliefs than in-party cues (Goren, Federico & Kittilson 2009). For economic voting studies, this means that out-partisans are more likely to view the economy unfavorably than in-partisans are to view the economy favorably.

2.1.1 The Role of Knowledge in Political Reasoning

The mechanisms through which citizens evaluate economic performance are undoubtedly far more complex than our current body of knowledge suggests, and this particular study is unlikely to make such processes any simpler. However, it is important to note that most popular concep-

tions of 'economic voters' and 'motivated reasoners' are inherently over-simplified. On one hand, it is a somewhat naive assumption to claim that all citizens evaluate objective performance, update their political attitudes, and then behave accordingly by punishing elected officials for bad performance. On the other hand, it is perhaps overly pessimistic to claim that all partisans' perceptions of economic performance are biased by prior beliefs and attitudes. Milton Lodge and Charles Taber describe the process through which citizens process information:

> "...the human capacity for processing sensory experience is about 11 million bits per second...The visual system takes up about 90 percent of this total capacity, processing roughly 10 million bits of visual information per second. No more than 40 bits per second of this visual information enters conscious working memory, so we become aware of only 1/250,000 of what we see!" (Lodge & Taber 2013, pp. 2)

Obviously, behavior is unique to the human experience. My primary goal in this chapter is to take findings from psychology on the role of information in opinion formation and apply them to the motivated reasoning processes through which we know partisans often form economic judgments.

As economic voting scholars have increasingly concluded that partisan leanings shape perceptions of economic performance, psychology research has established a range of factors that condition the influence of prior preferences on information processing. Levels of knowledge have been shown to moderate the influence of prior attitudes on political decision-making (Zaller 1992), as well as the ability of citizens to actively counterargue belief-inconsistent facts (Taber & Lodge 2006, Taber, Cann & Kucsova 2009). The precise mechanisms through which knowledge moderates the influence of prior beliefs on subsequent reasoning processes has been a source of disagreement. According to motivated reasoning, individuals tend to reject preference-inconsistent information – yet the precise mechanisms through which knowledge moderates the influence of prior beliefs on subsequent reasoning processes has been a source of disagreement. On one hand, early research has argued that predisposed political biases tend to be strongest among the least and most politically aware (Zaller 1992). According the Zaller's argument, the least politically aware tend to be less interested in politics, and therefore less likely to seek out additional information when evaluating political objects. The most politically aware, on the other hand, tend

to be the most interested in politics and hold the strongest and most stable political opinions. More recent evidence also suggests that citizens with high levels of political knowledge tend to be better able to actively counterargue belief-inconsistent information than less knowledgeable citizens (Slothuus & de Vreese 2010, Sniderman, Tetlock & Brody 1991, Taber & Lodge 2006, Taber, Cann & Kucsova 2009). The implication of these findings for how citizens view the economy is that partisan biases in economic evaluations should grow stronger with levels of knowledge, but that this tendency may not be symmetrical for in-partisans and out-partisans.

2.2 A Theory of Conditional Motivated Reasoning in Economic Perceptions

The theoretical expectations of this study are based on the notion that an individual's tendency towarded motivated reasoning is conditional upon her level of information and the strength and direction of prior beliefs. I test the following two hypotheses using both retrospective and prospective evaluations of the national economy. Since the relative weight placed on retrospective and prospective evaluations has been shown to vary with information levels (MacKuen, Erikson & Stimson 1992, Gomez & Wilson 2001), I test models of each for robustness. Pocketbook evaluations are of less interest from both a theoretical and a methodological perspective. The ANES cross-sectional surveys do not provide an objective measure of changes in an individual's personal finances, making it difficult to distinguish between politically biased pocketbook evaluations (directional goals) and evaluations that reflect actual changes in an individual's finances (accuracy goals). All respondents exist within the same national economic context, making distinctions between directional and accuracy goals more clear with sociotropic evaluations. Moreover, a main purpose of this study is to address heterogeneity in individual perceptions of a singular economy – the national economy. Obviously, personal financial experiences vary across individuals. More substantively interesting is understanding variation in how citizens view the same macroeconomic reality.

My hypotheses are built on the following two premises: with knowledge comes a greater

ability to recognize and reject preference-inconsistent information (Taber & Lodge 2006, Taber, Cann & Kucsova 2009), and out-partisans are more sensitive to the motivation to confirm their prior beliefs than in-partisans (Ditto et al. 1998, Goren, Federico & Kittilson 2009). First, I argue that as levels of political knowledge increase, in-partisans become more likely to view the economy in ways that confirm their prior political beliefs (i.e., favorably). Citizens with higher levels of political knowledge and awareness tend to hold the most stable political opinions (Zaller 1992) and tend to be the most sensitive to motivated reasoning (Taber & Lodge 2006, Taber, Cann & Kucsova 2009). As they become more knowledgeable, in-party identifiers should become better able to process economic information in ways that uphold their partisan identities. Thus, the most knowledgeable in-partisans should be best equipped to accept information that confirms their prior attitudes while rejecting information that contradicts those attitudes. As such, partisanship should serve as a stronger anchor for the formation of economic perceptions for in-partisans with high levels of knowledge than in-partisans with low levels of knowledge. This should especially ring true for those with the strongest in-partisan attachments. My first hypothesis states that:

> **H1:** In-partisans with strong partisan attachments and high levels of knowledge should be more likely to view the economy favorably than in-partisans with weaker partisan attachments and low levels of knowledge.

Second, since out-group members are more sensitive to motivated reasoning than in-group members (Ditto et al. 1998, Goren, Federico & Kittilson 2009), I don't expect political knowledge to matter as much for out-partisans. Identification with the out-party leads to a cognitive defense mechanism that should override any influence of political knowledge. The subjective need to defend one's beliefs is inherently stronger for individuals who identify with an outside group – members of an in-group are already the 'winners', and therefore feel less pressure to defend their position. As such, out-partisans with either low or high levels of knowledge should be about equally as likely to view the economy in self-confirming ways (i.e., unfavorably). Any remaining influence of knowledge should be diminished as the strength of out-party attachments grows stronger. My second hypothesis states that:

H2: Political knowledge should play less of a moderating role for how out-partisans view the economy, especially for those with the strongest out-party attachments.

If these hypotheses hold true, two observations should become clear when examining the relationship between partisanship, political knowledge, and economic perceptions. For in-partisans, the effect of partisanship on economic perceptions should grow stronger with both the strength of partisanship and levels of political knowledge. For out-partisans, the effect of partisanship on economic perceptions should remain mostly stable regardless of partisan strength or levels of political knowledge. These findings will raise important implications for our understanding of partisan biases in economic perception and, more broadly, the origins of public opinion. Scholars have proposed a wide range of theories regarding the mechanisms through which citizens form economic opinions – my general expectation is that those mechanisms are not static across individuals. In order to better understand when economic judgments are most likely to reflect partisan biases – and conversely, when economic judgments are most likely to shape partisan identities – we need to take a better account of individual differences in prior attitudes and information levels.

2.3 Data and Methods

Data for the following analyses come from the 1988 and 2012 American National Election Studies (ANES). These two particular surveys each contain a wide range of items that gauge an individual's level of political knowledge. While several other ANES surveys also include various knowledge items, the 1988 and 2012 surveys contain many of the same items. The two surveys were also conducted in years with different incumbent presidential parties, eliminating the possibility that variation in motivated reasoning might stem from differences between Democratic and Republican identifiers rather than in-partisans and out-partisans. If the latter is true, then the two survey years should show similar results even despite one year having a Republican president and the other having a Democratic president. The two years also represent different points along the timeline of party polarization in the electorate. Between the two surveys, three important trends

have occurred. First, political elites have become increasingly polarized across party lines. This polarization has been reflected in the content of media coverage, particularly when it comes to issues as important as the economy. Second, with the internet boom citizens have become better able to self-select into networks that reflect their prior beliefs. Third, and most importantly for this study, these latter two trends have resulted in greater polarization within the electorate. Thus, the 2012 ANES survey reflects the opinions of a very different electorate than that from the 1988 survey. An analysis of both years allows for the possibility that the moderating influence of knowledge on the motivated reasoning of partisans might have changed with the polarization of the party in the electorate.

The dependent variables in the following analyses are retrospective and prospective evaluations of the national economy.[4] For the retrospective item, respondents were asked whether the national economy had gotten better, gotten worse, or stayed about the same over the past year. A follow-up question then asked whether conditions had become much better (worse) or only somewhat better (worse), resulting in a five-point scale ranging from "much worse" to "much better". For the prospective item, respondents were asked whether they expect the national economy to get better, worse, or stay about the same during the next year. No follow-up question was included for the prospective item, resulting in a three-point scale coded as "worse", "the same", and "better".

The primary indendendent variabes included measures of both in-partisan and out-partisan strength, as well as political knowledge. The two measures of partisan strength consist of a transformation of the traditional ANES seven-point scale which ranges from strong Republicans to strong Democratics. In-partisan strength is an ordinal scale ranging from 0 to 3, with independent leaning in-partisans coded as 1, weak in-partisans coded as 2, strong in-partisans coded as 3, and all out-partisans and pure independents coded as 0. Out-partisan strength is measured the same way for respondents indentifying with the opposition party.[5] These two measures of par-

[4] All variable codings, question wordings, and descriptive statistics can be found in the Appendix for this chapter.

[5] For the purposes of this study, the distinction between in-partisans and out-partisans is based on the party of the incumbent president. For the 1988 ANES, Democratic identifiers are considered out-partisans and Republican identifiers are considered in-partisans. For the 2012 ANES, Republican identifiers are considered out-partisans and Democratic identifiers are considered in-partisans.

tisanship are better able to capture the potential for asymmetrical relationships between political and economic opinions for in-partisans and out-partisans. By including both the in-partisan and out-partisan measures in the same model, pure independents are effectively treated as the baseline group. Applied within the contexts of the 1988 and 2012 ANES studies, these two measures also distinguish fundamental differences between Democratic and Republican identifiers from differences between in-group and out-group members. Other control variables include presidential approval, ideological self-placement, employment status, race, gender, and age.

In order to test how economic perceptions are conditional on political knowledge and the strength and direction of partisanship, I apply ordered logit models to test an interaction between the measures of partisanship described above and the measures of political knowledge that are described in the following section. Predicted probabilities for each response to the economic perception items (worse, the same, better) are then simulated for each value of partisanship and political knowledge in order to examine how the probabilities of giving certain evaluations of the national economy move along with changes in political knowledge and direction of partisanship.

2.4 Measuring Political Knowledge

One of the most important aspects for studying the quality of represenative democracy is understanding citizens' knowledge of political matters. If elected officials are to be held accountable for their performance in office, then some basic understanding of political matters is required of voters. Unfortunately, a wide range of research has demonstrated a lack of knowledge on such matters. The American electorate has been shown repeatedly to not think in ideological terms (Converse 1964), to possess minimal knowledge of political matters (Delli Carpini & Keeter 1996), and to show very little interest in public affairs (Putnam 2001). However, the public's overall level of political information and interest in public affairs is not the focus of this chapter. Obviously, some degree of variation in political knowledge exists across individuals. My interest is in how these different levels of information shape the tendency for partisans to view the economy in belief-preserving (and often biased) ways.

Another issue in the study of political knowledge lies in its measurement. The political cognitions that citizens possess have been measured in terms of correlations between policy attitudes (Campbell et al. 1960, Converse 1964), awareness of basic political facts (Delli Carpini & Keeter 1996, Zaller 1986), and simple educational attainment. I do not make a claim here for which measurement approach is most appropriate. Instead, the measure of knowledge used here is comprised of a wide range of survey items that probe different areas of political expertise. Both the 1988 and the 2012 ANES surveys include questions that gauge citizens' knowledge of various political offices, political and social issues, and factual information about how the American political system functions. I use a weighted sum of each of these survey items to create a latent measure of general political knowledge.

To measure citizens' recognition of various political offices, the 1988 ANES survey asked respondents to identify the political offices held by Jim Wright, Margaret Thatcher, Mikhail Gorbachev, George Schultz, Ted Kennedy, and Yasser Arafat. The 2012 ANES survey asked respondents to identify the political offices held by John Boehner, Joe Biden, David Cameron, Timothy Geitner, and Ban Ki-moon.[6] For all of these items except the 2012 Treasury Secretary and Secretary General of the UN, respondents were read the name of the political figure and asked to open-endedly identify their respective office. For the Treasury Secretary and the Secretary General of the UN items, respondents were asked to select from a list of four political figures who held each office. These latter two items were included in the 2012 ANES survey as supplemental material from the Comparative Study of Electoral Systems (CSES). The 1988 ANES survey similarly asked respondents to identify the political offices held by Jim Wright (Speaker of the House), George Schultz (Secretary of State), Ted Kennedy (U.S Senator), Yasser Arafat (Russian leader), Margaret Thatcher (Prime Minister of Great Britain), and Mikhail Gorbechev (Russian leader). Incorrect responses were coded as zero and correct responses were coded as one. In the analysis presented here, "don't know's" were coded as incorrect resopnses (Mondak 1999, Mondak 2001, Mondak &

[6]Respondents were also asked in both surveys to identify the office of the Chief Justice of the United States Supreme Court, but this item was excluded due to coding issues following the survey; a detailed description of those complications can be found at http://electionstudies.org/announce/newsltr/20080324PoliticalKnowledgeMemo.pdf.

Davis 2001).

To measure knowledge of political issues, both surveys asked respondents to place the Democratic and Republican parties and their respective presidential candidates on seven-point Likert-type ideological and issue scales. In addition to the traditional seven-point liberal-conservative scales (coded as one for extremely liberal to seven for extremely conservative), issue placement items included the government's role in the following issues: government services, defense spending, health care, job guarantees, aid to minorities, and environmental regulations.[7] For each of these issues except aid to minorities and environmental regulations, respondents were given a list of seven positions ranging from high government involvement to no government involvement and asked to place the two parties and their presidential candidates on the scale. For the aid to minorities and environmental regulations items, respondents were only asked to place the candidates on the issue scales. Responses were coded as correct if the Democratic Party (candidate) was placed correctly relative to the Republican Party (candidate). For example, on the item that asked respondents to place the two parties on the seven-point ideology scale, responses were counted correct if the Democratic Party was considered more liberal than the Republican Party. These twelve items were also coded as zero for incorrect responses and one for correct responses, with "don't know's" coded as incorrect.

To measure factual knowledge, the 1988 survey asked several questions targeting respondents' knowledge of specific political and economic facts. The items included in this study consist of three questions asking respondents whether the national unemployment rate, inflation, and the size of the deficit had gotten better, gotten worse, or stayed the same since 1980. Another question asked respondents whether the Democratic or Republican Party was more conservative. The final two questions asked respondents which party controlled the House and the Senate prior to the 1988 elections. The 2012 survey asked respondents a battery of ten questions targeting specific political and economic facts. Respondents were asked how the national unemployment rate had changed

[7]To be specific, the 1988 ANES included each of these issue scales for both parties and candidates, with the exception of environmental regulations. The 2012 ANES did not include the aid to minorities and environmental regulations items for the two parties, but did for the presidential candidates.

during the past year, what the current unemployment rate was, how the federal deficit had changed since the 1990s, the number of years in a single Senate term, the number of terms a president can serve, where to vote, which program the federal government spends the least amount of money on, what medicare is, which is the more conservative of the two major parties, and which party was the minority in the House following the 2012 elections. Each factual item was coded as zero for incorrect or "don't know" and one for correct responses.

At this point a general measure of political knowledge was constructed as a weighted summated rating scale of each of the items described above.[8] The usefulness of such indices has been a subject of debate, and important assumptions need to be established in its defense. The overall index of political knowledge used in this study can be written as:

$$X_i = \frac{1}{k} \sum_{j=1}^{k} V_j \tag{2.1}$$

where X_i is an individual i's score on the knowledge index and V_j is one of k survey items included in the index. The goal is for X_i to represent an individual's "true" level of political knowledge, which is unobservable. Since each of k survey items is being used to construct an estimate of an unobserved dimension, it is assumed that each V_j survey item represents a measure of the true underlying dimension plus some degree of error, or:

$$V_j = T + \varepsilon_j \tag{2.2}$$

Under the assumption that ε_j is random, $E(\varepsilon) = 0$, and ε_j is uncorrelated with the true dimension T, then the variance of the errors approaches zero as k increases:

[8] An exploratory factor analysis was conducted to test how well each of the above survey items load onto a single latent measure of general political knowledge. Based on the results of the factor analysis, the 2012 ANES item asking respondents whether the national unemployment rate had gotten better, gotten worse, or stayed about the same during the past year had a factor loading of only 0.11 and a uniqueness of 0.99, and was thus dropped from the overall measure. All other items in the 2012 survey had a factor loading of 0.25 or higher and were retained in the weighted scale. The remaining twenty six items from the 2012 survey accounted for just over 65% of the total variance in the latent measure of political knowledge and had an alpha coefficient of 0.88. For the 1988 survey, all twenty four items had a factor loading of 0.30 or higher and were retained in the weighted scale. These items accounted for about 64% of the total variance in the latent measure of knowledge and had an alpha coefficient of 0.89. The factor loadings for each survey can be found in the appendix to this chapter.

$$Var(\bar{\varepsilon}) = \frac{r_{\varepsilon}^2}{k} \tag{2.3}$$

This measure is very similar to that described by Zaller (1986) in his analysis of twenty-seven knowledge items contained in the 1985 ANES Pilot Study. To beter illustrate the reliability of this measure of political knowledge, Table 2.1 and Table 2.2 show the correlations of each component item with the overall index for the 1988 and 2012 ANES, respectively. All coefficients are positive and are statistically significant from zero. While some scholars advocate some minimum correlation threshold for including an item as part of an index, I chose to keep all items based on the results from the exploratory factor analysis shown in the appendix to this chapter. Correlations that are lower in magnitude might simply tap into a different area of knowledge than other items. Nonetheless, as long as all items are positive, the resulting measure is a reliable representation of "true" levels of political knowledge.

The distribution of political knowledge for both survey years is illustrated in Figure 2.1. In the 1988 ANES, the overall measure of political knowledge had a mean of 0.48 and a standard deviation of 0.28; the 2012 ANES had a mean of 0.65 and a standard deviation of 0.23. Recoding "don't know" responses as missing values did not substantially change the distribution in either survey, so such responses were left coded as incorrect for the sake of preserving sample size. Based on the abundance of evidence suggesting low levels of knowledge among American voters, the relatively high level of knowledge in the 2012 survey is somewhat surprising. One explanation is that I have been more lenient in how correct and incorrect responses were coded on the ideological knowledge items. While previous research has required a certain amount of distance between the left-right placement of the two major parties and candidates (Zaller 1992), I have coded responses as correct as long as the Republican Party (candidate) was placed at least one category to the right of the Democratic Party (candidate). An important issue with any Likert-type scaling is that there is no "true" distance between any two points. The distance between two points on a 7-point ideology scale, for example, might mean one thing for one respondent and mean something entirely different for another respondent. Thus, while the ideological distance between political

Table 2.1. Item-Total Correlations, 1988 ANES

	General Knowledge
Speaker	0.44
UK Prime Minister	0.57
Arafat	0.59
Russian Prime Minister	0.58
Secretary of State	0.58
Ted Kennedy	0.53
Party Ideology	0.68
Party Gov't Services	0.62
Party Defense Spending	0.64
Party Healthcare	0.67
Party Job Guarantees	0.66
Party Minority Aid	0.42
Candidate Ideology	0.66
Candidate Gov't Services	0.63
Candidate Defense Spending	0.66
Candidate Healthcare	0.61
Candidate Job Guarantees	0.65
Candidate Minority Aid	0.42
ΔUnemployment	0.40
ΔInflation	0.52
ΔDeficit	0.42
More Conservative Party	0.46
Senate Party	0.57
House Party	0.61

Note: Entries are pairwise correlation coefficients.

figures undoubtedly varies, Likert scales fail to capture variation in how respondents interpret those ideological distances. For a researcher to set some minimum distance to be deemed a correct response effectively minimizes the observed "knowledge" of a set of respondents. For this reason, I have coded responses as correct as long as the Democratic figure was placed to the left of the Republican figure with the implication that knowledge has a more negatively skewed distribution

Table 2.2. Item-Total Correlations, 2012 ANES

	General Knowledge
Speaker of the House	0.57
Vice President	0.50
UK Prime Minister	0.46
Treasury Secretary	0.60
UN Secretary General	0.42
Party ideology	0.63
Party gov't services	0.59
Party defense spending	0.62
Party healthcare	0.65
Party job guarantees	0.64
Candidate ideology	0.60
Candidate gov't services	0.53
Candidate defense spending	0.61
Candidate healthcare	0.60
Candidate job guarantees	0.60
Candidate aid to minorities	0.52
Candidate environment	0.58
Current unemployment	0.44
Where to vote	0.37
Presidential terms	0.34
Senate terms	0.48
More conservative party	0.51
House election outcome	0.48
Size of deficit	0.45
What is medicare?	0.34
Federal spending	0.32

Note: Entries are pairwise correlation coefficients.

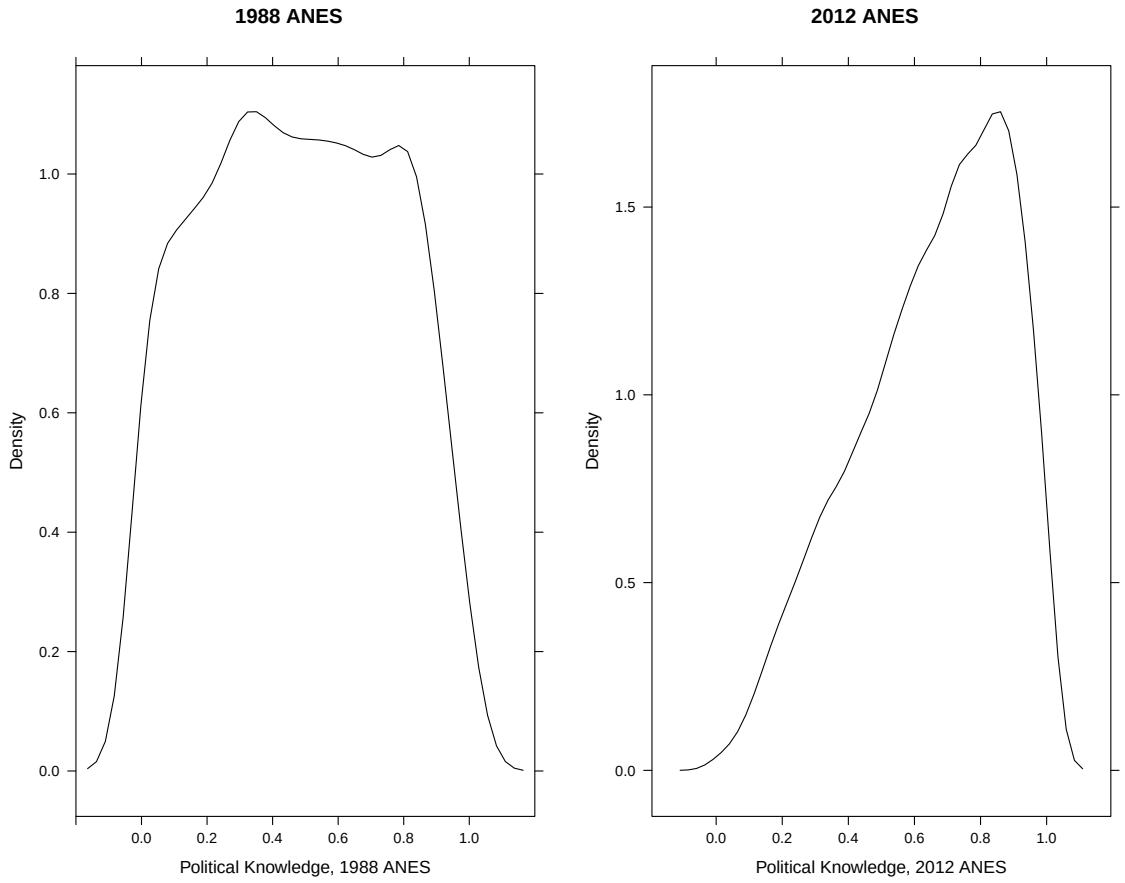
than presented in many previous studies.[9]

2.5 Analysis

To test the hypotheses described above, I estimate ordered logit models of economic perceptions as a function of partisanship, political knowledge, and other exogenous control variables. In order to test the influence of knowledge for the relationship between partisanship and economic

[9]This should not be interpreted as American voters being more knowledgeable about politics than previously thought, but simply a different perspective on how knowledge is measured.

Figure 2.1. Kernel Density Plot of General Political Knowledge, 1988 and 2012 ANES



perceptions, I include an interaction between knowledge and both in-partisan and out-partisan strength. Table 2.3 shows the results for both retrospective and prospective evaluations of the national economy during each survey year. Looking at the logit estimates, the 1988 results seem starkly different from the 2012 results. For both the 1988 retrospective and prospective models, neither interaction term is statistically different from zero, suggesting that the relationship between partisanship and economic perceptions did not change significantly with levels of political knowledge during the 1988 ANES. The 2012 models present better evidence of a relationship between partisanship and economic perceptions that may be conditional on levels of political knowledge. However, the coefficients for interaction terms and their component items should be interpretted with caution, as they measure conditional relationships. More substantively interesting is the extent to which the probability of a particular outcome changes with political knowledge and the

Table 2.3. Ordered Logit Estimates of the Conditional Effects of Partisanship and Knowledge on Economic Perceptions

	Retrospective		Prospective	
	1988	2012	1988	2012
In-party strength	0.127	−0.302***	0.236	−0.040
	(0.162)	(0.090)	(0.166)	(0.090)
Out-party strength	0.153	0.379***	0.316*	0.354**
	(0.143)	(0.117)	(0.151)	(0.112)
Political knowledge	0.669	1.516***	−0.419	0.954***
	(0.484)	(0.262)	(0.490)	(0.253)
In-party*Knowledge	0.087	0.557***	−0.005	0.513***
	(0.251)	(0.134)	(0.255)	(0.135)
Out-party*Knowledge	−0.347	−0.627***	−0.273	−0.217
	(0.243)	(0.161)	(0.255)	(0.154)
Education	0.045	0.124***	0.030	0.028
	(0.038)	(0.021)	(0.038)	(0.021)
Presidential approval	0.514***	1.057***	0.210**	0.722***
	(0.061)	(0.038)	(0.060)	(0.036)
Ideological self-placement	−0.066	−0.100***	0.026	0.021
	(0.046)	(0.027)	(0.47)	(0.028)
Employment status	0.001	−0.572***	−0.152	−0.086
	(0.284)	(0.116)	(0.302)	(0.116)
Nonwhite	0.214	−0.127	0.357*	0.247***
	(0.170)	(0.068)	(0.178)	(0.069)
Female	−0.459***	−0.279***	−0.110	−0.112
	(0.115)	(0.059)	(0.116)	(0.059)
Age	−0.004	−0.002	0.004	−0.0002
	(0.003)	(0.002)	(0.003)	(0.002)
1|2	0.462	2.429***	−0.219	0.994***
	(0.404)	(0.250)	(0.412)	(0.242)
2|3	2.886***	4.644***	2.318***	3.448***
	(0.414)	(0.259)	(0.419)	(0.248)
Observations	1,302	5,072	1,255	5,002
Pseudo R^2	0.086	0.245	0.021	0.145

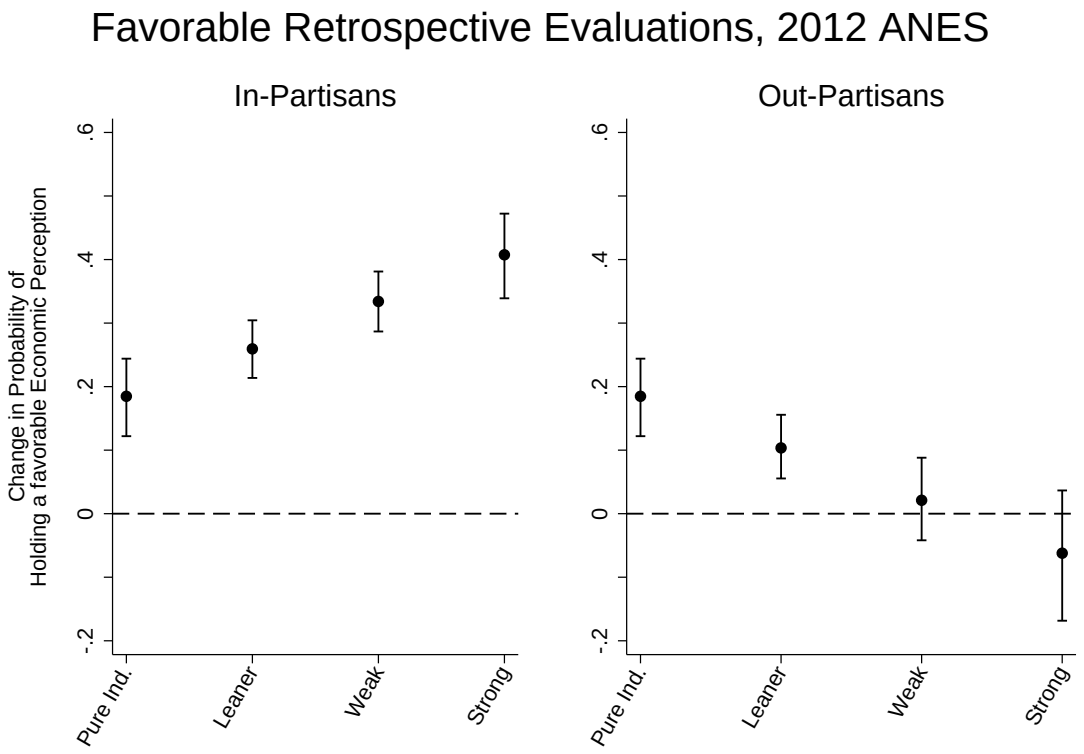
*p<0.1; **p<0.05; ***p<0.01

strength and direction of partisanship.

2.5.1 2012 Results

Figure 2.2 plots changes in the predicted probability of holding a favorable retrospective economic perception during the 2012 ANES study based on changes in political knowledge from

Figure 2.2. Change in Probability of Favorable Retrospective Economic Percpetions based on Changes in Knowledge from the 5th to the 95th Percentile, 2012 ANES



Notes: First-differences indicate the change in the predicted probability of holding a favorable economic perception based on a change from the 5th to the 95th percentiles of political knowledge; vertical bars indicate the upper and lower bounds of the 95% confidence interval.

the 5th to the 95th percentile. More intuitively, the point estimates shown in the figure represent how much more likely a partisan with high levels of knowledge is to view the economy favorably than a similar partisan with low levels of knowledge. Vertical bars surrounding the point estimates indicate the upper and lower bounds of the 95% confidence interval.[10] The left panel represents in-partisans and the right panel represents out-partisans, with the strength of partisan identities specified on the x-axis of each panel. The results shown in the figure offer support for a positive relationship between levels of political knowledge and the tendency for in-partisans to view the economy in accordance with their prior political beliefs. As the baseline group, pure independents

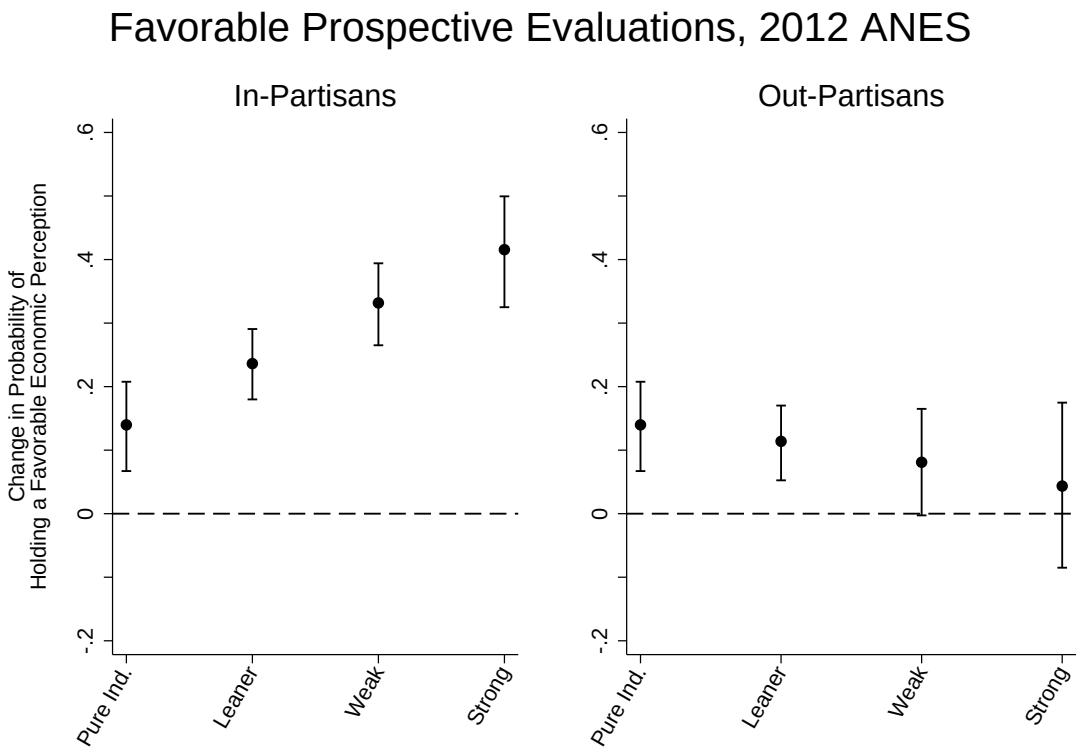
[10]First-differences were simulated from the ordered logit models in Table 2.3 using the *Clarify* postestimation suite (King, Tomz & Wittenberg 2000, Tomz, Wittenberg & King 2003).

with high levels of political knowledge were almost 20% more likely to view the favorably than indpendents with the lowest levels of knowledge. As partisan identities shift towards the party of the incumbent president, this difference across political knowledge grows in magnitude. High-knowledge in-partisan leaners were about 25% more likely to view the economy favorably than low-knowledge in-partisan leaners; high-knowledge weak in-partisans just over 30% more likely than low-knowledge weak in-partisans; and high-knowledge strong in-partisans about 40% more likely than low-knowledge strong in-partisans. These results present strong initial evidence of a conditional influence of political knowledge on the motivated reasoning of in-partisans.

Turning to the right panel of Figure 2.2, the results suggest a slightly weaker influence of political knowledge on the tendency for out-partisans to view the economy in belief-preserving ways. Based on conventional wisdom, we can expect out-partisans to be less likely to view the economy favorably than in-partisans. I have hypothesized that while knowledge moderates the motivated reasoning of in-partisans, out-partisans will be more sensitive to motivated reasoning processes regardless of political knowledge. This first set of results does indeed point to a weaker influence of knowledge for the economic perceptions of out-partisans – high-knowledge out-partisan leaners were actually about 10% more likely to view the economy favorably than low-knowledge out-partisan leaners. Once the strength of out-party identities shifts beyond the "leaners" category, the difference in economic perceptions between high- and low-knowledge out-partisans becomes indistinguishable from zero.

Figure 2.3 similarly plots changes in the predicted probability of holding a favorable *prospective* economic perception based on 5th to 95th percentile changes in knowledge, also during the 2012 ANES study. The results look very similar to those for the retrospective model – as levels of knowledge increase, in-partisans become more likely to view the economy favorably. Moreover, as the strength of identification with the incumbent party increases, so too does the tendency for more knowledgeable in-partisans to view the economy favorably than their less knowledgeable counterparts. Once again, these results are much weaker for out-partisans, with very little difference in the probability of high- and low-knowledge out-partisan leaners having favorably prospective eco-

Figure 2.3. Change in Probability of Favorable Prospective Economic Percpetions based on Changes in Knowledge from the 5th to the 95th Percentile, 2012 ANES

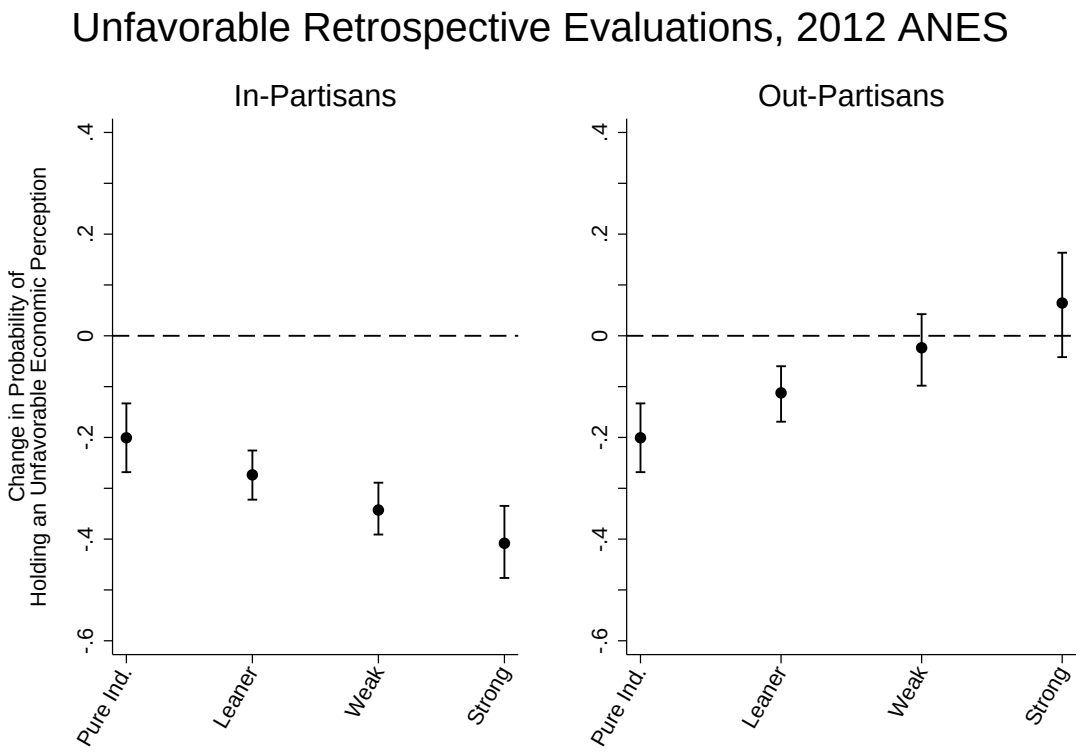


Notes: First-differences indicate the change in the predicted probability of holding a favorable economic perception based on a change from the 5th to the 95th percentiles of political knowledge; vertical bars indicate the upper and lower bounds of the 95% confidence interval.

nomic judgments. Weak and strong out-partisans displayed no significant difference in prospective evaluations with changes in levels of political knowledge.

While Figure 2.2 and Figure 2.3 reveal interesting results regarding *favorable* economic judgments, it is also useful to examine the probability of partisans holding *unfavorable* judgments. While motivated reasoning processes should lead in-partisans to be more likely to view the economy favorably than out-partisans, they should similarly lead out-partisans to be more likely to view the economy unfavorably than in-partisans. Figure 2.4 plots the first-difference effects of changes political knowledge from the 5th to the 95th percentile on this tendency for out-partisans to view the economy less favorably than in-partisans during the 2012 ANES study. The results shown in

Figure 2.4. Change in Probability of Unfavorable Retrospective Economic Percpetions based on Changes in Knowledge from the 5th to the 95th Percentile, 2012 ANES

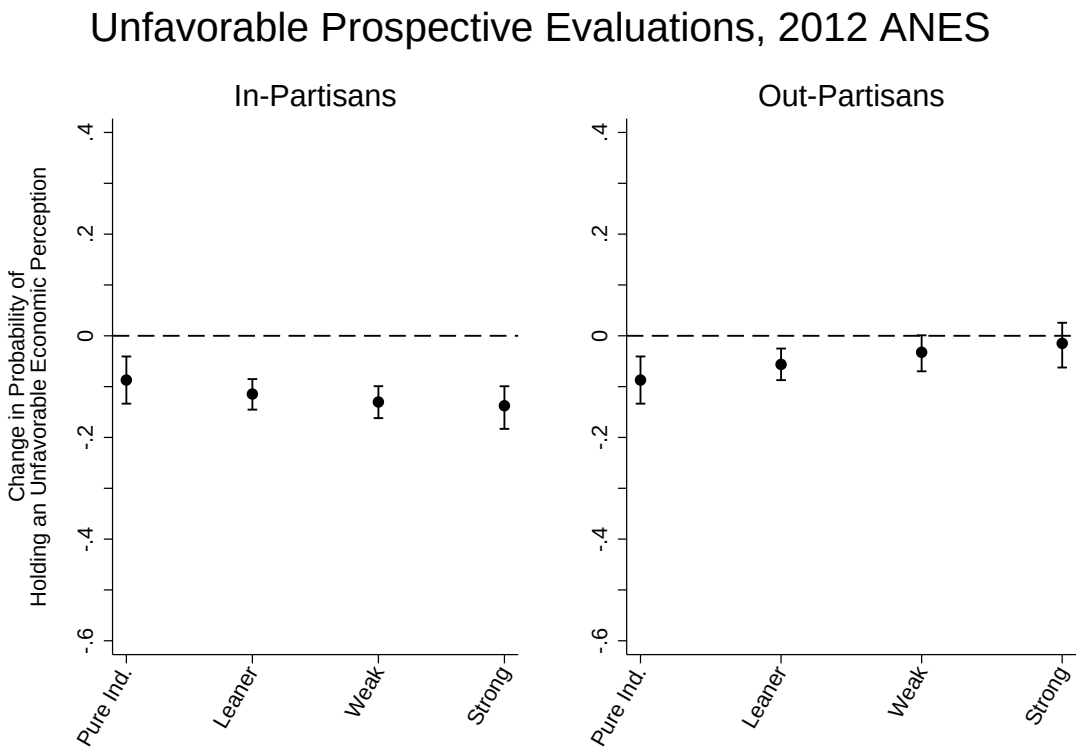


Notes: First-differences indicate the change in the predicted probability of holding an unfavorable economic perception based on a change from the 5th to the 95th percentiles of political knowledge; vertical bars indicate the upper and lower bounds of the 95% confidence interval.

the figure echo those shown in Figure 2.2 – high-knowledge in-partisans are less likely to view the economy unfavorably than low-knowledge in-partisans, and this trend is magnified with increases in the strength of in-party attachments. Once again, knowledge has only a weak impact on the economic perceptions of out-partisan leaners with no statistically significant influence on the perceptions of weak and strong out-partisans.

Finally, Figure 2.5 plots the first-difference effects of political knowledge on the probability of partisans holding an unfavorably prospective economic perception. The results shown here stand in contrast to the results presented thus far. In the case of unfavorable prospective evaluations, political knowledge seems to play very little role for either in-partisans or out-partisans. Looking

Figure 2.5. Change in Probability of Unfavorable Prospective Economic Percpetions based on Changes in Knowledge from the 5th to the 95th Percentile, 2012 ANES



Notes: First-differences indicate the change in the predicted probability of holding an unfavorable economic perception based on a change from the 5th to the 95th percentiles of political knowledge; vertical bars indicate the upper and lower bounds of the 95% confidence interval.

first at in-partisans, high-knowledge partisans were roughly 10% less likely to give an unfavorably prospective evaluation than low-knowledge partisans, and this tendency remained fairly constant across the strength of in-partisan identities. Similarly, knowledge also played very little role for the probability of out-partisans giving an unfavorable prospective evaluation. High-knowledge out-partisan leaners were about 5% less likely to view the economy unfavorably than low-knowledge out-partisan leaners, while knowledge played no significant role in the perceptions of weak or strong out-partisans.

2.5.2 1988 Results

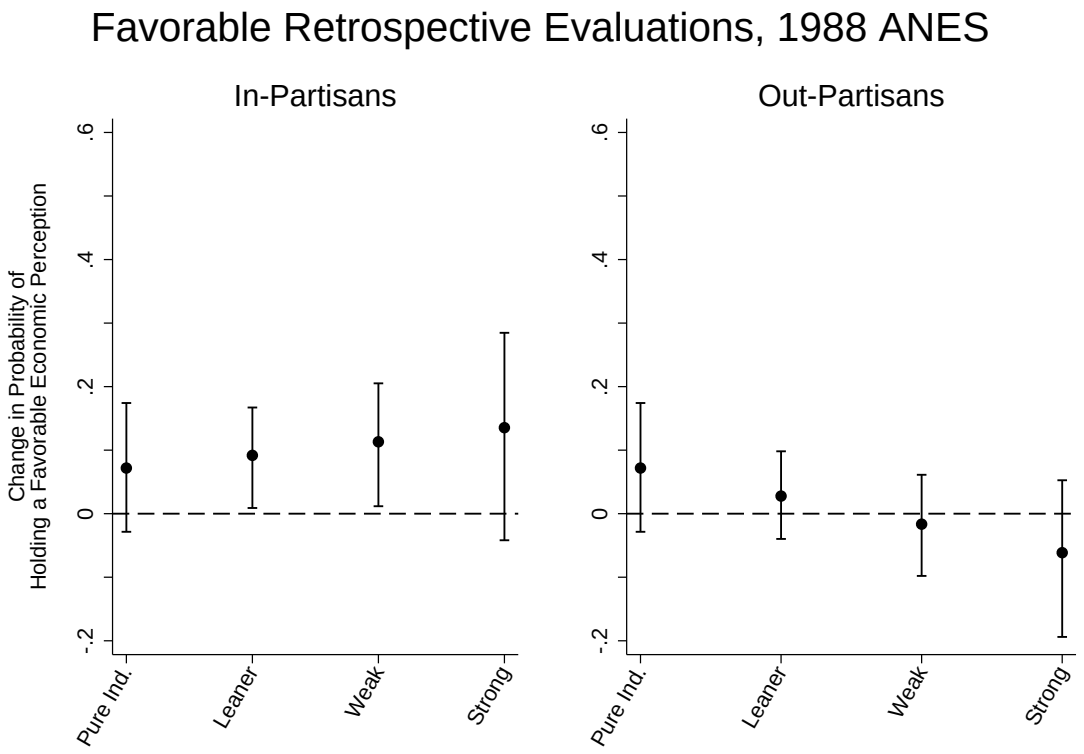
Up to this point, the 2012 ANES survey data lend support to the hypothesis that political knowledge moderates the motivated reasoning of in-partisans when evaluating the national economy, but less so for out-partisans. However, the 1988 results paint a very different picture. Figure 2.6 through Figure 2.9 plot the same first-difference effects of knowledge as the previous four figures, this time using data from the 1988 ANES study. Looking first at favorably retrospective evaluations shown in Figure 2.6, there is no significant difference in the probability of either high-knowledge in-partisans or out-partisans viewing the economy more favorably than their low-knowledge counterparts. Moreover, these null findings are consistent across the strength of partisanship for both in-partisans and out-partisans. This suggests that the amount of political or economic information held by partisans during the late 1980s played very little role in the motivated reasoning processes that shape economic opinions.

The results shown in Figure 2.7 for favorable prospective evaluations are substantively the same as those shown in Figure 2.6. Regardless of the direction of partisanship, there was no distinguishable difference between the probability of high- and low-knowledge partisans giving a favorable prospective evaluation of the national economy.

Figure 2.8 and Figure 2.9 plot the first-difference effects of political knowledge on the probability of partisans holding unfavorable retrospective and prospective economic evaluations, respectively. Once again, neither figure offers results that substantively differ from those shown in the previous two figures. Even when looking at differences in the probability viewing the economy unfavorably based on changes in political knowledge, neither in-partisans nor out-partisans display significant results.

Explaining the null findings found in the 1988 ANES data presents an interesting take on how the motivated reasoning of partisans has changed over time. As political elites have become more ideologically polarized over the past few decades and advances in communication technology have allowed citizens to more easily self-select into information networks that confirm their prior

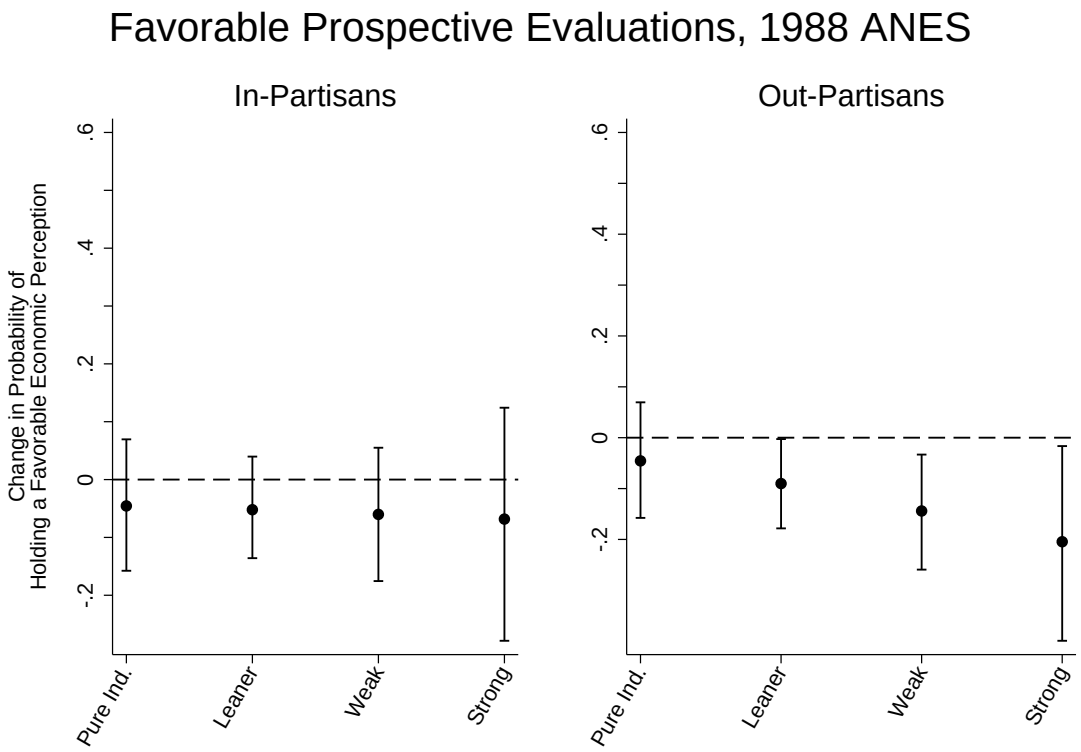
Figure 2.6. Change in Probability of Favorable Retrospective Economic Percpetions based on Changes in Knowledge from the 5th to the 95th Percentile, 1988 ANES



Notes: First-differences indicate the change in the predicted probability of holding a favorable economic perception based on a change from the 5th to the 95th percentiles of political knowledge; vertical bars indicate the upper and lower bounds of the 95% confidence interval.

beliefs, partisans have become more ideologically attached to their partisan identities. A likely explanation for the different findings between the 1988 ANES and the 2012 ANES is that this polarization in the electorate has changed the mechanisms through which partisans process and subsequently either accept or reject economic information. As partisans have become more ideologically polarized, higher levels of political knowledge have become more useful for interpretting economic facts in belief-preserving ways, especially for in-partisans. That is, highly knowledgeable in-partisans have become more likely to not only make economic judgments that reflect their prior attitudes, but they have also become better able to actively counterargue economic information that rejects those beliefs. This result echoes other findings on the role of knowledge for opin-

Figure 2.7. Change in Probability of Favorable Prospective Economic Percpetions based on Changes in Knowledge from the 5th to the 95th Percentile, 1988 ANES

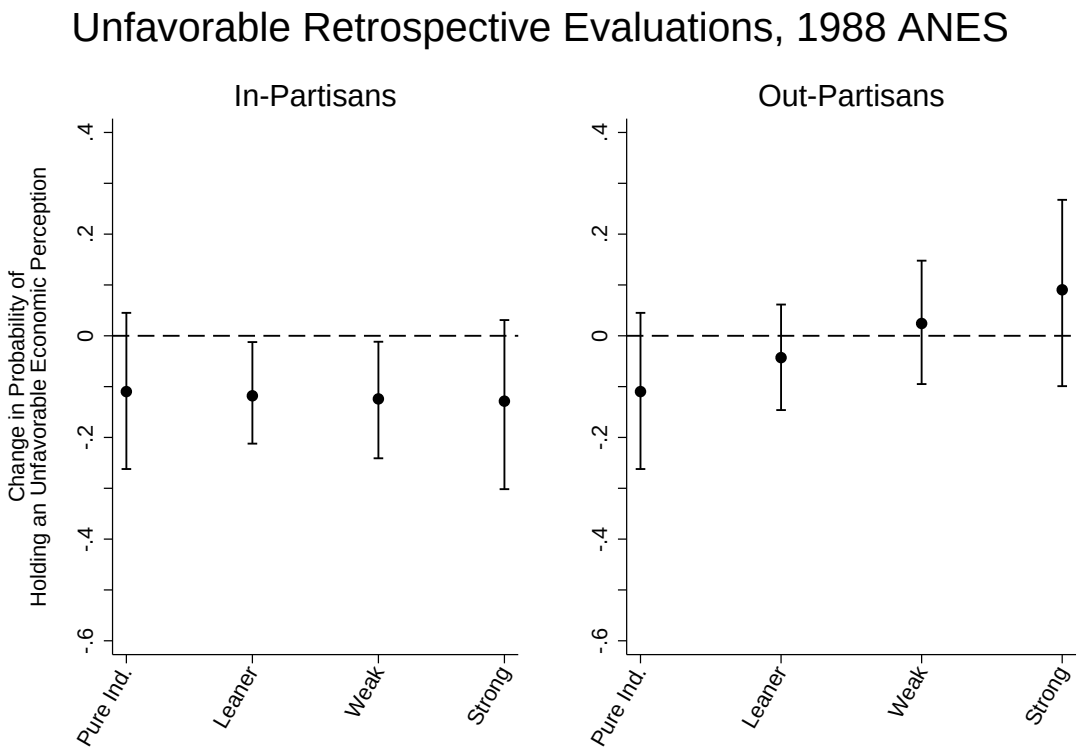


Notes: First-differences indicate the change in the predicted probability of holding an unfavorable economic perception based on a change from the 5th to the 95th percentiles of political knowledge; vertical bars indicate the upper and lower bounds of the 95% confidence interval.

ion formation (Taber & Lodge 2006, Taber, Cann & Kucsova 2009, Zaller 1992). The ultimate implication of the findings presented here is that the importance of information in the motivated reasoning of partisans has increased dramatically since the 1980s.

While the role of knowledge has seemingly changed between the 1988 and the 2012 ANES surveys, this finding extends only to in-partisans. The findings presented here reflect political psychology research which suggests that out-group members tend to be more sensitive to motivated reasoning than in-group members. While knowledge has developed a moderating influence on how in-partisans form economic judgments, out-partisans' economic opinions seem to remain (mostly) uninfluenced by variation in political knowledge.

Figure 2.8. Change in Probability of Unfavorable Retrospective Economic Percpetions based on Changes in Knowledge from the 5th to the 95th Percentile, 1988 ANES

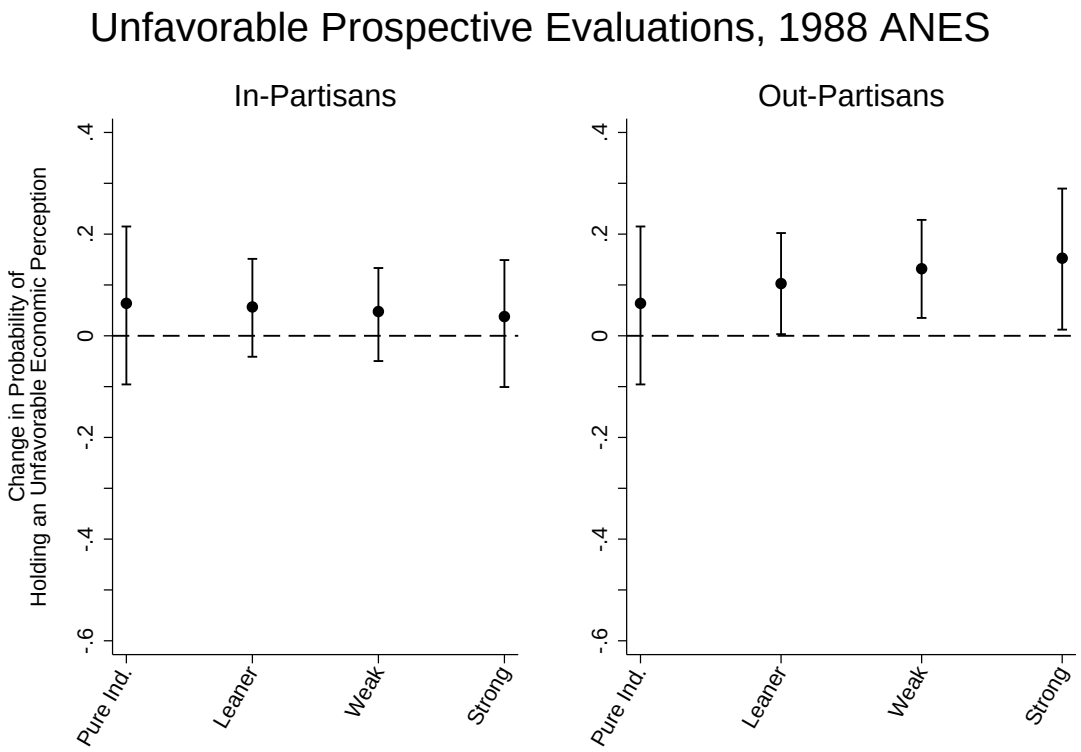


Notes: First-differences indicate the change in the predicted probability of holding an unfavorable economic perception based on a change from the 5th to the 95th percentiles of political knowledge; vertical bars indicate the upper and lower bounds of the 95% confidence interval.

2.6 Conclusions

The findings presented in this chapter provide new perspectives on how citizens form their perceptions of economic performance. Building on the motivated reasoning literature, I have demonstrated that the strength and direction of partisanship, as well as political knowledge, work together to shape how individuals view the economy. I hypothesized that the motivation to confirm prior beliefs when processing economic information would grow stronger for in-partisans as the strength of partisanship and levels of knowledge increased. Analysis of the 2012 ANES offered support for this expectation, while the 1988 analysis produced mostly null findings. I also pre-

Figure 2.9. Change in Probability of Unfavorable Prospective Economic Percpetions based on Changes in Knowledge from the 5th to the 95th Percentile, 1988 ANES



Notes: First-differences indicate the change in the predicted probability of holding an unfavorable economic perception based on a change from the 5th to the 95th percentiles of political knowledge; vertical bars indicate the upper and lower bounds of the 95% confidence interval.

dicted that the economic opinions of out-partisans, being more sensitive to motivational biases, would be less influenced by variation in levels of political knowledge than in-partisans. The fact that political knowledge did play a moderating role for the economic perceptions of in-partisans in the 2012 ANES study, but not for out-partisans, confirms the tendency for out-partisans to be more heavily influenced by their prior beliefs regardless of levels of political knowledge.

This chapter has established individual-level variation in the mechanisms through which partisan identities shape the formation of economic judgments. The following two chapters move beyond this single-level framework to take a better account of the objective economic context at the state and county levels.

CHAPTER 3

STATE-LEVEL ECONOMIC PERFORMANCE AND PARTISAN MOTIVATIONS IN NATIONAL ECONOMIC PERCEPTIONS

The use of partisanship as a cognitive shortcut for making political judgements has been well-documented by scholars of public opinion and political psychology (Conover & Feldman 1989, Zaller 1992, Rahn 1993, Bartels 2000, Sniderman 2000, Goren 2005, Goren, Federico & Kittilson 2009). Through motivated reasoning, people tend to process information in ways that confirm their own prior beliefs while rejecting or counterarguing information that contradict their prior beliefs (Lord, Ross & Lepper 1979, Kunda 1990, Rousseau & Snehal 1999, Lodge & Taber 2000, Nir 2011). People are generally detached from the political world, caught up in their own everyday problems and concerns, and identification with a partisan group makes the formation of political judgments less cognitively demanding. This dominance of partisanship for the formation of political judgments has also been extended to economic voting, where scholars have consistently demonstrated that voters tend to base their perceptions of the economy on prior political attitudes (Wlezien, Franklin & Twiggs 1997, Bartels 2002, De Boef & Kellstedt 2004, Evans & Anderson 2006, Gerber & Huber 2009, Evans & Pickup 2010, Gerber & Huber 2010, Enns, Kellstedt & McAvoy 2012). Despite the wealth of evidence that partisanship shapes perceptions of the economy, a larger question still looms over this literature: under what conditions might voters become more likely to dismiss their partisan leanings and rely instead on objective economic information when asked to evaluate the economy?

Recent findings have shown that the use of partisanship as an information shortcut depends on the congruence between partisan identities and evaluations of party performance (Lavine, Johnston & Steenbergen 2012). When an individual's identification with a political party and evaluation

of the party's performance come into conflict, he or she becomes less likely to rely on partisanship as a shortcut for processing political information. These individuals turn instead to objective information when forming issue attitudes, evaluating political figures, and making voting decisions. Moreover, the extent to which partisanship biases economic perceptions varies over time (Enns & McAvoy 2012, Chzhen, Evans & Pickup 2014). I expect that this over time variation in how partisanship shapes perceptions of the economy is linked to changes in the congruence between partisan identities and evaluations. Economic conditions are a likely candidate for what might cause such internal conflicts – partisans should become more likely to experience conflicts between their identities with a political party and their evaluations of the party's performance during bad economic times. As a result, they should become more likely to turn away from partisan shortcuts and look instead for objective information when evaluating the economy. During good economic times, partisan identities and evaluations should fall back into sync and partisanship will become a more useful cue for evaluating the economy. In this chapter I test these theories using a multilevel analysis of the 1980-2012 ANES Time-Series studies and state-level economic data on unemployment and per capita disposable income. The results offer strong support for the expectation that partisan biases in economic perceptions are diminished in contexts with rising unemployment and little growth in disposable income. On the other hand, the effects of political attitudes on economic perceptions are significantly stronger in contexts with declining unemployment and higher levels of growth in disposable income.

The chapter is structured as follows. Section 3.1 reviews the literature on motivated reasoning in the formation of economic perceptions, as well as how the formation of those preferences have been shown to vary over time and across individuals. Section 3.2 outlines my theoretical expectations for a moderating role of state-level economic conditions for partisan biases in economic perceptions. Section 3.3 describes the data structure, methodological approaches, and multilevel model specification used to empirically test the role of economic conditions in the relationship between political attitudes and economic perceptions. Section 3.4 presents the analysis and results, and Section 3.5 concludes with a discussion of the findings and their implications for the study of

economic voting and political information processing.

3.1 Motivated Reasoning in Economic Perceptions

The influence of partisanship for the formation of political judgments is often traced back to the early work of Campbell et al. (1960).[1] Despite some arguments that partisanship is the sum of an ongoing process by which individuals update their political attitudes based on evaluations of government performance (Downs 1957, Key 1966, Fiorina 1981, Erikson, MacKuen & Stimson 2002, Weinschenk 2010), there remains a strong concensus that partisanship is a highly influential force for how individuals perceive the world and form political opinions (Rahn 1993, Bartels 2000, Hetherington 2001, Bartels 2002, Green, Palmquist & Schickler 2002, Johnston 2006, Lewis-Beck et al. 2008, Gerber, Huber & Washington 2010, Tilley & Hobolt 2011). Whether grounded in psychological attachments formed early in life (Campbell et al. 1960, Lewis-Beck et al. 2008) or identities with specific social groups (Berelson, Lazarsfeld & McPhee 1954, Miller & Wlezien 1993, Green, Palmquist & Schickler 2002), the influence of partisanship for the processing of political information is all but indisputable.

This use of partisanship as a cognitive shortcut is not unique to political science. A well-established finding in the psychology literature is that individuals are prone to accept information which confirms prior beliefs while rejecting or couterarguing information which contradicts prior beliefs (Lord, Ross & Lepper 1979, Kunda 1990, Rousseau & Snehal 1999, Lodge & Taber 2000, Nir 2011). These motivated reasoners also tend to respond more strongly and more quickly to information that confirms their own beliefs, while taking longer to process contradictory information (Redlawsk 2002, Morris et al. 2003, Lodge & Taber 2005). In their review of the psychological literature on motivated reasoning, Lavine, Johnston & Steenbergen (2012, pp. 27–29) describe three primary goals that guide human reasoning and cognition: efficiency, accuracy, and belief perseverance. First, people want to be efficient when processing information and making

[1] See also Berelson, Lazarsfeld & McPhee (1954).

decisions – that is, they wish to preserve as many cognitive resources as possible. Second, while expending as little cognitive effort as possible, individuals still strive to be as accurate as possible when processing information and making decisions. Third, human beings have an inherent desire to preserve their own prior beliefs. In order to do so, people are often prone to forming appealing conclusions even before efficiently and accurately processing information. Rarely can all three of these goals be met without sacrificing at least one of the others. This three way trade-off between efficiency, accuracy, and belief perseverance lies at the core of the social and psychological models of partisanship. Partisanship is the most easily accessible cognitive shortcut for evaluating political information, providing an efficient means of reaching conclusions that will confirm one's prior beliefs (Rahn 1993, Taber & Lodge 2006, Westen et al. 2006, Lebo & Cassino 2007, Taber, Cann & Kucsova 2009, Jacobson 2010, Kim, Taber & Lodge 2010, Nir 2011, Jerit & Barabas 2012).[2]

The pervasive nature of partisanship is reflected in a similar debate within the economic voting literature. Scholars argue for either a behavioral model of economic voting in which evaluations of economic performance shape political attitudes (Key 1966, Kinder & Kiewiet 1979, Fiorina 1981, Kinder & Kiewiet 1981, Kiewiet 1983) or a psychological model in which political attitudes shape perceptions of economic performance (Wlezien, Franklin & Twiggs 1997, Bartels 2002, De Boef & Kellstedt 2004, Evans & Anderson 2006, Gerber & Huber 2009, Evans & Pickup 2010, Gerber & Huber 2010, Gerber, Huber & Washington 2010, Enns, Kellstedt & McAvoy 2012). Despite the normative appeal of an economic voter whose political attitudes are continuously updated in order to reward or punish elected officials for economic performance, a growing abundance of evidence increasingly suggests that individuals rely on political attitudes (namely partisanship) as a shortcut for evaluating economic performance. Towards the end of the Reagan adminstration, despite improvements in both unemployment and inflation, Democratic identifiers overwhelmingly suggested that both conditions had gotten worse over the past two presidential terms while Republican identifiers indicated that conditions had improved (Bartels 2002).

[2]The accuracy of such partisan-driven evaluations has led to a separate debate in the political science literature, but the normative implications of cognitive shortcuts is beyond the scope of this study. For a discussion of those implications, see Lau & Redlawsk (2001) and Bartels (1996).

Other evidence suggests that partisanship, presidential approval, and vote choices had stronger effects on economic perceptions than economic perceptions had on political attitudes (Evans & Pickup 2010). Immediately following the success of the Democratic Party in the 2006 midterm elections, Republican and Democratic identifiers were shown to abruptly change their perceptions of the economy even despite very little objective change in economic conditions Gerber & Huber (2010). On the aggregate-level, other findings have demonstrated that levels of consumer confidence are strongly shaped by such political factors as attitudes toward the President and the party of the President (De Boef & Kellstedt 2004, Lebo & Cassino 2007). These, among numerous other findings, confirm that partisanship is not only used as a perceptual screen through which individuals form political judgments, but also for the formation of economic judgments. The overwhelming consensus (and normative implication) of the contemporary economic voting literature is that the traditional economic voter who provides democratic accountability through constant evaluation and Bayesian updating, for the most part, simply does not exist (Anderson 2007).

Despite the vast evidence for motivated reasoning in the formation of political evaluations, recent evidence has also suggested that the extent to which individuals rely on motivated reasoning might vary over time and across individuals. Among other findings, scholars have recently demonstrated that the use of partisan motivated reasoning is diminished in circumstances where an individual's partisan identity conflicts with his or her evaluation of the party's performance (Lavine, Johnston & Steenbergen 2012). In particular, politically motivated biases in economic perceptions have been shown to diminish as the national economic context deteriorates (Chzhen, Evans & Pickup 2014, Dickerson 2015, Parker-Stephen 2013). While intriguing, these findings did not directly model economic performance but instead compared individual-level analyses during time periods characterized by varying national economic trends. In the following section, I go on to describe some of these recent findings and how I expect them to extend to the formation of economic perceptions. In particular, I will outline my expectation that economic conditions serve as an important source of congruence and conflict between partisan identities and evaluations and therefore play an important role in the use of motivated reasoning when evaluating economic

performance.

3.2 Theoretical Expectations

While political psychologists have presented substantial evidence that voters use motivated reasoning when making political and economic judgments, some exceptions to the rule have also been established. For example, the extent of partisan biases in economic perceptions have been found to vary over time, with economic perceptions responding more slowly to real economic changes during times when partisan biases are strongest (Enns & McAvoy 2012). One implication of this finding is that during times when partisan biases are strongest, incumbents are less likely to be held accountable for economic performance due to the delayed effect of economic conditions on economic sentiment. But what conditions might lead these partisan biases to change over time? Redlawsk, Civettini & Emmerson (2010) recently provided evidence that as individuals are consistently exposed to information that conflicts with prior beliefs, they eventually reach a "tipping point" where their own beliefs begin to shift. Other scholars have focused on the changing relationship between partisan identities and evaluations of party performance. When partisan identities and evaluations of the party's performance come into conflict, individuals have been shown to rely less on party cues and more on objective information when forming issue attitudes, evaluating candidates, and making voting decisions (Lavine, Johnston & Steenbergen 2012). For example, leading up to the 2008 presidential election nearly two-thirds of Republican identifiers disapproved of Bush's handling of the economy and nearly half disapproved of his job performance as president. Ten years earlier, when the economy was comparatively much better off, more than 90% of Democratic identifiers approved of President Clinton's job performance and handling of the economy.[3] Much like the argument made by Redlawsk, Civettini & Emmerson (2010), the disillusioned Republicans in 2008 had been consistently exposed to negative economic information to the point

[3]From the 1998 and 2008 ANES Time-Series Studies: In 2008, 62.6% of respondents who identified as either a strong, weak, or independent-leaning Republicans disapproved of Bush's handling of the economy, and 46.3% disapproved of his job performance as President; in 1998, 94.4% of respondents who identified as either strong, weak, or independent-leaning Democrats approved of Clinton's handling of the economy, and 91.1% approved of his job performance as President.

that their own views of the Republican president's performance began to change. As described by Lavine, Johnston & Steenbergen (2012), a conflict had arisen between partisan identities and evaluations of party performance – the result was a weaker role of partisanship in the formation of political judgements.

All of these findings suggest that the extent to which individuals use motivated reasoning when making political decisions is not constant across individuals or across time. I argue that a major source of variation in the use of motivated reasoning is the economy. Determining when individuals are most likely to rely on information shortcuts depends on how they prioritize their goals of efficiency, accuracy, and belief perseverance. The use of partisanship as a cognitive shortcut often meets the goals of efficiency and belief perseverance, occasionally at the expense of accuracy. But under what conditions might individuals assign more weight to the goal of making accurate judgements than efficient or belief-confirming judgments? Psychologists have adopted the notion of a sufficiency threshold, or a desired level of confidence in a decision or evaluation (Chaiken, Liberman & Eagly 1989, Payne, Bettman & Johnson 1993, Lavine, Johnston & Steenbergen 2012). When partisan shortcuts lead to a decision that falls below the sufficiency threshold, the resulting confidence gap leads an individual to seek out more objective information to increase their subjective confidence. Given that individuals are more heavily exposed to negative economic information than positive information (Hetherington 1996, Sanders & Gavin 2004, Soroka 2006) and respond more strongly to such negative information (Taylor 1991, Baumeister et al. 2001), the state of the economy can impact the size of the gap between an individual's desired and actual levels of confidence in their evaluation of the economy. Partisan heuristics are thus more likely to lead to economic perceptions that lie closer to the sufficiency threshold during good economic times than bad economic times. As such, I expect individuals to rely more heavily on objective information when evaluating the economy during bad economic times, while relying more heavily on partisanship as a cognitive heuristic during good economic times.

The role of objective economic conditions for the relationship between political and economic attitudes is a relatively new contribution to an old literature. The political context has been

shown to have a profound impact on the formation of economic perceptions (Gerber & Huber 2010) and a variety of other issue attitudes (Dancey & Goren 2010, Highton & Kam 2011), but much less attention has been paid to the economic context. In their analysis of the relationship between partisanship and economic evaluations during the 1992-1997 British election cycle, Evans & Anderson (2006) stated:

> "It is plausible that a disastrous economy [. . .] would elicit shared and reasonably perceptive responses that are not powerfully affected by political conditioning, but when an economy is relatively stable [. . .] partisan "contamination" of voters' understanding of economic performance is much more likely. In such cases yearly changes in economic performance are typically not distinctive enough to produce a shared, accurate assessment of how the economy is doing." (p. 195)

As economic voting scholars became distracted by the debate between whether political attitudes shape economic perceptions of vice versa (Lewis-Beck 2006), Evans & Anderson (2006) were offering the suggestion that the tendency for partisanship to shape economic attitudes might depend on the broader economic context. This theory was only recently subjected to empirical testing when it was shown that the relationship between government approval and economic perceptions in Great Britain was most likely to be exogenous during periods of economic growth and endogenous during periods of economic decline (Chzhen, Evans & Pickup 2014). Local levels of unemployment have also been shown to influence national election outcomes in both British and Welsh elections (Johnston et al. 2000).

Other evidence suggests that when voters are exposed to economic information that moves in both positive and negative directions, partisan disagreement is more likely to occur. On the other hand, when economic information moves in only one direction partisanship plays less of a role in the formation of economic attitudes (Parker-Stephen 2013). It has also been shown that when such conflicting information comes from partisan sources, individuals become more likely to engage in partisan motivated reasoning (Price 1989, Huddy 2001, Slothuus & de Vreese 2010) and that out-party cues tend to be more powerful than in-party cues (Goren, Federico & Kittilson 2009). Given these recent findings, the expectation that economic conditions play a role in the formation of individual-level economic perceptions is well-warranted.

We can therefore expect individuals to be more prone to partisan motivated reasoning when evaluating the economy during times when economic conditions are relatively well off. On the other hand, as economic conditions decline individuals should be more heavily exposed to negative information that conflicts with their partisan identities, making them more likely to rely on objective economic information when forming economic judgments. I hypothesize that in states with rising unemployment and declining income levels, individuals will rely less on motivated reasoning when evaluating the economy. In these states, we should see weaker effects of partisanship on the formation of economic perceptions. For states with declining unemployment and rising levels of income, individuals should be more prone to rely on motivated reasoning when evaluating the economy. In these states, partisanship should be seen as a more useful tool for achieving the goals of efficiency, accuracy, and belief perseverance, and thus the effects of partisanship on economic evaluations should be stronger.

I expect the moderating role of economic conditions to apply primarily to the relationship between partisanship and retrospective economic evaluations and less so for prospective evaluations. Most of the economic voting literature suggests that the average individual weighs retrospective evaluations more heavily than prospective evaluations, with only the most sophisticated voters using a rational expectations framework for translating prospective economic perceptions into political evaluations (MacKuen, Erikson & Stimson 1992). Scholars have also frequently argued that the systematic processing of objective information requires a sufficient level of knowledge or sophistication (Neuman 1986, Krosnick 1991, Zaller 1992, Sniderman, Tetlock & Brody 1993, Delli Carpini & Keeter 1996, Kam 2005, Lau & Redlawsk 2006). Since the same individuals who weigh prospective evaluations more heavily than retrospective evaluations are the same individuals who are most capable of systematically processing objective information, I don't expect to find as strong of a moderating role of economic conditions for the relationship between partisanship and prospective evaluations as I expect to find for retrospective evaluations.[4]

[4]This is not to suggest that more sophisticated individuals are any less likely to use partisan shortcuts than less sophisticated individuals (see Zaller 1992), but simply that the degree of partisan biases in economic perceptions will vary less with economic conditions for prospective economic evaluations.

I focus exclusively on the role of state-level economic conditions for both theoretical and empirical reasons. First, national economic conditions are primarily aggregated abstracts of localized economic conditions (Gimpel & Reeves 2012). While variation in national economic indicators certainly derive from variations in local economic conditions, an increase or decrease in the national unemployment rate, inflation, or GDP is by no means a variation that is generalizable to regions across the country. Even as national economic conditions improve, local conditions may remain the same or continue to deteriorate. Second, we can expect the role of local information in the formation of economic perceptions to vary between in-partisans and out-partisans. Individuals who strongly identify with the party of the President are more likely to incorporate positive local information into their assessment of the national economy, while out-partisans are more likely to incorporate negative local information. As a result, localized economic conditions serve as a source of variation in objective economic conditions at a given point in time, as well as the utilization of subjective information across individuals at a given point in time (Dettrey & Palmer 2014). Third, recent research has shown that people tend to form economic opinions in the same way as people who face similar circumstances as themselves (Ansolabehere, Meredith & Snowberg 2014). From this perspective, voters don't necessarily need to know detailed information about their local economy to be able to respond to the local context.[5] Local economic conditions have also been shown to have a significant impact on retrospective evaluations of the national economy (Books & Prysby 1999), as well as presidential election outcomes (Johnston et al. 2000, Healy & Lenz 2014). Finally, localized economic conditions provide a source of valuable cross-sectional and temporal variation for an empirical analysis of individuals nested within groups. State-level unemployment and income don't just vary over time, but also across states at a given point in time.[6]

[5] A simple sports analogy helps illustrate this fact: everyone who attends a professional sporting event doesn't need to know the two teams' histories, win percentages, rulebooks, and officiating signals in order to respond to events in the game in the same ways and at the same times as the other spectators.

[6] See Figure 3 and the Appendix for a description of the variation in state-level unemployment and per capita disposable income.

3.3 Data and Methodological Approaches

Data for the following analyses come from the 1980-2012 American National Election Studies (ANES), supplemented with state-level economic data on unemployment and per capita disposable income (PCDI). The 1980 ANES Time-Series study is the earliest of the surveys to include items that probe respondents' evaluations of the national economy. Surveys were then conducted at two year intervals from 1980 until 2004 and at four year intervals from 2004 until 2012. The specific variable codings for the survey data can be found in the Appendix. State-level unemployment data were obtained from the United States Bureau of Labor Statistics,[7] and PCDI data were obtained from the United States Bureau of Economic Analysis.[8] Since each of the ANES surveys were conducted during November of each survey year, I measure 12-month net changes in seasonally-adjusted state unemployment rates from November of the previous year to November of the survey year as well as current levels of unemployment during November of each survey year. Similarly, I measure PCDI as the percent change from the previous period to November of each survey year as well as current (logged) levels in November of each survey year.[9]

In the following analyses, I use both retrospective and prospective evaluations of the national economy as dependent variables. To measure retrospective evaluations, survey respondents were asked, "Would you say that over the past year the nation's economy has gotten better, stayed about the same, or gotten worse?" A follow-up question then asked respondents, "Would you say much better (worse) or somewhat better (worse)?" Responses to these two items were then coded as a five-point scale ranging from much worse to much better. For prospective evaluations, respondents were asked, "What about the next 12 months? Do you expect the economy to get better, get worse, or stay about the same?" Only some surveys asked a follow-up question similar to that used for retrospective evaluations. Since the five-point prospective measure is not available in

[7] http://www.bls.gov

[8] http://www.bea.gov

[9] Both current levels and net changes in economic conditions are of theoretical interest because we might expect the moderating role of net changes in economic conditions on the relationship between economic perceptions and political attitudes to vary depending on current levels of economic health. For example, a 0.5% change in unemployment is likely to be seen as less dramatic in a state with a current unemployment rate of 2.5% than in a state with a current unemployment rate of 10.5%.

every survey, I use the original three-point scale that ranges from much worse to much better.[10] For the purposes of this chapter, using both retrospective and prospective evaluations as dependent variables is primarily for robustness. In Chapter 5, the difference between retrospective and prospective evaluations becomes more theoretically clear, as levels of information have been shown to influence the retrospective or prospective nature of how partisans form economic opinions.

The primary individual-level explanatory variable is coded the same as in the previous chapter. Instead of relying on the traditional 7-point Republican-Democrat ANES scale, the measure was first recoded as a 7-point scale ranging from -3 (strong out-partisans) to +3 (strong in-partisans), with pure independents centered at zero. It is important to note that for the purposes of this study, in-partisans are considered to be respondents who identify with the party of the current president during each survey year. This new measure was then folded into two separate measures, one for in-partisans and one for out-partisans. For the in-partisan measure, in-partisan leaners are coded as 1, weak in-partisans coded as 2, and strong in-partisans coded as 3 with pure independents and all out-partisans collapsed into zero. Similarly, for the out-partisan measure, out-partisan leaners are coded as 1, weak out-partisans coded as 2, and strong out-partisans coded as 3 with pure independents and all in-partisans collapsed into zero. By including both of these measures in the same model, pure independents are essentially treated as the baseline group while allowing for different effects for in-partisans and out-partisans. The 7-point measure of in-partisan strength fails to capture any asymmetrical effects between in-party and out-party members, which the previous chapter has already established to exist.

As a robustness check, I also test models with presidential approval as the primary individual-level explanatory variable. Since ambivalent partisans might identify with the party of a President but disapprove of the President's job performance, it is useful to use both partisanship and presidential approval as proxies for political attitudes. To measure presidential approval, respondents were asked, "Do you approve or disapprove of the way that [the president] is handling his job as

[10]The prospective economic evaluation item was not included in the 2002 ANES study. Thus, in the following analyses that use prospective evaluations as the dependent variable, survey data are available every two years from 1980 to 2000 and every four years from 2000 to 2012.

President?" A follow-up question then asked respondents, "Do you approve (disapprove) strongly or not strongly?" Responses to these two items were then coded as a four-point scale ranging from disapprove strongly to approve strongly. Results from these models were almost identical to those using the two partisanship measures and are available in the Appendix for this chapter.

3.3.1 Why State-level Performance?

A popular criticism of studies relying on local economic performance as a measure of the economic context is that voters might be largely unaware of their state's economic performance. The media undoubtedly pays more attention to the national economy than individual state economies. Moreover, economic performance often varies dramatically within states, as well as across states. For example, economic conditions might be starkly different in a rural county than in a neighboring urban county. It is therefore necessary to present a defense of state-level performance before proceeding into the analysis.

First, no individual citizen actually experiences a national economy, as "[t]he state of the national economy is but a set a summary measures averaged across thousands of communities and millions of individuals" (Gimpel & Reeves 2012, pp. 509). Thus, while individuals might be exposed to information on the national economy through media coverage and political discourse, no one actually experiences national-level performance. Any measure of national economic performance fails to capture the dramatic variation in the economy that occurs across localities. Furthermore, the pocketbook versus sociotropic debate on how voters utilize economic information to inform their economic judgments represents two extremes: one within the individual herself, and the other in the national economy. A growing body of research has demonstrated that numerous mechanisms exist within these two extremes that also work to shape economic perceptions. Local unemployment rates, fuel prices, and home forclosures have all been shown to influence how citizens perceive the national economy (Books & Prysby 1999, Gimpel & Reeves 2012, Johnston et al. 2000, Weatherford 1983).

The focus of this particular chapter is on the asymmetrical tendency for partisans to use

information from their state's economy to inform national economic perceptions. Later in the chapter, I expand on the use of state-level performance as a measure of the economic context by demonstrating that national economic perceptions, when aggregated, do indeed follow state-level performance very closely over time. I also go on to demonstrate the methodological advantages of state-level performance for a multilevel analysis of economic perceptions. Specifically, I show that state-level performance tends to follow national economic trends very closely, while also providing important variation across states within survey years. In Chapter 4, I take the analyses presented here a step further by examining economic performance at the county-level.

3.3.2 Model Specification

In its most basic form, the individual-level relationship between economic perceptions and partisanship (with exogenous controls excluded for space purposes) can be modeled as

$$Y_i = \beta_0 + \beta_1 X_i + \varepsilon_i \tag{3.1}$$

where Y_i is an individual's perception of the national economy, X_i is an individual's partisanship, and ε_i is the unobserved disturbance term. The relationship between an individual's economic perception and in-party strength is captured by β_1 and, since in-party strength has pure independents centered at zero, β_0 captures the average economic perception for pure independents. An important factor that this basic model does not capture is how this individual-level relationship can vary across groups. If the relationship between partisanship and economic perceptions varies with state-level economic conditions, then a model is needed that can allow the intercept and slope to be different for individuals in different groups. Since individuals are nested within states, this basic model can be extended to allow β_0 and β_1 to vary across states as a function of state-level economic performance, so that

$$\begin{aligned} \text{Level 1} \quad & Y_{ij} = \beta_{0j} + \beta_{1j} X_{ij} + \varepsilon_{ij} \\ \text{Level 2} \quad & \beta_{0j} = \gamma_{00} + \gamma_{01} W_j + \mu_{0j} \\ & \beta_{1j} = \gamma_{10} + \gamma_{11} W_j + \mu_{1j} \end{aligned} \tag{3.2}$$

where W_j is a state-level economic indicator[11] and i and j are subscripts indexing individuals and states, respectively. In the second level of Equation 3.2, the first portion (β_{0j}) allows the average economic perception of pure independents[12] to vary with state-level economic conditions. The second portion of the second-level equation allows the amount of change in economic perceptions given a one-unit change in partisanship to vary with state-level economic conditions. In the random intercept portion of the second level of the model, γ_{00} represents the grand mean intercept, γ_{01} represents the effect of the state-level economic indicator on the intercept, and μ_{0j} is the random variance of the intercept aross states. In the random effects portion of the second level model, γ_{10} represents the grand mean of the effect of X_{ij} on economic perceptions, γ_{11} represents the change in the effect of partisanship on economic perceptions across values of the Level 2 indicator (i.e., the interaction between the Level 1 and Level 2 predictors), and μ_{1j} is the random variance of the slope across states. Thus, Equation 3.2 can be rearranged by plugging the two portions of the second-level equation in for the intercept and slope in the first-level equation, so that

$$Y_{ij} = \gamma_{00} + \gamma_{01} W_j + \gamma_{10} X_{ij} + \gamma_{11} (W_j)(X_{ij}) + \mu_{1j} X_{ij} + \mu_{0j} + \varepsilon_{ij} \tag{3.3}$$

where γ_{01} is the main effect of state-level economic conditions, γ_{10} is the main effect of parti-

[11] In the analyses that follow, models include more than one state-level economic indicator and separate measures for in-partisans and out-partisans. I only include one first-level and second-level indicator in Equation 3.2 for simplicity purposes and to save space.

[12] In the full models, pure independents are treated as the baseline group so that the intercept in the first-level equation simply indicates the average economic perception for pure independents in states with no change in state-level economic conditions.

sanship, and γ_{11} is the coefficient for the interaction between the two predictors. The variance across states for the slope, the intercept, and the remaining unobserved disturbance are captured by μ_{1j}, μ_{0j}, and ε_{ij}, respectively. The paramter of most interest in Equation 3 is γ_{11}, which will determine how the effect of partisanship on economic perceptions varies with state-level economic conditions.

To facilitate interpretation of the main effects parameters and the coefficients for the interaction terms, I have centered levels of state unemployment and levels of logged PCDI at their mean values. Therefore, γ_{10} (the main effect of partisanship) can be interpreted as the difference in economic perceptions based on a one-unit change in partisanship *for individuals in states with average levels of unemployment and PCDI, and no net change in unemployment or PCDI*. Similarly, the main effects estimates for each state-level economic indicator can be interpreted as the change in economic perception based on a one-point change in the economic indicator *for individuals who identify as pure independents*.

It is also important to note that continuous-by-continuous interaction terms and their statistical significance should be interpreted with caution since they measure conditional relationships. Taken by itself, the coefficient for an interaction term is not very meaningful – instead, the coefficients for the constituent terms and their interaction need to be taken into account in order to make an inference about a conditional relationship (Brambor, Clark & Golder 2006). One approach to interpretting these interaction terms is to calculate the marginal effects of one of the constituent terms on the outcome variable across values of the other constituent term. For example, in Equation 3 the marginal effect of partisanship on economic perceptions can be calculated as

$$\frac{\delta Y}{\delta X} = \gamma_{10} + \gamma_{11} W_j \tag{3.4}$$

By computing the marginal effect of partisanship on economic perceptions at each value of the state-level economic predictor, we can observe how the relationship between partisanship and economic perceptions changes with economic conditions.

Since both dependent variables used in the following analyses (retrospective and prospec-

tive economic perceptions) are ordinal measures, caution should typically be exercised in interpreting statistical results. The most appropriate method of analysis for limited dependent variables is an ordered probit or ordered logit model. However, comparing the results of mixed effects models estimated via maximum likelihood estimation (such as those described above) with results from mixed effects ordered probit models did not indicate any substantial differences. For interpretation purposes, the analyses that follow estimate mixed effects via maximum likelihood – ordered probit results for each model are available in the Appendix (Table 8 and Table 9) for comparison.

3.4 Analysis

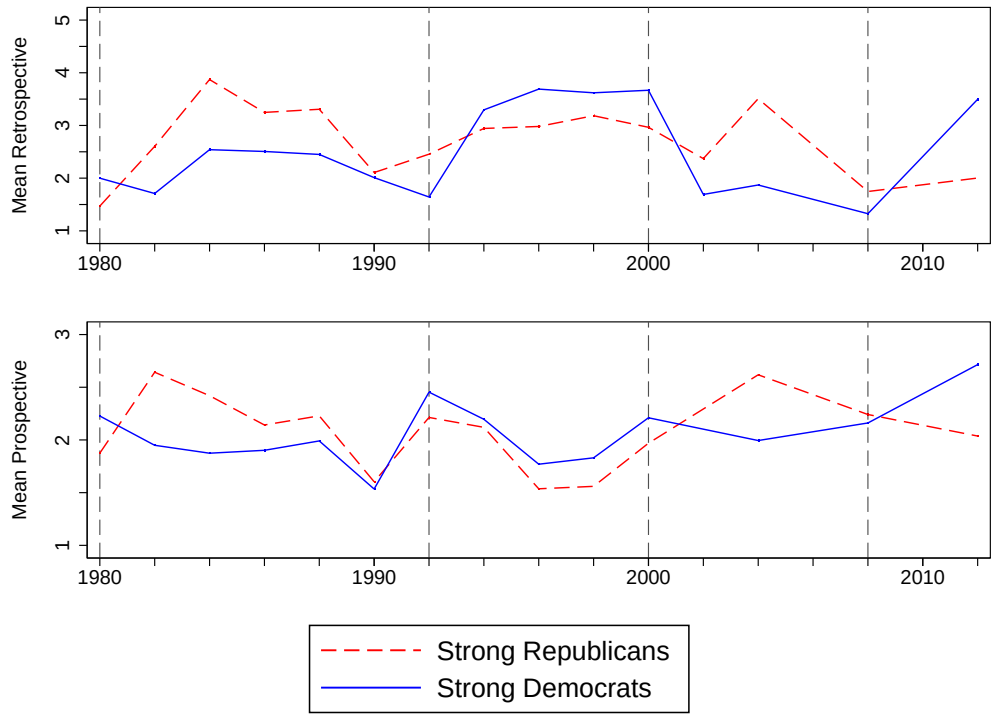
An examination of the survey time series reveals several interesting features of the relationship between economic perceptions and political attitudes. As expected, retrospective economic perceptions are strongly correlated with the strength of an individual's identification with the incumbent President's party. For the entire pooled survey sample, retrospective evaluations and partisanship have a correlation coefficient of 0.30. If the two are aggregated by taking the yearly means, the correlation coefficient goes up to 0.60. In order to better visualize this relationship, the top panel in Figure 3.1 plots the average retrospective economic perception for Democratic and Republican identifiers from 1980 to 2012. The blue line in the figure represents respondents identifying as strong Democrats, and the red line represents respondents identifying as strong Republicans; pure independents are excluded but tend to fall roughly between Democratic and Republican identifiers. At first glance, Democratic and Republican perceptions of the economy seem to follow one another very closely. However, a closer examination reveals an interesting trend. Shortly following each election year in which the party of the President switched from one party to the other (indicated by vertical dashed lines), we notice that the average retrospective economic evaluations for Democratic and Republican identifiers cross paths. Under Republican presidents, Republican identifiers view the economy more favorably and under Democratic presidents, Democratic identifiers view the economy more favorably. Another interesting feature is the decline in economic perceptions among Republicans during George W. Bush's second term as President. Although

Republican economic evaluations remained more positive than Democratic evaluations throughout the Bush presidency, Republican evaluations began to fall sharply following the 2004 presidential elections. A likely explanation for this sharp decline is the conflict many Republicans experienced between their partisan identities and evaluations (Lavine, Johnston & Steenbergen 2012). As support for Bush's foreign policy towards the Middle East began to decline, ambivalence experienced by Republican identifiers found its way into their economic attitudes even before the onset of the Great Recession in 2008. Chapter 4 takes a closer look at how partisans responded to the 2008 financial crisis.

The bottom panel of Figure 3.1 similarly plots the average prospective evaluations of the national economy for strong Democrats and strong Republicans. While the correlation between prospective evaluations and partisanship is somewhat weaker than the correlation between retrospective evaluations and partisanship (0.17 for the entire pooled sample and 0.21 for the yearly aggregates), the trend remains the same – partisans hold better expectations of future economic performance when they identify with the party of the incumbent President. During periods with a Democratic President, Democratic identifiers expect the national economy to improve slightly more over the next twelve months than Republican identifiers. Similarly, during periods with a Republican President, Republican identifiers expect the national economy to improve slightly more over the next twelve months than Democratic identifiers. For example, during most of the latter Bush's administration, Republican identifiers had significantly higher expectations of the national economy than Democratic identifiers. Again, Republican expectations reached a tipping point after the 2004 election as Republican identifiers became disillusioned with Bush's foreign and economic policy (Lavine, Johnston & Steenbergen 2012). As Republican identities and evaluations began to conflict, a slight drop in economic expectations can be observed among Republicans during Bush's second term. Immediately following the start of the 2008 financial crisis and the election of Barack Obama, Democratic economic expectations surged greatly while Republican expectations continued to decline.

The focus of this chapter, as well as the rest of the study, is on the relationship between

Figure 3.1. Mean Retrospective and Prospective Economic Perceptions by Partisanship, 1980-2012



Notes: Data were obtained through the American National Election Studies, 1980-2012 Time Series Studies. Dashed vertical lines indicate presidential election years in which the party of the President flipped; pure independents are excluded.

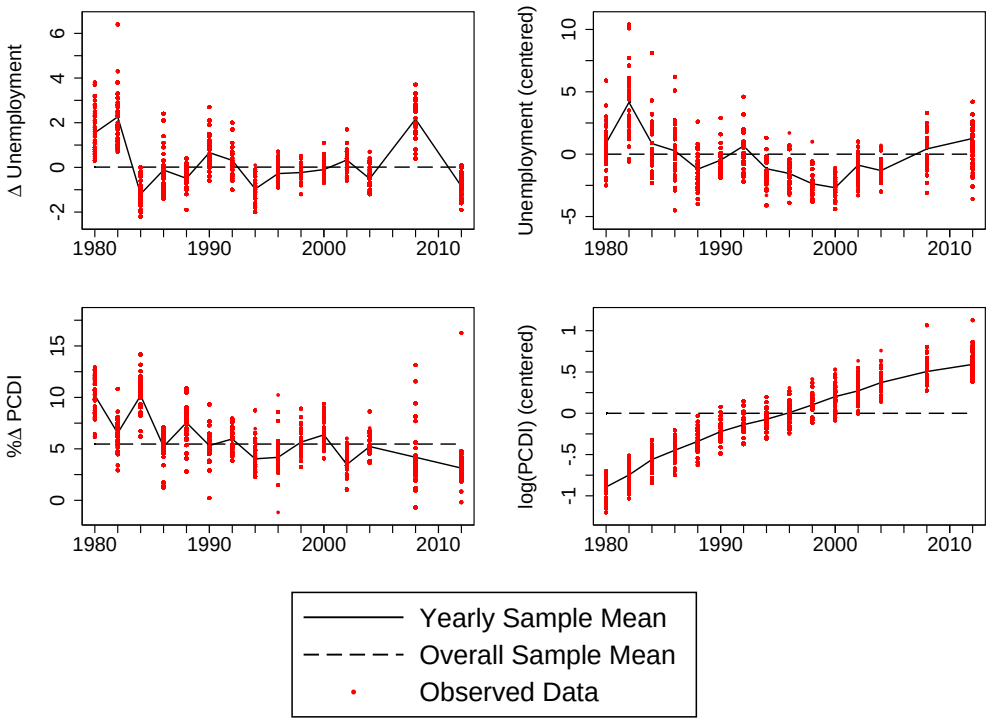
partisanship and economic perceptions. Nonetheless, it is useful to also examine the relationship between presidential approval and economic perceptions. The correlation coefficient between retrospective evaluations and approval for the individual-level pooled sample is 0.43 and increases to 0.82 when aggregated by year. The top panel in Figure 3.2 plots the average economic perceptions and approval ratings of ANES survey respondents from 1980 to 2012, illustrating a strong relationship between how Americans evaluate the President's job performance and how they retrospectively evaluate the economy. With the exception of a brief period surrounding the terrorist attacks of September 11, 2001, retrospective evaluations and presidential approval move together almost completely in unison. The terrorist attacks in 2001 generated a 'rally 'round the flag effect that led to a surge in presidential approval, while also leading to negative speculation about the

effects of the attacks on the global economy. Thus, the disparity between retrospective economic perceptions and presidential approval between the 2000 and 2002 ANES surveys is not entirely surprising. By the 2004 presidential election, economic perceptions and presidential approval fell back into sync with one another. The relationship between economic perceptions and presidential approval is very similar, as shown in the appendix for this chapter.

The first step in examining how the local economy moderates the relationship between partisanship and economic perceptions is defining the local economic environment. The local economy inherently exists somewhere between the performance of the national economy at one extreme, and an individual's own personal financial situation at the other extreme. Three requirements need to be met in order for a certain level of economic performance to serve as an appropriate proxy for the economic environment in which partisans' judgments are made. First, enough variation in economic performance needs to exist across states and over time in order to conduct an appropriate multilevel analysis. Second, state-level performance needs to follow *national* performance closely enough to justify its use as a proxy for how citizens perceive the *national* economy. And third, if these first two requirements are met, then aggregate subjective evaluations of the national economy should follow changes in state-level performance relatively closely.

First, in order to determine how the economic context moderates the degree to which political attitudes bias economic perceptions, enough variation in economic conditions is needed both across contexts and over time. State-level economic conditions are useful for this purpose because of the variation they provide over time, as well as across states. While many individuals might be more heavily exposed to national economic information, an individual who is directly affected by or exposed to the effects of the economy are more likely to be affected by local economic conditions. For example, a high national unemployment rate does not mean that unemployment has risen equally across all states, or even risen at all in every state. Even as national unemployment rises, individuals in certain regions may still prosper or be entirely isolated from national economic trends. Thus, national economic conditions represent little more than abstract aggregates of local economic conditions. Such aggregate measures eliminate all local variation, and as a result are of

Figure 3.2. State-level Unemployment and Per Capita Disposable Income, 1980-2012



Notes: Unemployment data were obtained online from the United States Bureau of Labor statistics (www.bls.gov); income data were obtained online from the United States Bureau of Economic Analysis (www.bea.gov).

little use for an analysis of individuals nested within economically distinct clusters.

Figure 3.3 plots variation in economic performance across states and survey years. For example, the top left panel of the figure plots twelve-month net changes in state unemployment rates along with the yearly average across all states and the grand mean of all states across all survey years. In 1986, for example, the average net change in unemployment across all fifty states and the District of Columbia was just below zero – indicating that, nationally, unemployment did not change much between November 1985 and November 1986. However, many states that same year experienced increases in unemployment of up to almost 2.5%, while other states saw their unemployment rates drop almost 2% from November of 1985. The same can be said for percent changes in PCDI from one period to the next. In 2008, for example, the average change in income across all states was just under about 5%, yet some states saw no change at all (or even slightly

negative changes) while other states saw increases of up to about 13%.

Figure 3.3 also illustrates significant variation in current levels of unemployment and PCDI across states and years. Since levels of unemployment and PCDI are centered at the mean values, we can interpret values of zero as average levels of each indicator.[13] In the top right panel of the figure, we can again see significant variation in levels of unemployment across all states in each survey year. Regardless of the yearly average across states, each survey year shows tremendous differences in the unemployment rate across states. None of this information would be captured by a single yearly national unemployment rate. The same applies to levels of PCDI. While the variation in logged PCDI across states in each survey year may seem small compared to the variation in unemployment rates, the actual (non-logged) values of PCDI in the entire sample range from a minimum of $6,419 to a maximum of $65,770 with a mean of $23,735.03 and a standard deviation of 10,641.66. Thus, levels of PCDI clearly vary substantially across states and over time.

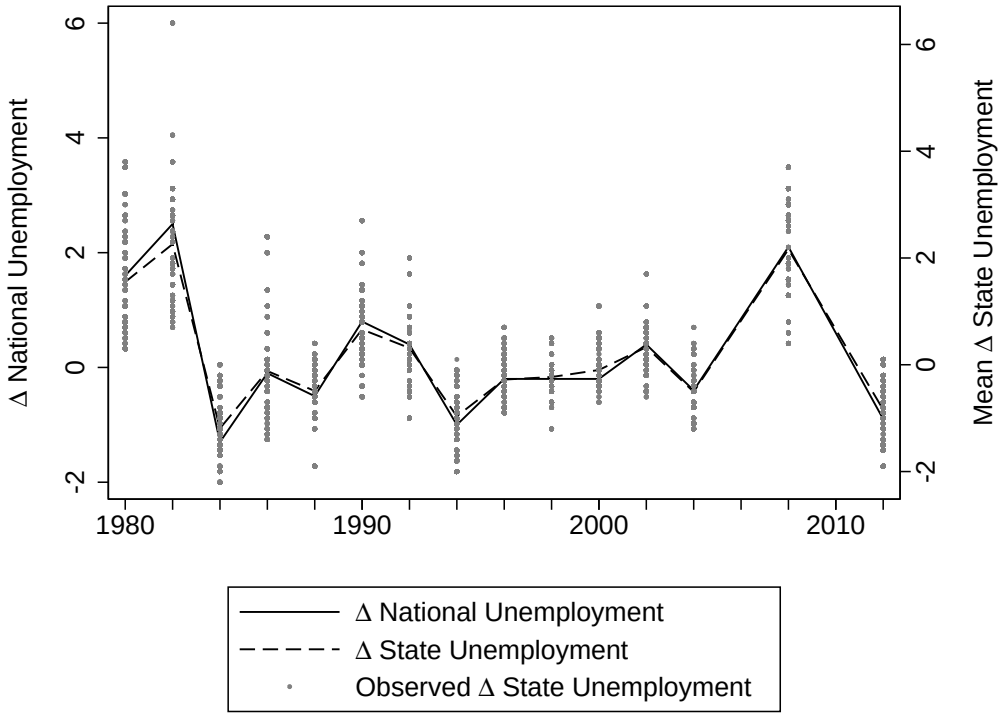
The first set of results is shown below in Table 3.1. In Model 1 retrospective economic perceptions are used as the dependent variable with partisanship and each of the economic indicators as the primary explanatory variables, while Model 2 uses prospective economic perceptions as the dependent variable. As mentioned in the previous section, the measure for partisanship is centered over pure independents and levels of unemployment and PCDI are centered at their grand mean values. In the second set of results, presented in Table 2, I measure political attitudes as approval of the President's job performance in order to check for the robustness of the first set of findings.

3.4.1 Retrospective Economic Perceptions, Partisanship, and State-level Economic Performance

Table 3.1 shows mixed effects estimates of retrospective economic perceptions as a function of partisanship and state-level economic performance. Note that survey year fixed effects are also included in the model with 2008 treated as the baseline year, but are excluded for space purposes. Looking first at the intercept in the fixed effects portion of the model, the results suggest that for a

[13] Levels of unemployment and PCDI are centered at their grand mean values, so a value of zero indicates the mean across all states and all survey years.

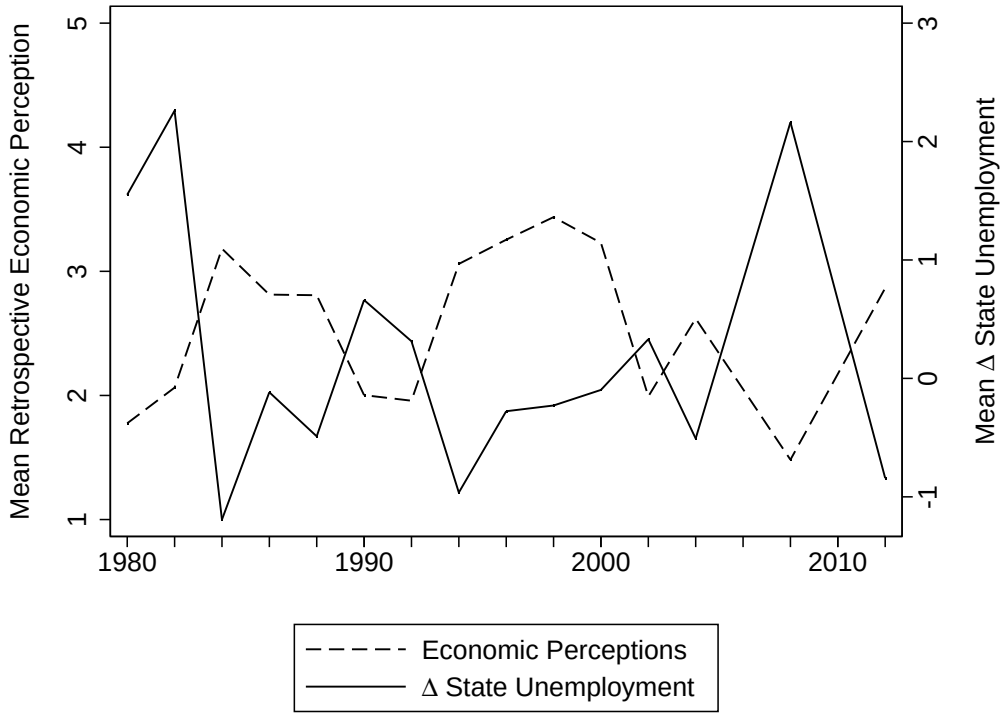
Figure 3.3. Mean Net Changes in State Unemployment Rates and Yearly Net Changes in National-level Unemployment Rates, 1980-2012



Notes: Both state and national unemployment data were obtained online from the United States Bureau of Labor statistics (http://www.bls.gov); net-changes in national unemployment rates are seasonally adjusted.

pure independent in a state with no changes in economic performance, the expected retrospective economic perception during 2008 was about 1.85 on the five-point scale of economic perceptions. For each one-unit increase in the strength of identification with the incumbent presidential party (assuming no changes in state-level economic performance), this expected economic perception increases by about 0.07 points; for each unit increase in the strength of identification with the out-party (also assuming no change in state-level economic performance), this expected economic perception decreases by about 0.02 points. Before looking at the cross-level interactions, which present the most interesting results, the random effects portion of the model suggests that the effect of in-partisan strength had a standard deviation across states of about 0.04. The standard deviation of the effect of out-partisan strength was not statistically different from zero, nor did the intercept which suggests that the effect of identifying as a pure independent also did not vary significantly

Figure 3.4. Mean Retrospective Evaluations of the National Economy and 12-month Net Changes in State Unemployment, 1980-2012



Notes: Mean economic perceptions are the average response to the traditional ANES item gauging retrospective evaluations of the national economy over the last 12-months (scaled one (unfavorable) to five (favorable)).

across states.

The cross-level interactions should be interpretted with caution as they indicate conditional relationships. Figure 3.6 and Figure 3.7 plot the marginal effects of each partisan measure on retrospective economic perceptions across the range of both net changes in state unemployment rates and percent changes in per capita disposable income, respectively. Looking first at the left panel of Figure 3.6, the marginal effects of in-party strength on retrospective economic perceptions are plotted across the range of net changes in state unemployment rates. The results indicate that for in-partisans in states with two-percentage point decreases in unemployment (the minimum observed value), each unit shift in the strength of party identification had a marginal effect on retrospective economic evaluations of about 0.13. This effect drops off as net changes in unemployment increase. For in-partisans in states with six-percentage point increases in state unemployment rates,

Table 3.1. Mixed Effects Estimates of Retrospective Economic Perceptions as a Function of Partisanship and Local Economic Performance, with Year Fixed Effects

Fixed Effects	Estimate	Robust SE
In-partisan	0.072^{c}	0.010
Out-partisan	−0.019^{c}	0.008
Δ St. unemployment	−0.043^{c}	0.012
Δ PCDI†	0.051^{c}	0.020
Δ St. unemployment*In-partisan	−0.027^{c}	0.005
Δ St. unemployment*Out-partisan	0.017^{c}	0.006
Δ PCDI*In-partisan	−0.007^{c}	0.009
Δ PCDI*Out-partisan	−0.012^{c}	0.007
State Unemployment Rate†	−0.025	0.013
State PCDI†	0.033	0.025
State population (logged)	−0.001	0.011
Education†	0.074***	0.007
Ideology†	−0.033***	0.008
Presidential approval†	0.369***	0.010
Employment status	−0.181***	0.028
Age†	−0.008***	0.007
Intercept	1.846***	0.162
State Random Effects	Std. Deviation	Robust SE
σ(Intercept)	0.000***	0.000
σ(In-partisan)	0.035***	0.018
σ(Out-partisan)	0.000	0.000
Observations	21,724	
States	51	

Note: Parameters were estimated via full maximum likelihood with 2008 as the baseline year.

† Standardized to a mean of zero and standard deviation of one.

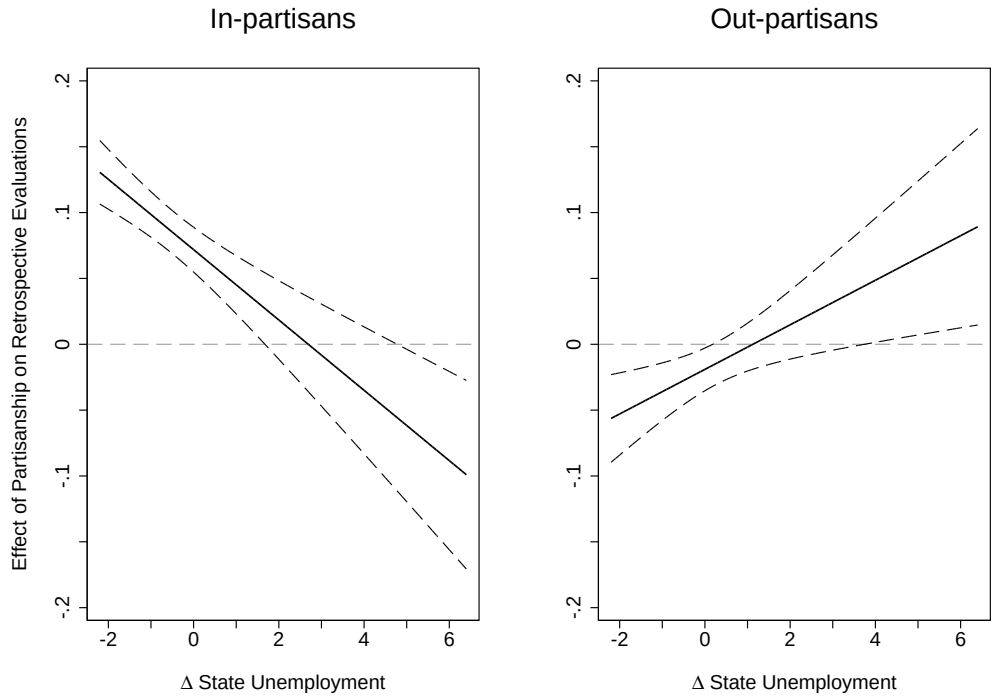
^{c} Conditional relationship; see marginal effects plots.

* p<0.05; ** p<0.01; *** p<0.001

each unit shift in the strength of party identification had a marginal effect of retrospective economic evaluations of about -0.10. As expected, these results suggest that as state unemployment rates rise, the effect of partisan strength on economic perceptions decreases.

Turning to the right panel of Figure 3.6, the marginal effects of out-party strength on retrospective economic evaluations are similarly plotted across the range of net changes in state un-

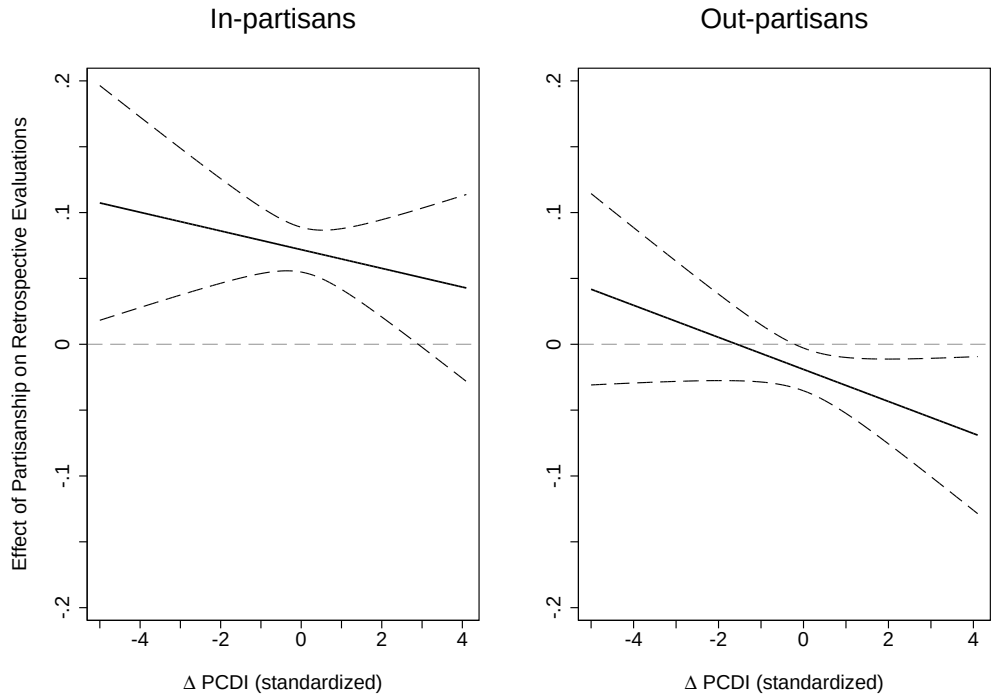
Figure 3.5. Marginal Effects of Partisanship on Retrospective Economic Perceptions, by Net Changes in State Unemployment



Notes: Marginal effects were postestimated from the model shown in Table 3.1; dashed lines indicate the 95% confidence interval.

employment rates. The results indicate that for out-partisans in states with two-percentage point decreases in unemployment (the observed minimum value), each unit increase in the strength of out-party identities had a marginal effect on retrospective economic evaluations of only about 0.05. Looking at the upper and lower bounds of the 95% confidence intervals, this effect became statistically indistinguishable from zero for out-partisans in states with no net changes in unemployment up to those in states with five-percentage point increases in unemployment. Only for out-partisans in states with six-percentage point increases in unemployment did this effect become statistically different from zero, but still with an effect of less than 0.10. These results suggest that the moderating effect of net changes in state unemployment rates on the relationship between partisanship

Figure 3.6. Marginal Effects of Partisanship on Retrospective Economic Perceptions, by Changes in PCDI



Notes: Marginal effects were postestimated from the model shown in Table 3.1; dashed lines indicate the 95% confidence interval.

and retrospective economic perceptions is stronger for in-partisans than for out-partisans.

Figure 3.7 also plots the marginal effects of each partisan measure on retrospective economic perceptions, this time across the range of percent changes in per capita disposable income (PCDI) from the period preceding each ANES survey. Looking first at the left panel of the figure, the results show no statistically significant change in the effect of in-partisan strength on retrospective economic perceptions across the range of changes in PCDI. In-partisans in states with -5% decreases in income (the minimum observed value) had a marginal effect on retrospective evaluations of about 0.10, compared to those in states with 4% increases in income (the maximum observed value) who had a marginal effect of about 0.05 on retrospective evaluations. However, the 95% confidence interval suggests that these two effect sizes are not statistically different from

one another.[14]

The right panel of Figure 3.7 similarly plots the marginal effects of out-partisan strength on retrospective economic evaluations across the range percent changes in per capita disposable income. Again, the difference in effect sizes for out-partisans in states with the lowest observed changes in PCDI and those in states with the highest observed changes in PCDI are not statistically different. These null findings for a moderating effect of changes in income for the relationship between partisanship and retrospective economic evaluations suggest that per capita disposable income simply might not be the most suitable measure of state-level economic performance. One explanation for this is that income levels tend to vary across states with the cost of living, as well as over time with levels of inflation, thus making it difficult to use income data to compare economic performance across states over such a long time period.

3.4.2 Prospective Economic Perceptions, Partisanship, and State-level Economic Performance

Table 3.2 replicates the analysis shown in the previous subsection using prospective evaluations of the national economy instead of retrospective evaluations. Note that since not all of the ANES surveys included follow-up questions for the prospective items, the dependent variable in Table 3.2 is a three-point measure of how respondents expect the national economy to perform over the next twelve months, coded as follows: 1) "worse"; 2) "about the same"; 3) "better". Again, survey year fixed effects are also included in the model with the 2008 survey excluded as the baseline year, but are omitted from the table for space purposes. Looking first at the fixed effects portion of the model, the intercept indicates that for a pure independent in a state with no change in economic performance during 2008, the average prospective economic evaluation was about 2.08 on the three-point scale. Compared to the results from Table 3.1, this indicates that the grand mean economic perception was more positive for the prospective survey item than the

[14] A useful rule of thumb when examining marginal effects plots is to imagine a horizontal line drawn through the upper and lower confidence bands. If the imaginary horizontal line falls within the range of the confidence bands across the entire x-axis, then the marginal effects sizes are not significantly changing with the moderator variable (in this case the state-level economic indicator.

Table 3.2. Mixed Effects Estimates of Prospective Economic Perceptions as a Function of Partisanship and Local Economic Performance, with Year Fixed Effects

Fixed Effects	Estimate	Robust SE
In-partisan	0.074[c]	0.007
Out-partisan	0.043[c]	0.006
Δ St. unemployment	0.006[c]	0.020
Δ PCDI[†]	0.007[c]	0.015
Δ St. unemployment*In-partisan	−0.012[c]	0.005
Δ St. unemployment*Out-partisan	0.001[c]	0.007
Δ PCDI*In-partisan	−0.014[c]	0.005
Δ PCDI*Out-partisan	−0.011[c]	0.006
State Unemployment Rate[†]	0.020	0.011
State PCDI[†]	−0.0003	0.019
State population (logged)	−0.004	0.011
Education[†]	0.005	0.006
Ideology[†]	−0.004	0.006
Presidential approval[†]	0.156***	0.006
Employment status	0.020	0.026
Age[†]	0.006	0.005
Intercept	2.083***	0.151

State Random Effects	Std. Deviation	Robust SE
σ(Intercept)	0.032***	0.009
σ(In-partisan)	0.012***	0.006
σ(Out-partisan)	0.000	0.000

Observations	19,326
States	51

Note: Parameters were estimated via full maximum likelihood with 2008 as the baseline year.

[†] Standardized to a mean of zero and standard deviation of one.

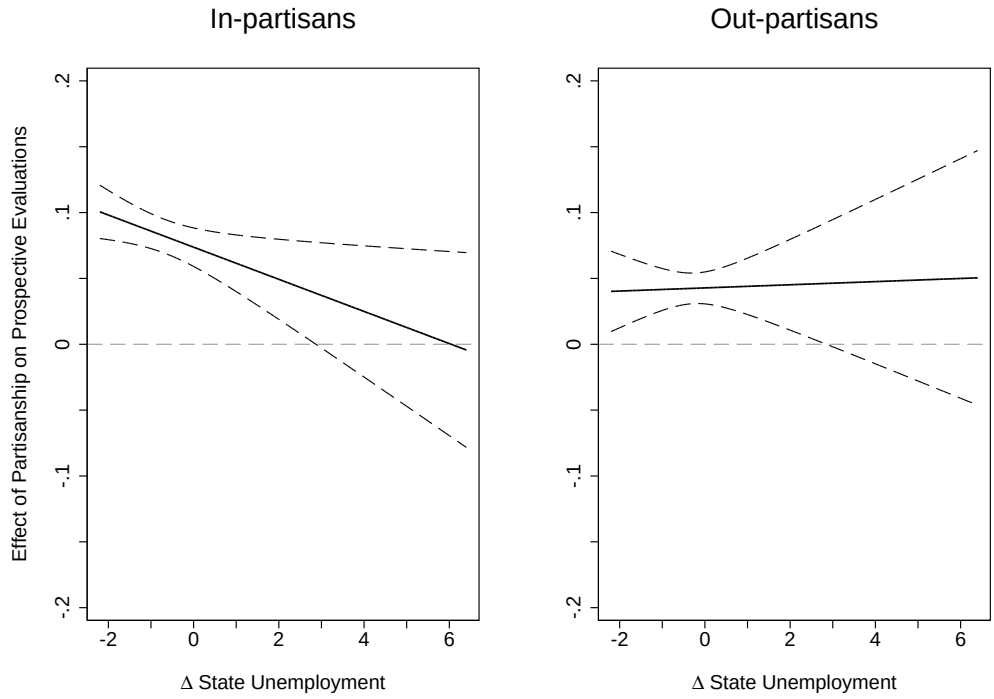
[c] Conditional relationship; see marginal effects plots.

* p<0.05; ** p<0.01; *** p<0.001

retrospective item.[15] For in-partisans during 2008 in states with no net change in economic performance, each unit increase in the strength of partisanship was associated with about 0.07-point more favorable prospective economic evaluation. For out-partisans during 2008 in states with no

[15]Note that the retrospective item modeled in Table 3.1 was a five-point ordinal scale with the neutral category coded as three.

Figure 3.7. Marginal Effects of Partisanship on Prospective Economic Perceptions, by Net Changes in State Unemployment



Notes: Marginal effects were postestimated from the model shown in Table 3.2; dashed lines indicate the 95% confidence interval.

change in economic performance, each unit-increase in the strength of partisanship was associated with about a 0.04-point more favorable prospective economic evaluation. While this latter result is somewhat surprising, since out-partisans can be expected to view the economy unfavorably in general, it should be interpretted with caution as it represents a conditional relationship. Looking at the random effects portion of the model shown in Table 3.2, the results indicate that the intercept had a statistically significant standard deviation across states of about 0.03 points on the three-point scale of prospective evaluations. The random effects also show that the coefficient for in-partisan strength had a standard deviation across states of about 0.01, and once again the coefficient for out-partisan strength did not vary significantly across states.

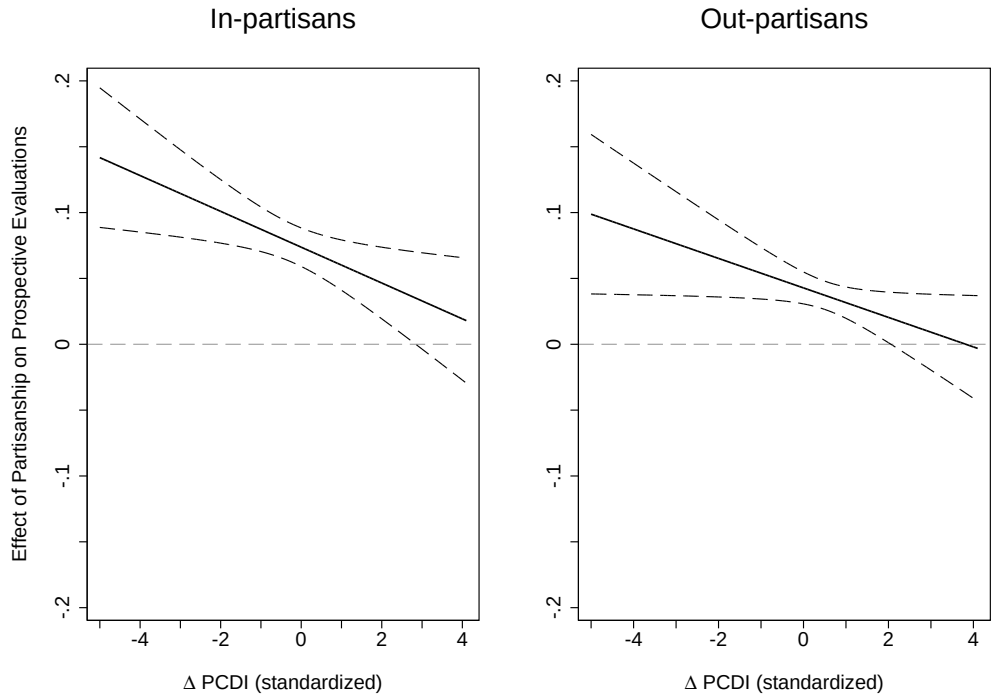
Turning to the interaction effects from the model in Table 3.2, marginal effects plots similar

to those shown previously are shown in Figure 3.8 and Figure 3.9. Figure 3.8 plots the marginal effects of partisanship on prospective economic evaluations across the range of net changes in state unemployment rates. The results in the left panel of the figure are very similar to the retrospective model shown above. For in-partisans in states with two-percentage point decreases in state unemployment rates, each unit increase in the strength of partisanship is associated with about a 0.10 more favorable prospective economic evaluation. This effect again drops off as net changes in unemployment increase. For in-partisans in states with three-percentage point increases in unemployment or higher, this effect is statistically indistinguishable from zero. These results are very similar to those from the retrospective model, as the effect of in-party identities on economic perceptions is weakened as state unemployment rates rise.

The right panel of Figure 3.8 plots the effect of out-party identities on prospective economic evaluations across the range of net changes in state unemployment rates. The results show no statistically different effect sizes across the range of changes in unemployment – the marginal effect of out-partisan strength on economic perceptions remains almost exactly the same between respondents in states with the lowest and the highest changes in unemployment rates. Again, these results suggest a stronger moderating role of net changes in state unemployment rates for in-partisans than for out-partisans.

Figure 3.9 plots the effects of each partisanship measure on prospective evaluations across the observed range of percent changes in per capita disposable income. The left panel shows that for in-partisans in states with the lowest observed changes in per capita disposable income, each unit increase in partisan strength had a marginal effect of about 0.15 on the three-point scale of prospective economic evaluations. Surprisingly, this effect dropped off gradually as unemployment increased, and became statistically indistinguishable from zero in states 2% or higher increases in income. This interesting because while increases in unemployment indicate a declining economy, increases in income indicate exactly the opposite. However, the change in these effect sizes between states with the lowest and highest observed changes per capita disposable income was almost indistinguishable from zero when looking at the 95% confidence interval.

Figure 3.8. Marginal Effects of Partisanship on Prospective Economic Perceptions, by Changes in State PCDI



Notes: Marginal effects were postestimated from the model shown in Table 3.2; dashed lines indicate the 95% confidence interval.

Finally, the right panel of Figure 3.8 plots the marginal effect of out-partisan strength on prospective economic evaluations across the range of percent changes in per capita disposable income. The results look almost identical to those for in-partisans shown in the left panel of the figure, but once again the difference in these results for out-partisans in states with the lowest and highest observed changes in income is almost indistinguishable from zero. These results once again confirm that per capita disposable income is a less useful measure of state-level economic performance than net changes in state unemployment rates.

As a robustness check, the models from Table 3.1 and Table 3.2 were replicated using presidential approval as the primary individual-level variable in place of partisanship (while including partisanship as a control). The results were mostly identical to those presented in this chapter and

can be found in the Appendix.

3.5 Conclusions

Overall, the results from this chapter's analysis demonstrate that changes in state-level economic performance, when measured in terms of unemployment, moderate the relationship between partisanship and economic perceptions for in-partisans but to a lesser extent for out-partisans. Twelve-month net changes in state unemployment rates seem to serve as a more reliable indicator of state-level economic performance than percent changes in per capita disposable income, since the latter tends to vary across survey years with inflation and across states with the cost of living. The findings demonstrate that in-partisans experience ambivalence in contexts of declining economic performance, thus losing confidence in partisanship as a heuristic for evaluating the national economy. Out-partisans, on the other hand, respond much less strongly to changes in their state's economic performance as they are more likely to rely on partisanship when evaluating the national economy. These findings apply both to retrospective and prospective evaluations of the national economy.

The following chapter expands on this analysis by focusing on economic performance at the county-level during years before, during, and after the recent Great Recession. The following analysis also goes on to test how this moderating influence of the local economy might also vary with levels of political knowledge. For example, do citizens require a certain amount of information in order to respond to changes in their local economy when asked to evaluate the national economy?

CHAPTER 4

COUNTY-LEVEL ECONOMIC PERFORMANCE, POLITICAL KNOWLEDGE, AND PARTISAN MOTIVATIONS IN NATIONAL ECONOMIC PERCEPTIONS

In the previous chapter I demonstrated that the motivated reasoning of in-partisans when evaluating the national economy is weakened as state-level economic performance deteriorates. Out-partisans, being more prone to motivated reasoning, were less likely to be influenced by changes in the state economy. The state economy represented an ideal middle ground between the pocketbook and sociotropic theories of how citizens form perceptions of the economy. But how does more localized performance shape how partisans evaluate the national economy? Even within a single state, economic performance tends to vary rather dramatically across local communities. For example, do strawberry pickers in Santa Cruz County, CA base their economic opinions on the same local economy as a construction worker in Los Angeles County, CA? Should we expect a small business owner in Dallas, TX to benchmark their economic assessments on the same environment as an oil rig worker in Houston? And should these contextual effects vary with an individual's level of political knowledge? This chapter has two primary purposes. First, the following stuty investigates how economic performance below the state-level moderates the motivation for partisans to view the national economy in terms of their on political identities. Second, this chapter examines how the tendency for voters to benchmark their national economic assessments on the local economy might vary with levels of political knowledge. In other words, Chapter 3 established that the state economy matters for how voters perceive the national economy – but do these contextual effects extend to the local level and, if so, do those effects apply unevenly to citizens with different levels of political knowledge?

It is an established fact that subjective characteristics of individuals help explain variation in national economic perceptions (Duch, Palmer & Anderson 2000). To this point, this study

has demonstrated that these variations in economic assessments are, at least to some degree, also shaped by the economic environment in which partisans exist. This tendency echoes previous arguments for contextual effects on opinion formation (Przeworski 1974, Weatherford 1983), but defining such an environment presents important theoretical and methodological difficulties to the point that almost any measure of the local economic context is imperfect. My goal for Chapter 3 and Chapter 4 of this study is to untangle some of these complexities by defining the economic environment at multiple levels. The previous chapter established that variation in state-level economic performance, at least in terms of unemployment, shapes the tendency for in-party cues to serve as a shortcut for evaluating the national economy. As the state economy deteriorates, signals between an in-partisan's political identity and signals from the state economy reduce confidence in party cues when assessing national economic information. Out-partisans are more likely to rely on partisan motivations regardless of changes in the state economy. First, being on the 'losing' team, out-partisans display a greater tendency toward motivated reasoning in that they feel a stronger need to defend their own beliefs. Second, even when economic and political signals conflict for out-partisans (i.e., an out-partisan in a prosperous environment), positive information stemming from the economic context exerts a weaker influence on opinion formation than negative information (Baumeister et al. 2001, Hetherington 1996, Soroka 2006, Taylor 1991). As such, the subjective influences of partisanship are more likely to shape how out-partisans evaluate the national economy independently of changes in the state economy. This chapter takes on the arduous task of moving the local environment closer to the individual voter. If economic environments are thought of as a range from the voter's own pocketbook to the objective performance of the national economy as a whole, a study of contextual effects must identify points somewhere between these two distal extremes that defines a distinct and measurable economic context. Neither of these extremes are adequate for understanding variation in national economic perceptions – evidence for pocketbook origins of economic opinions has been scarce (Books & Prysby 1999, Kinder & Kiewiet 1979), and objective performance at the national-level represents a constant that inherently cannot explain why voters view the same macroeconomic realities differently (Kramer 1983, Weatherford 1983).

The rest of this chapter is structured as follows. Section 4.1 describes contextual variation in economic performance within states. These variations are what drive the analysis in this chapter – just as national economic indicators fail to capture variation in state-level performance, state-level indicators fail to capture the substantial variation in performance across local communities. Section 4.2 describes the data and methodological approaches used to test the role of county-level economic performance for how partisans benchmark national economic assessments. Section 4.3 presents the analysis and findings, and Section 4.4 concludes with a discussion of the findings and their implications for the study of economic voting and public opinion.

4.1 Bringing the Context Closer to Home

To very briefly review what the field has already established, we know that citizens tend to process economic information in ways that confirm their prior political beliefs (Bartels 2002, Evans & Anderson 2006, Evans & Pickup 2010, Gerber & Huber 2010, Wlezien, Franklin & Twiggs 1997). These findings stem from psychological research on motivated reasoning, which demonstrate that citizens tend to process information in belief-confirming ways while rejecting belief-inconsistent information (Kunda 1990, Lodge & Taber 2013, Lord, Ross & Lepper 1979). This motivation for belief-preservation has been shown to diminish when economic and political signals conflict with one another (Basinger & Lavine 2005, Lavine 1998, Lavine, Johnston & Steenbergen 2012). When signals come into conflict, partisanship becomes less useful as a shortcut for processing information in self-confirming ways. Only recently has this 'conditional' theory of motivated reasoning been extended to the study of economic voting. Evaluations of economic performance are more likely to have an exogenous influence on political attitudes as the macro economy deteriorates (Chzhen, Evans & Pickup 2014, Dickerson 2015), and partisans begin to converge in how they perceive national economic realities (Parker-Stephen 2013).[1] These findings suggest that more than just individual characteristics play a role in how voters evaluate the national

[1]However, there is evidence that when in-partisans and out-partisans diverge in how they view the economy, they simultaneously diverge in how they attribute responsibility for economic performance (Bisgaard 2015). This suggests that even if evidence of partisan motivated reasoning seems to vanish from how voters evaluate the economy, those motivations still tend to manifest themselves in other ways.

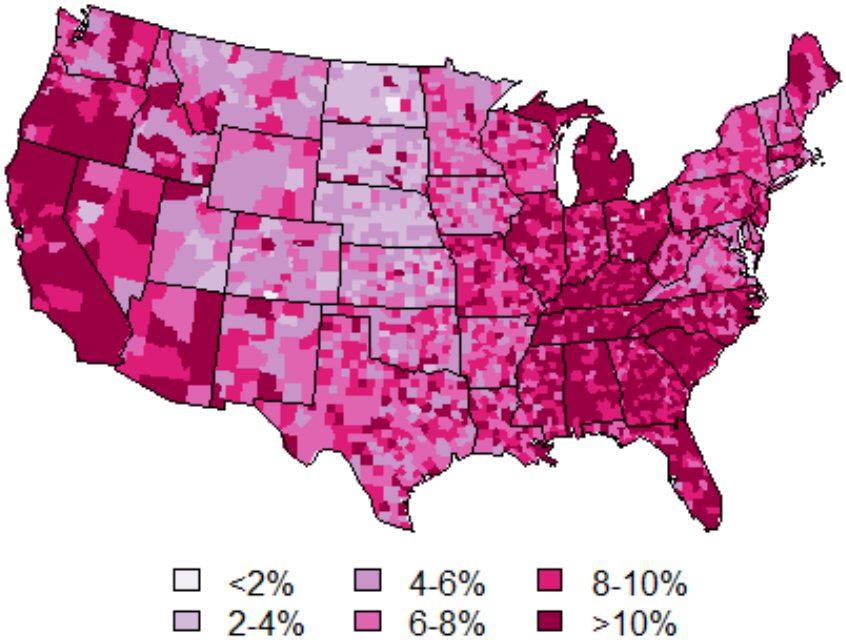
economy.

The next step in this line of research is to utilize objective economic information in order to better understand how economic performance moderates partisan bias in national economic perceptions. As stated previously, any definition of the local economic environment is imperfect. Variation in economic performance exists over time as well as across regions, states, counties, and local communities. The closer the environment is to home, the more likely it becomes that an individual directly experiences the economy. But defining too small of an environment – for example, one's own pocketbook or household income – leads to an overestimation of the homogeneity within groups while underestimating subjective variation across individuals. This debate over how to define the economic environment is not new to the field, although studies of economic contextual effects have been few and far between. In one of the earliest calls for contextual effects on econonmic evaluations, Weatherford argues that:

> "Context has an impact on individual opinions because there exists a fairly clear bias of sentiment in the area, and because this majority opinion exercises some pressure toward conformity. Specifying too large a geographic area will miss the element of similar experience that leads to a 'climate of opinion,' while too small an area will overestimate the degree of homogeneity occuring naturally in the individual's environment." (Weatherford 1983, pp. 871)

The handful of studies which have taken the local economic context into account have defined the environment in several different ways including metropolitan Labor Market Areas (LMA) (Books & Prysby 1999, Weatherford 1983), state-level unemployment (Abrams & Butkiewicz 1995, Ansolabehere, Meredith & Snowberg 2014, Books & Prysby 1999, Brunk & Gough 1983), and groups of politically and demographically distinct counties (Reeves & Gimpel 2012). Obviously, voters probably do not experience any one of these economic environments exclusively. People commute across county lines for work or social interaction, exposing themselves to economic signals that might fall outside of their 'home' environment. Moreover, state-level economic policy tends to produce economic effects that spillover across communities within the state. On the other hand, defining the economic environment at the state-level fails to capture substantial varia-

Figure 4.1. Unemployment Rates by County, 2009

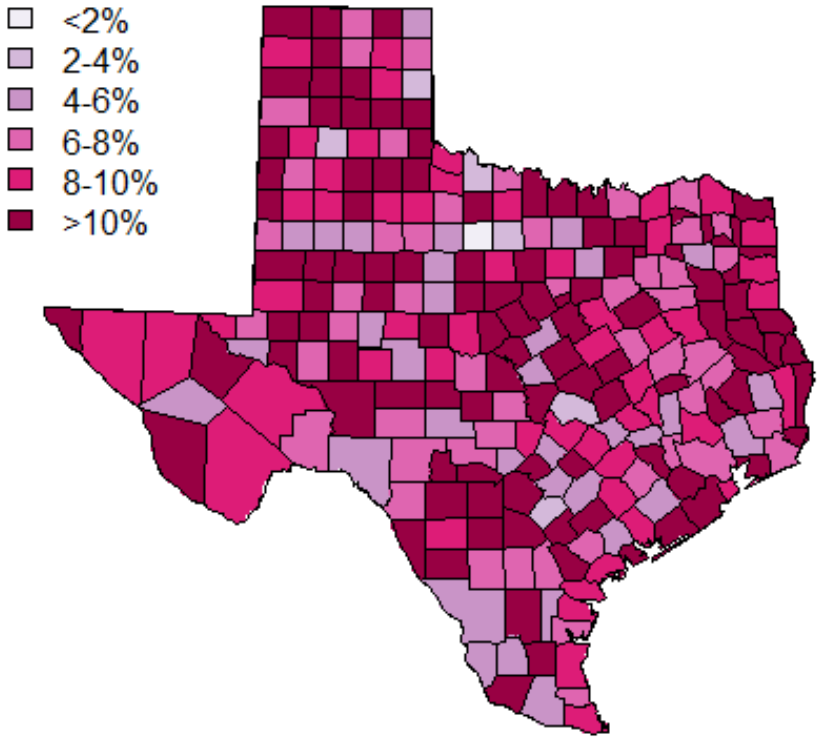


Notes: Unemployment data were obtained through the United States Bureau of Labor Statistics (http://www.bls.gov).

tion across communities that undoubtedly exist, particularly in geographically larger states. Even in the midst of a major national recession, localities differ in the extent to which they are impacted by the crisis. For example, Figure 4.1 shows levels of unemployment across counties following the Great Recession. It is clear that a great deal of variation exists in economic performance below the state-level, particularly in geographically larger states such as Texas and California.

To better illustrate contextual variation in economic performance below the state-level, Fig-

Figure 4.2. Unemployment Rates by Texas Counties, 2009



Notes: Unemployment data were obtained through the United States Bureau of Labor Statistics (http://www.bls.gov).

ure 4.2 focuses on county-level unemployment rates in the state of Texas following the Great Recession. Significant contextual variation in unemployment rates within the state of Texas show that, just as a national economic indicator fails to capture economic variation across states, a state-level economic indicator similarly fails to capture variation in economic performance across counties. For example, Throckmorton County, TX had an unemployment rate of less than 2% in 2009. But only a short drive north to Baylor county or south to Shackelford county leads to unemployment

rates of higher than 10%. This suggests that some localities were hurt more by the recession than others, and it begs the question – how more or less likely were partisans in Throckmorton County to view the economy through a partisan lens than partisans in Baylor County or Shackelford County? Past research suggests that in-partisans (Democratic identifiers in 2009) should view the economy favorably, while out-partisans (Republicans in 2009) should view the economy unfavorably. The previous chapter suggested that in a state with rising unemployment, these differences in economic opinions may diminish. But on a more localized level, should partisans in Throckmorton County benchmark their national economic assessments differently than partisans in Baylor County?

It is worth noting that these local variations in unemployment can be misleading – spillover effects from state policies and cross-county commuters make measuring the context at the local level much more cumbersome. It could be the case that residents of Throckmorton County commute to either Baylor County or Shackelford County for employment, or vice versa. Citizens do not directly experience a conscious change in the economic environment when crossing county lines. The implication is that even county-level economic indicators are imperfect measures of the local economy. But despite these jurisdictional spillover effects, the significance of the results that follow can be interpretted as attenuated estimates of the influence of the local economy on how partisans benchmark national economic assessments.

4.2 Theoretical Expectations

Similar to previous chapters, I start with the assumption that the tendency toward motivated reasoning is asymmetrically stronger for out-partisans than in-partisans (Ditto et al. 1998, Goren, Federico & Kittilson 2009). Through a sort of cognitive defense mechanism, out-group members feel stronger motivations to protect and defend their prior beliefs than in-group members. Second, I assume that a negative information environment is more influential for opinion formation than a positive information environment (Baumeister et al. 2001, Hetherington 1996, Soroka 2006, Taylor 1991). Given these two assumptions, consider four partisans in distinct economic environments:

an in-partisan in poor conditions; an in-partisan in prosperous conditions; an out-partisan in poor conditions; and an out-partisan in prosperous conditions. First, an in-partisan surrounded by poor economic conditions experiences conflicting signals – a personal identity with the incumbent presidential party and negative economic signals from the local environment. The resulting ambivalence, combined with the asymmetrically stronger influence of negative information over positive information, reduces confidence in partisanship when it comes to evaluating the national economy. For an in-partisan surrounded by more prosperous conditions, these signals fall back into sync with one another and the influence of partisanship on economic perceptions returns. For an out-partisan surrounded by poor conditions, partisan identities and economic signals are congruent with one another and so the effect of partisanship on economic perceptions remains unchanged. Finally, for an out-partisan surrounded by prosperous conditions (which are conflicting signals), the influence of partisanship still remains. This latter tendency should result from the fact that out-group members are more prone to motivated reasoning and positive information (coming from the prosperous local economy) is less influential for opinion formation than negative information. The observable implications of these expectations should be an asymmetrical influence of the local economy on how in-partisans and out-partisans come to view the national economy – local conditions should moderate the influence of partisanship on national economic evaluations for in-partisans, but less so for out-partisans.

I propose the following hypotheses. First, in-partisans in counties with poor economic performance should become less likely to view the economy in terms of their own partisanship. Conflicting signals between in-party identities and negative information stemming from the local economy should reduce confidence in party cues when evaluating the economy. Second, out-partisans should be less likely to benchmark national economic assessments on changes in the local economy. It has already been established that out-group members, being on the 'losing team' are subject to stronger motivations to defend their prior beliefs (Ditto & Lopez 1992, Ditto et al. 1998, Goren, Federico & Kittilson 2009). Moreover, even an out-partisan exposed to conflicting political and economic signals (i.e., an out-partisan in a county with good economic performance) should be

less likely to dismiss party cues when evaluating the national economy due to the asymmetrically weaker influence of positive information (stemming from the local economy) over negative information. Third, I expect individuals with higher levels of knowledge to weigh their partisanship more heavily than information from the local economy, since the most knowledgeable citizens tend to also be the most prone to motivated reasoning. In other words, any moderating role of the local economy should diminish as levels of political knowledge increase.

It is worth noting that most citizens probably do not possess specific knowledge about county-level economic performance. As stated in the previous chapter, voters tend to be more heavily exposed to information regarding the national economy than the local economy, and that information has been shown to impact how voters evaluate the national economy (Baumeister et al. 2001, Goidel & Langley 1995, Harrington 1989, Hetherington 1996, Sanders & Gavin 2004, Soroka 2006, Taylor 1991). While the purpose of this study is to investigate the moderating role of the local economy for national economic perceptions, the influence of national economic information should not be discounted. Unfortunately, with only one set of survey observations per year, national-level economic indicators are of little use in explaining variation in economic perceptions. The following analysis accounts for these unmeasured influences by including dummy variables for survey years, with 2008 excluded as the baseline year. The following section elaborates on the nested data structure and model specification in greater detail. Nonetheless, voters do not need to possess specific knowledge about the local economy in order to experience some contextual influence – it has already been established that voters tend to form opinions that reflect the circumstances of other voters in similar social, economic, and political contexts (Ansolabehere, Meredith & Snowberg 2014, Przeworski 1974, Weatherford 1983), even without possessing specific knowledge about the local context.

4.3 Data Structure and Model Specification

I test this theory using a multilevel analysis, in which survey respondents are nested within

counties and states.[2] Data for the following analysis come from the 2006-2012 Cooperative Congressional Election Studies (CCES), supplemented with county- and state-level unemployment data from the Bureau of Labor Statistics (BLS). The CCES survey data are useful for this study for a number of reasons. First, the studies' Common Content sections provide a strong degree of consistency in survey content and question wording unmatched by many public opinion surveys. Second, each survey year consists of sample sizes that far surpass those offered by even the most popular public opinion surveys (approximately 200,000 individual respondents across the seven surveys). Obviously, a sample size of this magnitude is far from necessary for any standard statistical analysis. The benefit of this sample size is the variation it provides within groups – in this case, at the county and state levels. Over the course of the seven survey years, respondents were interviewed in 3,017 counties and all 50 states plus Washington D.C. The number of respondents per county ranged from 1 to 5,102, and the number of respondents per state ranged from 421 to 21,526.[3] These level-two and level-three sample sizes allow for a multilevel analysis capable of testing the theoretical expectations described above.

The first level of the nested data structure consists of the pooled sample of CCES survey respondents from 2006 through 2012. The dependent variable (Econ_{ijk}) is a five-point ordinal measure of retrospective evaluations of the national economy ranging from "much worse" to "much better".[4] The primary first-level predictors are measures of the strength of identification with the in-party and out-party, measured relative to the party of the current president in each survey year. In order to form these two measures, the traditional seven-point party identification scale was recoded in each survey year to range from -3 (strong out-partisans) to 3 (strong in-partisans), with pure independents centered at zero. To better capture asymmetries between in-partisans and out-partisans, this measure was then split into a measure of in-party strength (coded as 0 for pure

[2]Survey respondents represent the first level, counties represent the second level, and states represent the third level.

[3]Note that dropping groups with less than some threshold sample size is not useful in this case, since doing so would eliminate variation in economic performance across counties while also affecting the distribution of survey responses. Multilevel modeling approaches allow for vast differences in sample sizes within groups.

[4]Specifically: 1) "much worse"; 2) "somewhat worse"; 3) "about the same"; 4) "somewhat better"; 5) "much better". Since items measuring prospective evaluations of the national economy were not included consistently across the CCES surveys, this chapter relies exclusively on retrospective evaluations.

independents and all out-partisans, 1 for in-partisan leaners, 2 for weak in-partisans, and 3 for strong in-partisans) and out-party strength (coded as 0 for pure independents and all in-partisans, 1 for out-partisan leaners, 2 for weak out-partisans, and 3 for strong out-partisans). The benefit of splitting partisanship into separate measures for in-partisans and out-partisans is that it allows for different effect sizes for the two groups. The traditional seven-point scale, whether ranging from Democrat to Republican or from out-partisan to in-partisan, fails to capture in-group and out-group asymmetries. Other first-level control variables include employment status (coded one for unemployed and zero for employed, retired, or disabled), ideological self-placement, presidential approval, educational attainment, race, gender, and age. All question wordings and variable codings can be found in the Appendix for this chapter. Age, ideological self-placement, presidential approval, and educational attainment are standardized to have a mean of zero and a standard deviation of one in order to better facilitate interpretation of the intercepts and random effects, which are described in greater detail in the following section.

The primary second-level predictor is a measure of twelve-month net changes in county-level unemployment rates, measured from November of the previous year to November of each survey year.[5] I also control for county populations (logged), since unemployment rates rural and urban areas reflect very different environments. The resulting data structure consists of 192,812 survey respondents nested within 2,936 counties and 50 states plus the District of Columbia over the course of seven survey years.[6] On the state-level, I also control for twelve-month net changes in state unemployment rates.[7]

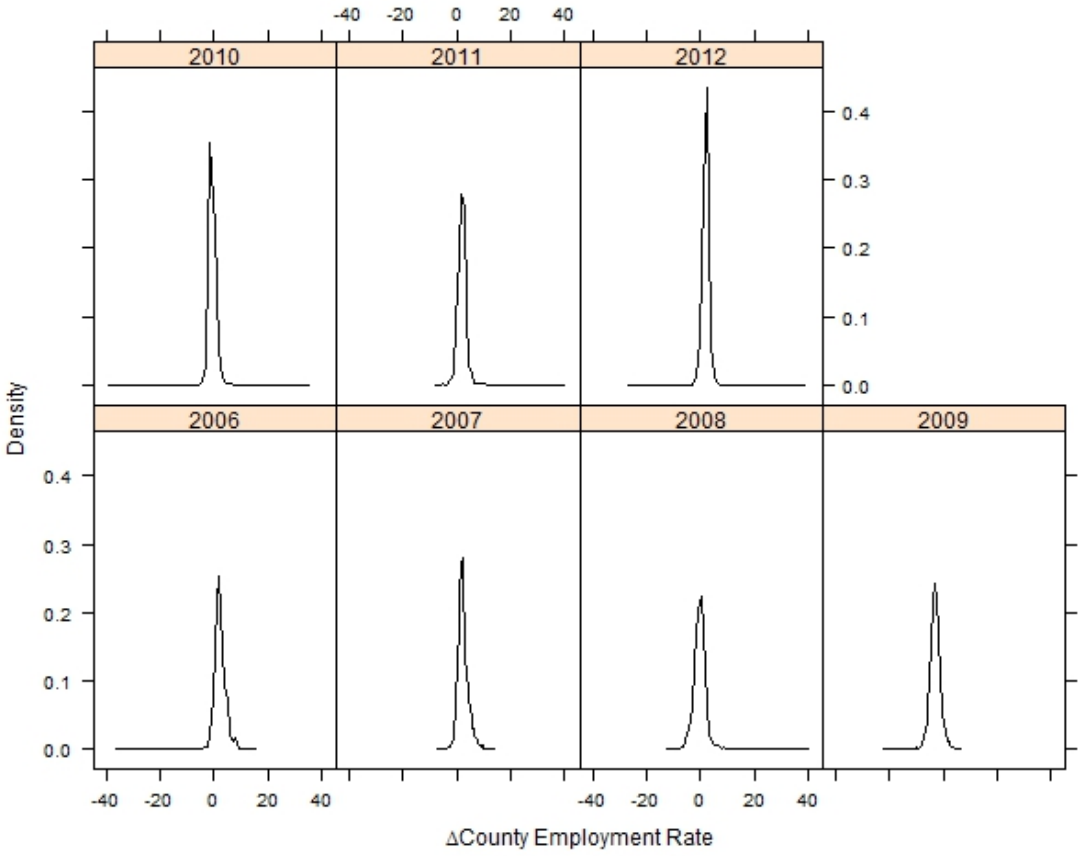
The distributions of twelve-month net changes in county and state unemployment rates are shown in Figure 4.3 and Figure 4.4, respectively. For the entire pooled sample, net changes in

[5]Based on the null findings for a conditional influence of per capita disposable income in the previous chapter, income is excluded from the following analysis. Since income tends to vary geographically with the cost-of-living and temporally with inflation, it is a less effective measure of local economic performance than net changes in unemployment rates. Moreover, income data were not available for every county included in the sample, and dropping those counties would alter the distribution of individual-level survey responses.

[6]Sample sizes are expressed after listwise deletion of missing survey responses.

[7]Since the previous chapter established that changes in state unemployment rates shape how partisans view the economy, the following models would suffer from omitted variable bias by not at least including a control for net changes in state unemployment.

Figure 4.3. Kernel Density Plot of 12-Month Net Changes in County-Level Employment Rates

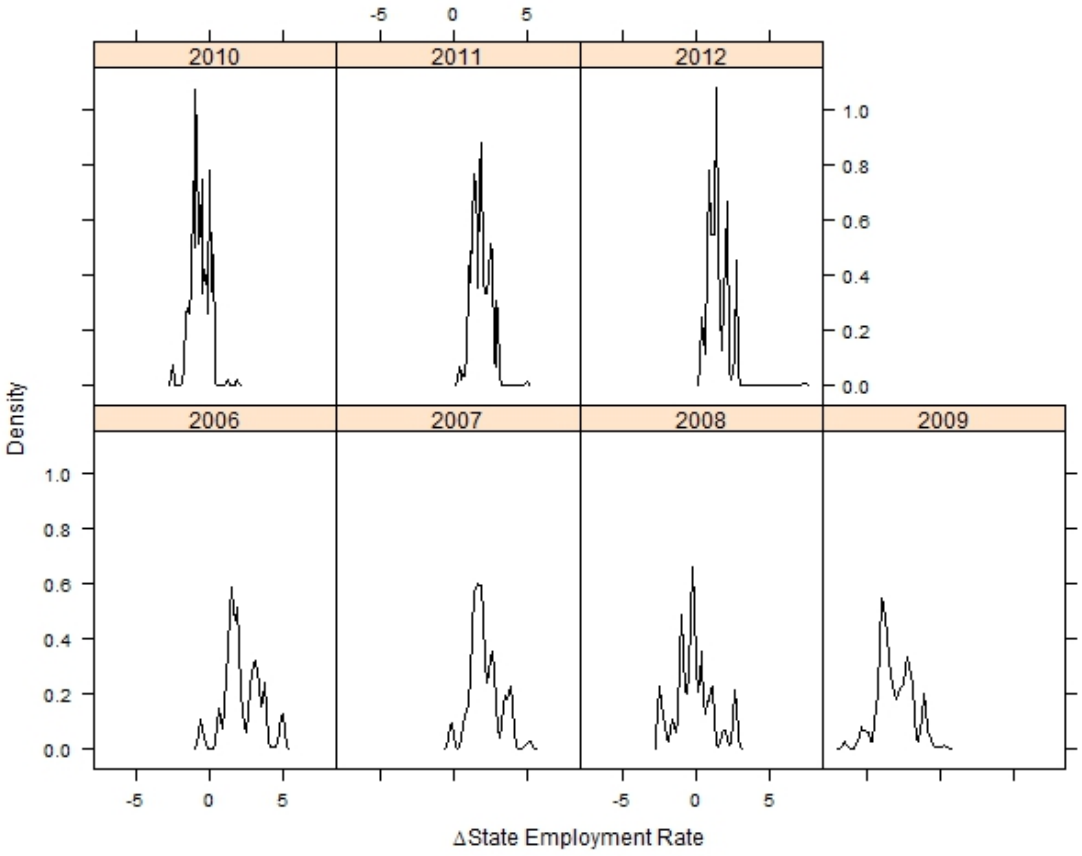


county-level unemployment ranged from -14.3 to 14.0 with a mean 0.07 and a standard deviation of 1.45. State-level unemployment ranged from -5.3 to 4.5 with a mean of 0.03 and a standard deviation of 1.36.

To test the hypotheses described above, I estimate a three-level model of economic perceptions as a function of partisanship, net changes in county unemployment rates, and net changes in state unemployment rates. The subscripts i, j, and k denote individuals nested within counties nested within states, respectively. The benefits of a multilevel analysis are that intercepts and effect sizes on the individual-level are allowed to vary with changes in predictors at the second level. Equation 4.1 illustrates the multilevel model specification, where T_t is a vector of year dummies (with 2008 as the baseline year).[8] Substantively, the nested data structure allows the effects of

[8]Dummy variables for survey years are included to capture unobserved factors that vary across years, such as the

Figure 4.4. Kernel Density Plot of 12-Month Net Changes in State-Level Employment Rates



partisanship on economic perceptions to vary with net changes in county unemployment rates. Expressed in mixed effects form, the model includes cross-level interactions for both in-partisans and out-partisans with each of the county- and state-level economic indicators. The model is estimated in the following section in mixed effects form via full maximum likelihood.

I estimate cross-level interaction effects where each partisanship measure is interacted with net changes in county unemployment rates. I also include random intercepts at the county-level and the state-level, using net changes in unemployment rates at each level as predictors. To capture the influence of the national economic context on economic perceptions, I also include year-fixed effects to allow the intercept to vary across surveys. Unfortunately including an objective indicator

performance of the national economy. Since only one survey observation exists per survey year, national economic performance lacks the variation to be explicitly modeled – but the survey year dummy variables should absorb any outside influence of the national economy on economic perceptions.

of the national economy isn't feasible since only one survey is conducted per year. Thus, only a single national-level observation would be present for each survey year.

The three-level model can be expressed in hierarchical form as follows (with socio-demographic controls omitted for space purposes):

$$\begin{aligned}
\text{Individual} \quad & \text{Econ}_{ijk} = \pi_{0jk} + \pi_{1jk}\text{Inpty}_{ijk} + \pi_{2jk}\text{Outpty}_{ijk} + \sum_{t=1}^{T-1} T_t + e_{ijk} \\
\text{County} \quad & \pi_{0jk} = \beta_{00k} + \beta_{01k}\text{Unemp}_{0jk} + r_{0jk} \\
& \pi_{1jk} = \beta_{10k} + \beta_{11k}\text{Unemp}_{1jk} + r_{1jk} \\
& \pi_{2jk} = \beta_{20k} + \beta_{21k}\text{Unemp}_{2jk} + r_{2jk} \\
\text{State} \quad & \beta_{00k} = \gamma_{000} + \gamma_{001}\text{Unemp}_{0k} + v_{00k}
\end{aligned} \tag{4.1}$$

In the second part of the following analysis, I expand on the model described in Equation 4.1 to also include three-way interactions between partisanship, educational attainment (standardized), and net changes in county unemployment rates. The three-way interaction is meant to capture the extent to which a moderating influence of local economic performance on partisan biases in economic perceptions might vary with an individual's level of political knowledge. As should be standard practice for models including multiplicative interactions, this expanded model includes each component term of the three-way interaction, as well as each component two-way interaction (Berry, DeMeritt & Esarey 2010, Berry, Golder & Milton 2012, Brambor, Clark & Golder 2006, Clark, Gilligan & Golder 2006). The full interactive model also includes random intercepts at the state-level, as well as random intercepts and random effects at the county-level.[9]

4.4 Analysis

Mixed effects estimates of economic perceptions as a function of partisanship and local

[9]The full interactive model includes county-level random effects for in-partisan strength, out-partisan strength, and political knowledge.

economic performance are shown in Table 4.1. With 2008 treated as the baseline survey year, the intercept represents the grand mean economic perception (γ_{000} in Equation 4.1) for pure independents in 2008 who were currently employed and held average ideologies, education, and presidential approval ratings.[10] The positive and statistically significant coefficients for each survey year show that economic perceptions on average were the least favorable during 2008. The intercept shows that during 2008, on average, a pure independent in a county and state with no net change in unemployment had an average economic perception of about 1.7 on the five-point scale. This isn't necessarily surprising, however, since the 2008 survey was conducted immediately after the onset of the financial crisis. The random intercept estimates shown in the bottom half of Table 4.1 show that this grand mean economic perception had a standard deviation of about 0.02 across counties (r_{0jk}) and about 0.03 across states (v_{00k}). This suggests that perceptions of the national economy varied systematically across contexts and, while those variations were small in magnitude, they were significantly different from zero. Figure 4.5 plots the distributions of intercepts across counties and states, respectively, based on 1,000 Markov Chain Monte Carlo (MCMC) simulations of the model shown in Table 4.1.[11] Note that similar to the results shown in Chapter 3, the intercept only represents the average economic perception of the baseline group (pure independents) during the baseline survey year (the 2008 CCES).

Looking at the main effects estimates for in-partisan strength and out-partisan strength, the results in Table 4.1 show that (assuming no net change in county or state unemployment rates) economic perceptions became about 0.06 points more favorable with each unit increase in the strength of identification with the incumbent president, and about 0.05 less favorable with each unit increase in the strength of identification with the out-party. The main effects coefficients also suggest that for pure independents, a one-point increase in state-level unemployment rates was associated with about only a 0.003-point less favorable economic perception, and a one-point increase in county-

[10] Assuming no net change in county or state unemployment rates; note that ideology, education, age, and presidential approval are each standardized to have a mean of zero and a standard deviation of one, and employment status is coded as zero for individuals who are currently employed. Standardizing these variables simply makes the intercepts and random effects estimates easier to interpret.

[11] Simulations are based on maximum *a posterior* probability estimation (Gelman & Hill 2007, Gelman & Su 2015).

Table 4.1. Mixed Effects Estimates of Economic Perceptions as a Function of Partisanship and Local Economic Performance, with Year Fixed Effects

Fixed Effects	Estimate	Robust SE
In-partisan	0.063[c]	0.003
Out-partisan	−0.050[c]	0.003
Δ St. employment	−0.003	0.007
Δ Co. employment	0.035[c]	0.005
Δ Co. employment*In-partisan	−0.080[c]	0.005
Δ Co. employment*Out-partisan	0.038[c]	0.002
County population (logged)	0.008**	0.003
Education	0.047***	0.002
Ideology	0.045***	0.005
Presidential approval	0.584***	0.005
Employment status	−0.177***	0.007
2006	1.353***	0.024
2007	0.909***	0.027
2009	2.34***	0.021
2010	0.768***	0.017
2011	0.662***	0.021
2012	0.965***	0.021
Intercept	1.684***	0.026
County Random Effects	Std. Deviation	Robust SE
σ(intercept)	0.020***	0.006
σ(in-partisan)	0.026***	0.003
σ(out-partisan)	0.022***	0.003
State Random Effects	Std. Deviation	Robust SE
σ(intercept)	0.025***	0.005
Observations	193,628	
Counties	2,980	
States	51	

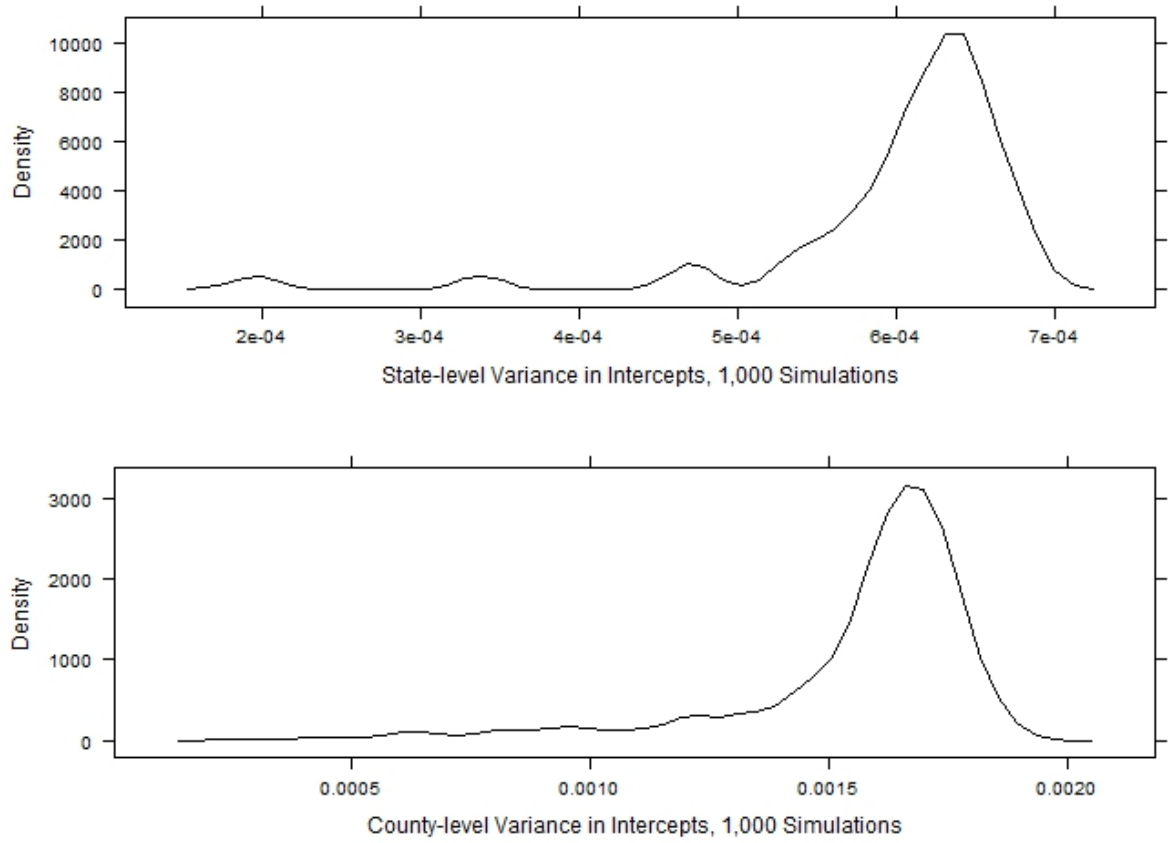
Note: Parameters were estimated via full maximum likelihood with 2008 as the baseline year.

* p<0.05; ** p<0.01; *** p<0.001

[c] Conditional relationship; see marginal effects plots.

level unemployment rates was associated with about a 0.04-point more favorable economic perception. However, given the interactive nature of the model, these coefficients should be interpretted

Figure 4.5. Simulated County- and State-Level Random Intercepts



Notes: Intercepts indicate the expected economic perception of currently employed pure independents with average approval ratings and ideologies in 2008 (the baseline year).

with caution as they represent conditional relationships. More substantively interesting are the interactions between partisanship and net changes in county unemployment rates. Before examining the cross-level interactions, it is useful to examine the random effects at both the county and state levels. On the county-level, the random effects show that the impact of in-party identification on national economic perceptions had a standard deviation of about 0.03 across counties, while the impact of out-party identifications had a standard deviation of about 0.02 across counties. While the random intercepts described above demonstrate variation in mean economic perceptions across contexts, the random effects estimates for in-party strength and out-party strength show how the

relationship between partisanship and economic perceptions varies across contexts.

The more substantively interesting findings are the estimates for the cross-level interactions between partisanship and each of the county- and state-level economic indicators. The coefficients and significance levels for these interactions should be interpretted with caution, as they represent conditional relationships. A more suitable approach to interpretting these relationships is to compute the marginal effects of each measure of partisanship on economic perceptions across the full range of each of the economic indicators.[12]

These marginal effects are plotted in Figure 4.6 and Figure 4.7. Looking first at Figure 4.6, the left panel plots the marginal effect of each one-unit shift in the strength of identification with the incumbent party on economic perceptions across the full range of twelve-month net changes in county unemployment rates. For an in-partisan in a county with about a 14-point decrease in unemployment (a very prosperous local economy), each unit increase in the strength of partisanship was associated with about a 1.25-point more favorable economic perception.[13] An in-partisan in a county with such a drastically declining unemployment rate is exposed to congruent political and economic signals – she feels favorably towards the incumbent political party and is surrounded by positive economic signals. This effect becomes weaker as net decreases in unemployment approach zero – for an in-partisan in a county with no net change in unemployment, each unit shift in the strength of partisanship was associated with about a 0.25-point more favorablel economic perception. This positive effect given no net change in unemployment isn't particularly suprising, however, since we can naturally expect in-partisans to view the economy more favorably than out-

[12]Based on the model expressed in Equation 4.1, marginal effects can be computed for in-partisans as:

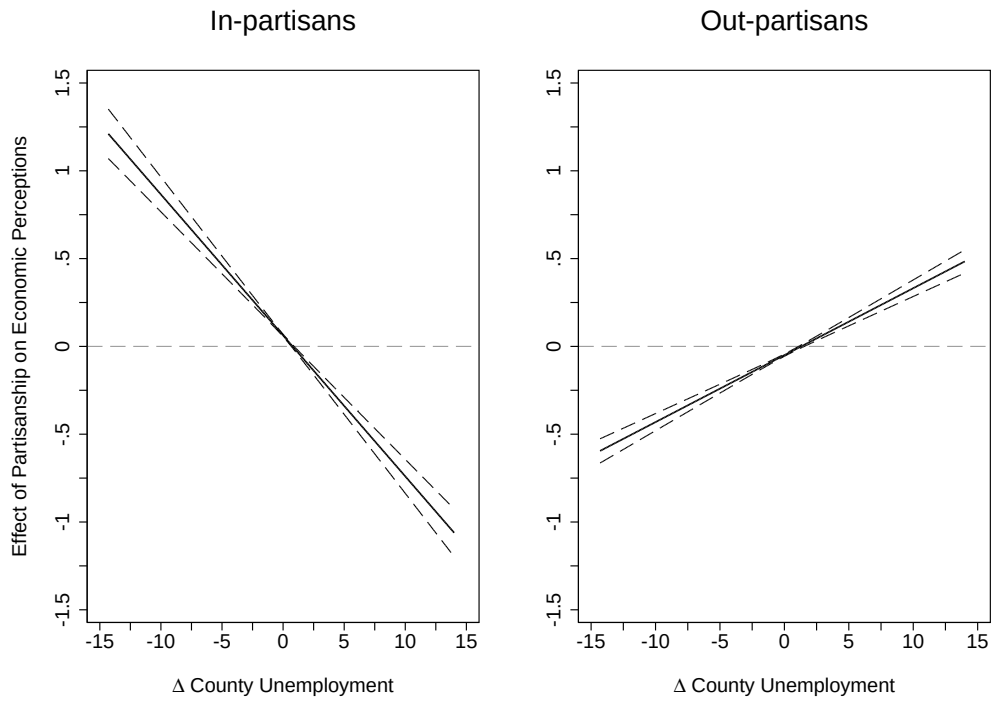
$$\frac{\delta Y}{\delta X} = \beta_{10k} + \beta_{11k}\text{Unemp}_{jk} \tag{4.2}$$

and for out-partisans as:

$$\frac{\delta Y}{\delta X} = \beta_{20k} + \beta_{21k}\text{Unemp}_{jk} \tag{4.3}$$

[13]Note that a county with a 14-point increase or decrease in unemployment is an outlier. However, dropping observations from these outlier counties did not substantively change the results, so those counties were retained here for the purposes of maintaining a good degree of variation in county-level economic performance. Moreover, dropping outlying counties alters the distribution of the individual-level data.

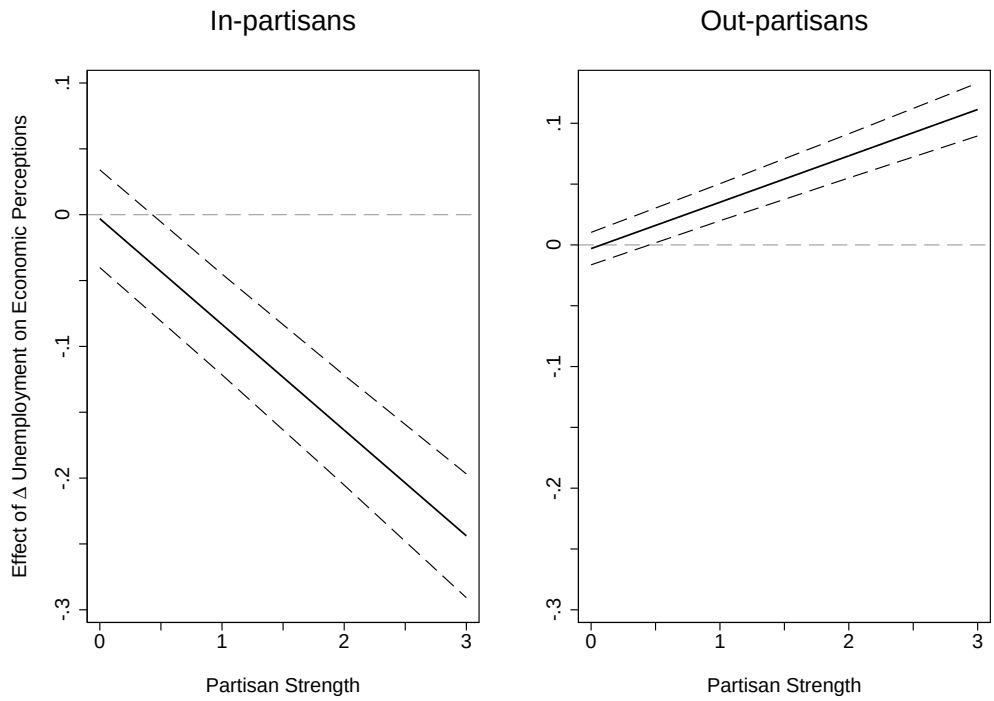
Figure 4.6. Marginal Effects of Partisanship on Economic Perceptions across Net Changes in County Unemployment



Notes: Marginal effects are in comparison to the baseline group (pure independents) across the full range of twelve-month net changes in county unemployment rates; dashed lines indicate the upper and lower bounds of the 95% confidence interval.

partisans. As unemployment rates begin to rise, the effect of identifying with the incumbent party on economic perceptions crosses zero and becomes negative. For an in-partisan in a county with the highest observed net increase in unemployment, each unit shift in the strength of partisanship is associated with about a one-point *less favorable* economic perception. This supports the hypothesis that an in-partisan in a poor economic environment becomes less strongly motivated to view the economy in terms of political identities. Conflicting signals between the local economy and the individual's partisan leaning reduces confidence in partisanship as a cue for evaluating the economy. Comparing in-partisans in counties with the highest decreases and highest increases in unemployment, the effect of in-party strength on economic perceptions changed by about 2.5 points on the five-point scale of economic perceptions.

Figure 4.7. Marginal Effects of Net Changes in County Unemployment on Economic Perceptions across Partisan Strength



Notes: Marginal effect represent the expected change in economic perception based on a one-point net change in unemployment across the range of each partisanship measure; dashed lines indicate the upper and lower bounds of the 95% confidence interval.

The right panel of Figure 4.6 similarly plots the effects of out-party strength on economic perceptions across the full range of net changes in county unemployment rates. For an out-partisan in a county with the highest decrease in unemployment, each unit shift in the strength of identification with the out-party is associated with about a 0.5-point *less favorable* economic perception. This falls in line with the hypothesis that since negative signals are more influential for opinion formation than positive signals, and since out-partisans are more prone to motivated reasoning than in-partisans, an out-partisan in a positive economic environment should still be likely to rely on their partisanship as a cue for evaluating the national economy. As net changes in unemployment approach zero, so too does the effect of out-party strength on economic perceptions. For an out-partisan in a county with no net change in unemployment, the effect of partisanship on eco-

nomic perceptions is slightly negative but almost indistinguishable from zero. As unemployment rates increase, the effect of out-party strength surprisingly becomes positive, but remains relatively weak on the five-point scale of economic perceptions. For an out-partisan in a county with the highest observed increase in unemployment rates, each unit shift in the strength of partisanship is surprisingly associated with about a 0.5-point *more favorable* economic perception. Comparing out-partisans in counties with the highest decreases and highest increases in unemployment, the effect of out-party strength on economic perception change by only about one point on the five-point scale of economic perceptions (compared to 2.5 points for in-partisans). This suggests that in-partisans respond to changes in the local economy more strongly than out-partisans.

When investigating conditional relationships, it is useful to also examine the effect of the moderator variable (in this case, net changes in county unemployment rates) on the outcome across the range of the predictor variable (in this case, in-partisan strength and out-partisan strength). Thus, while Figure 4.6 plotted the effect of partisanship on economic perceptions across changes in unemployment, Figure 4.7 plots the effect of changes in unemployment on economic perceptions across the range of in-party strength (left panel) and out-party strength (right panel). The purpose of this figure is to better illustrate differences in how in-partisans and out-partisans respond to changes in the local economy. Looking first at the left panel, increases in county unemployment rates have a negative effect on economic perceptions, which becomes stronger with the strength of identification with the incumbent party. For pure independents, the effect of changes in unemployment on economic perceptions was indistinguishable from zero. For in-party leaners, increases in unemployment were associated with about a 0.1-point less favorable economic perception; for weak in-partisans, increases in unemployment were associated with about a 0.15-point less favorable economic perception; and for strong in-partisans, increases in unemployment were associated with about a 2.5-point less favorable economic perception. This lends more support to the expectation that in-partisans become less likely to view the economy in light of their party identification when surrounded by deteriorating economic conditions.

The right panel of Figure 4.7 similarly plots the effect of rising unemployment on economic

perceptions across the strength of identification with the out-party. Surprisingly, out-partisans seem to view the economy more favorably as county unemployment rates rise, although these effects are again weak relative to the five-point scale of economic perceptions. Increases in county unemployment rates lead to only about a 0.25-point more favorable economic perception for out-partisan leaners; about 0.5-points more favorable for weak out-partisans; and about one-point more favorable for strong out-partisans. While it is surprising that out-partisans seem to view the national economy more favorably as their local economy deteriorates, these effects are very small in magnitude.

4.4.1 Political Knowledge and the Local Economy

Another goal of this chapter is to investigate the role that knowledge plays in how voters benchmark their economic assessments based on the local economy. Does the extent to which the local economy moderates partisan motivations vary with levels of knowledge? Chapter 2 established that the motivation to preserve prior beliefs when evaluating the national economy became stronger with increasing levels of political knowledge, particularly for in-partisans. More knowledgeable citizens are better able to manipulate and counterargue belief-inconsistent facts than less knowledgeable citizens. But how does the tendency for voters to base economic opinions on the performance of the local economy vary with levels of knowledge? Do citizens require some sufficient amount of knowledge or sophistication in order to proper utilize and respond to signals from the local economy? Or if motivated reasoning is strongest among the most knowledgeable citizens, then are those same citizens more likely to ignore signals from the local economy and rely instead strictly on partisanship when evaluating the national economy? The last portion of this analysis tests the dual influences of local economic signals and political knowledge for how partisans form their economic perceptions. The results should shed light on how the moderating influence of the local economy on the motivated reasoning of partisans when evaluating the national economy might vary with an individual's level of information.

To this point, the findings presented in this chapter reflect those from the previous chapter

Table 4.2. Mixed Effects Estimates of Economic Perceptions as a Function of Partisanship, Local Economic Performance, and Political Knowledge

Fixed Effects	Estimate	Robust SE[a]
In-partisan	0.063[c]	0.003
Out-partisan	−0.051[c]	0.003
Education	0.064[c]	0.004
Δ St. employment	0.001	0.007
Δ Co. employment	0.030[c]	0.005
Δ Co. employment*in-partisan	−0.081[c]	0.005
Δ Co. employment*out-partisan	0.038[c]	0.003
Δ County unemployment*education	−0.025[c]	0.003
Δ County unemployment*education*in-partisan	−0.002[c]	0.002
Δ County unemployment*education*out-partisan	0.001[c]	0.001
County population (logged)	0.030***	0.005
Ideology	0.047***	0.005
Presidential approval	0.584***	0.004
Employment status	−0.176***	0.007
2006	1.356***	0.025
2007	0.906***	0.028
2009	2.332***	0.021
2010	0.770***	0.019
2011	0.677***	0.020
2012	0.977***	0.020
Intercept		

County Random Effects	Std. Deviation	Robust SE
σ(intercept)	0.019***	0.006
σ(in-partisan)	0.025***	0.003
σ(out-partisan)	0.023***	0.003
σ(education)	0.013***	0.006

State Random Effects	Std. Deviation	Robust SE
σ(intercept)	0.022***	0.005

Observations	193,628
Counties	2,980
States	51

Note: Parameters were estimated via full maximum likelihood with 2008 as the baseline year.

[a] White-Huber corrected standard errors.

* p<0.05; ** p<0.01; *** p<0.001

[c] Conditional relationship.

which focused on state-level economic performance. This seems to suggest that partisans respond similarly to both the county- and state-level economies when evaluating the national economy. But what role does knowledge play for how partisans benchmark their economic assessments? This chapter also aims to address the extent to which the local economy moderates partisan biases in economic perceptions varies based on an individual's level of political knowledge. Table 4.2 estimates a model similar to that shown in Table 4.1, but differs in that it also includes educational attainment in the interaction term.[14]

Before examining the results in Table 4.2, important data limitation issues need to be addressed. Perhaps one of the ugliest aspects of studying political knowledge lies in its measurement. In Chapter 2, I constructed reliable measures of political knowledge from survey items included in the 1988 and 2012 American National Election Studies (ANES). The degree of consistency in survey content and question wording between these two surveys provided a useful opportunity to investigate the role of knowledge for the formation of economic perceptions during two distinctly different time periods. Chapter 3 did not include a measure of knowledge (besides a control for educational attainment), due to the lack of consistency across the 1980-2012 ANES studies. Rather, the purpose of Chapter 3 was to capitalize on the state-level variation in economic performance offered by the pooled survey time series – hence a trade-off between being able to produce adequate measures of political knowledge and being able to conduct a multilevel analysis of individuals nested within counties or states. The pooled CCES data used in this chapter poses the same benefits and limitations as the pooled ANES data used in the previous chapter. The CCES data provides sample sizes within counties and states which allow for an appropriate multilevel analysis, but they lack the content and consistency needed for construction of a knowledge measure such as that used in Chapter 2. The only variable used in the CCES surveys which provided any kind of measure of a respondent's level of information was educational attainment. Most of the surveys included a battery of items asking respondents to place various political figures on ideological scales (similar to those used to construct the knowledge measures in Chapter 2), but the scale of

[14]Note that education is also standardized in Table 4.2 to have a mean of zero and a standard deviation of one. Doing so facilitates easier interpretation of interaction terms, random intercepts, and random effects.

those items differed across surveys. Some surveys used 100-point ideological scales, while others used the ANES 7-point scales. Moreover, each survey different in the content of those batteries of questions – some included presidential candidates (during the 2008 and 2012 surveys, although the 2008 survey used a 100-point scale and the 2012 survey used a 7-point scale); some included the political parties themselves; and some included individual political figures that could not be compared to another figure.[15] One avenue might be to analyze only a single survey year from the CCES data, constructing a measure of knowledge based on that year's content. But doing so restricts the county and state levels from having any temporal variation in economic performance. Using the 2012 ANES survey would allow the use of the same knowledge measure from Chapter 2, but poses the same restriction as using a single CCES survey for conducting a multilevel analysis. Thus, the data used in this project prevent a truely satisfactory multilevel analysis of partisanship, local economic performance, and an adequate measure of political knowledge.

The simplest available solution, which numerous other scholars have used, is to simply use educational attainment as a proxy for political knowledge. Scholars disagree over the use of education as a measure of political knowledge or sophistication, but this study is not meant as a contribution to the measurement debate. I use educational attainment here as a measure of knowledge simply due to the data available – constructing a knowledge measure for a single year prevents an adequately nested data structure, while pooling multiple surveys prevents construction of an adequate measure of political knowledge.

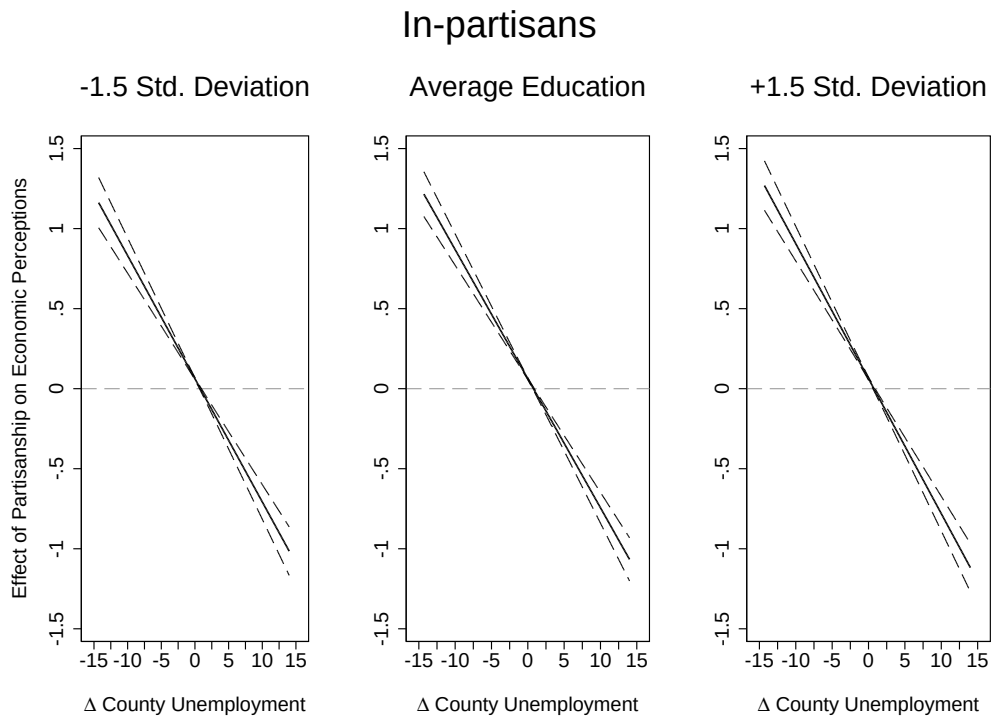
Turning now to the results in Table 4.2, I estimate three-way interactions between each measure of partisanship, educational attainment, and net changes in county unemployment rates. Note that educational attainment is standardized to have a mean of zero and a standard deviation of one. The standardized measure ranges from about -1.7 standard deviations below mean education levels to about 1.6 standard deviations above mean education levels. The model shown here is essentially the same as that expressed in Equation 4.1 with one additional term added to the interaction. The

[15]For example, the knowledge measure used in Chapter 2 included items comparing respondents' ideological placement of presidential candidates, coded as correct if the Republican candidate was placed to the right of the Democratic candidate. Thus, two comparable items are needed to construct a correct/incorrect measure of knowledge.

coefficients for the three-way interactions show how, and to what extent, the moderating influence of the local economy for the relationship between partisanship and economic perceptions varies based on an individual's education. In other words, based on the hypotheses described earlier in this chapter, the moderating effect of the local economy should diminish as levels of knowledge increase. More highly educated citizens should be better able to systematically counter-argue facts which contradict their political beliefs. Thus, even if the local economy is performing poorly, a highly knowledgeable in-partisan can be expected to still evaluate the national economy in terms of their own political identity. Surprisingly, the results shown in Table 4.2 do not lend support to this argument. The lack of statistical significance for the three-way interactions suggest that the moderating effect of the local economy is not significantly different for individuals with high or low levels of knowledge. But as stated earlier, coefficients of multiplicative interaction terms and their statistical significance should be interpretted with caution. Separate marginal effects plots for different levels of educational attainment provides a more intuitive way of assessing the interactive influences of partisanship, education, and county unemployment for how partisans view the national economy.

In order to better illustrate the findings shown in Table 4.2, the marginal effects of partisanship on economic perceptions across the observed range of county unemployment rates are plotted for in-partisans and out-partisans in Figure 4.8 and Figure 4.9, respectively. In each figure the left panel plots the marginal effects of partisanship across changes in unemployment for respondents with one and a half standard deviations below the mean level of educational attainment; the center panel plots the marginal effects for respondents with mean levels of educational attainment; and the right panel plots the marginal effects for respondents with one and a half standard deviations above the mean level of educational attainment. Note again that once standardized, education ranged from just over one and a half standard deviations below the mean to just over one and a half standard deviations above the mean. Thus, the 1.5 standard deviation differences shown in Figure 4.8 and Figure 4.9 roughly represent the minimum, mean, and maximum levels of education among CCES respondents. As suggested by the results shown in Table 4.2, there is essentially

Figure 4.8. Marginal Effects of In-Partisan Strength on Economic Perceptions across Net Changes in County Unemployment, by Educational Attainment

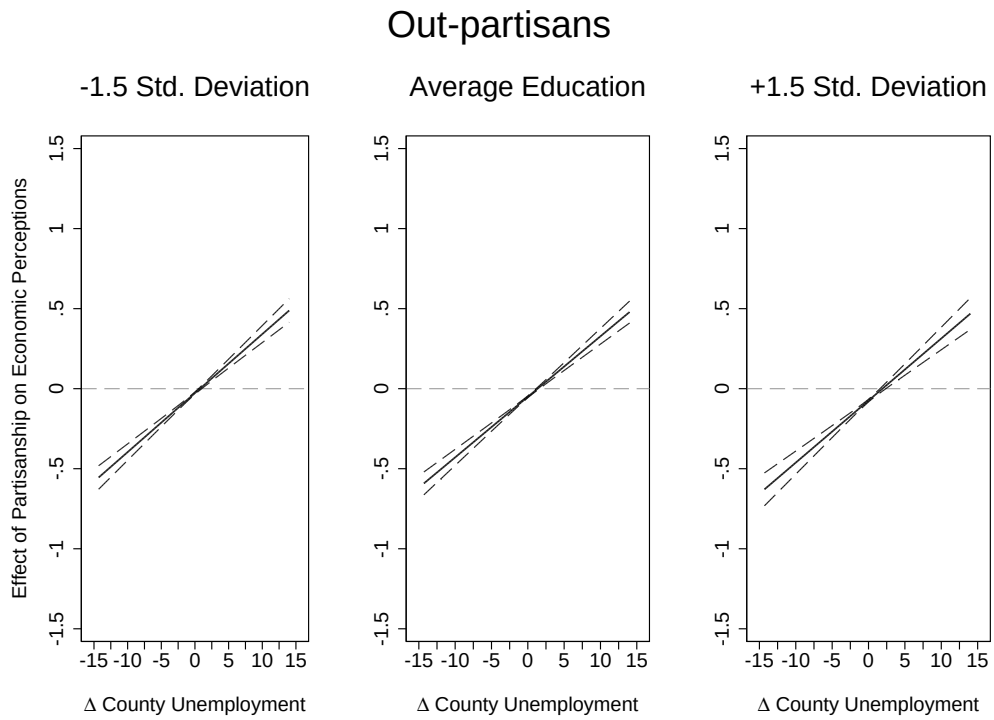


Notes: Marginal effect represent the expected change in economic perception based on a one-point shift in the strength of identification with the incumbent party across net changes in county unemployment rates; dashed lines indicate the upper and lower bounds of the 95% confidence interval. Note that the standardized measure of educational attainment ranged from 1.7 standard deviations below the mean to 1.6 standard deviations above the mean. For simplicity, the plots shown here show 1.5 standard deviations above and below the mean level of education.

no difference in the marginal effects of partisanship across unemployment for different levels of educational attainment. For in-partisans with all levels of education in counties with about 15% decreases in unemployment rates (the minimum observed value), each unit increase in the strength of partisanship had a marginal effect of about 1.25 on retrospective evaluations of the national economy. This effect dropped off as county unemployment rates increased. For in-partisans across all education levels in counties with about 15% increases in unemployment (the maximum observed value), each unit increase in the strength of partisanship had a marginal effect of about -1.0 on evaluations of the national economy.

Figure 4.9 similarly plots the effect of out-party identities on economic perceptions across

Figure 4.9. Marginal Effects of Out-Partisan Strength on Economic Perceptions across Net Changes in County Unemployment, by Educational Attainment



Notes: Marginal effect represent the expected change in economic perception based on a one-point shift in the strength of identification with the out-party across net changes in county unemployment rates; dashed lines indicate the upper and lower bounds of the 95% confidence interval. Note that the standardized measure of educational attainment ranged from 1.7 standard deviations below the mean to 1.6 standard deviations above the mean. For simplicity, the plots shown here show 1.5 standard deviations above and below the mean level of education.

the observed range of net changes in county unemployment rates for respondents with low, medium, and high levels of knowledge. The results are similar to those shown in Figure 4.8, but somewhat weaker. For out-partisans across all education levels in counties with the lowest observed net changes in unemployment, each unit increase in the strength of partisanship had a marginal effect of about -0.50 points on economic perceptions. This effect increased to about 0.50 points for out-partisans in states with the highest observed net changes in unemployment rates.

There are three possible explanations for this null finding. First, the lack of support for this chapter's third hypothesis could simply be an artifact of the data. If a more adequate measure of political knowledge were available, the results might look different. However, this is less likely

than the following two explanations. Second, it might be the case that any moderating influence of the local economy for how partisans evaluate the national economy overrides any moderating influence of political knowledge. This would suggest that signals from the local economy are a more powerful factor for shaping how partisans benchmark their economic assessments than an individual's level of knowledge. Third, and conversely, it could also be the case that the moderating influence of political knowledge overrides any influence of signals from the local economy. This would suggest that political knowledge is a more powerful factor for how partisans view the national economy than the performance of the local economy. Unfortunately, the data presented here do not allow for these explanations to be unraveled in much more detail. This study has shown that both political knowledge and the local economic environment independently shape how partisans form perceptions of the national economy, but much work remains to be done in order to understand how knowledge and local economic performance might work together to shape how partisans evaluate the national economy.

4.5 Conclusions

The findings presented in this chapter demonstrate that the individual- and state-level relationships shown in Chapter 3 of this study also extend to the county-level. For in-partisans in counties with rising unemployment rates, the effect of partisanship on perceptions of the national economy become weaker. However, at the county-level net changes in unemployment rates also exert a significant moderating effect on the relationship between out-party identities and economic perceptions – for out-partisans in counties with declining unemployment, the results show a negative effect of partisanship on economic perceptions. While this does not reflect the mostly null findings for out-partisans shown in Chapter 3, these effects at the county-level are still substantially weaker for out-partisans than for in-partisans.

CHAPTER 5

CONCLUSIONS

This study has demonstrated that some of the variation in national economic perceptions can be explained by the direction of an individual's partianship, level of political knowledge, and the local economic environment. While previous research has emphasized the influence of subjective factors such as partisanship on how citizens view objective economic performance – those identifying with the incumbent party tend to view the economy more favorably than those opposed to the incumbent party. The findings presented here show that this influence of partisan motivated reasoning is not constant across individuals. A recurring theme throughout the preceding analyses has been that in-partisans and out-partisans weigh their political attitudes differently when evaluating the economy.

Chapter 2 showed that partisan motivations in national economic perceptions are moderated by levels of political knowledge, but only for in-partisans. As in-partisans become more knowledgeable, they become better able to interpret facts in belief-consistent ways and counter-argue belief-inconsistent facts. As a result we see stronger evidence of motivated reasoning among in-partisans with the highest levels of political knowledge. Out-partisans, on the other hand, seem to be somewhat isolated from this conditional influence of knowledge. Out-partisans with both low and high levels of political knowledge were almost equally as likely to view the economy unfavorably. These findings suggest fundamental differences in what role partisanship plays for opinion formation. Asymmetries between in-partisans and out-partisans is a theme that has been echoed throughout this study.

In Chapter 3 this study demonstrated that state-level economic performance moderated the influence of partisanship on economic perceptions for individuals identifying with the incumbent

presidential party, but not for those identifying with the opposition party. For out-partisans, the effect of partisanship on economic perceptions remained mostly the same regardless of changes in a given state's economic performance. Moreover, these moderating effects were stronger when economic performance was measured in terms of twelve-month net changes in state unemployment rates – percent changes in per capita disposable income from the fiscal period preceding each ANES survey year played a much weaker role. This is likely due to the fact that income levels tend to vary across contexts with the cost of living, as well as over time with levels of inflation. The implication is that income measures make it difficult to compare economic performance across localities and over time, while net changes in local unemployment rates serve as a more suitable measure of local economic performance.

In an extension of Chapter 3's analysis, Chapter 4 demonstrated similar findings by measuring local economic performance at the county-level. For in-partisans in counties with rising unemployment, the effect of partisanship was substantially weaker than for those in counties with declining unemployment. The reverse was true for out-partisans – those in counties with declining unemployment displayed weaker effects of partisanship on economic perceptions than those residing in counties with rising unemployment. Chapter 4 also tested the moderating role of political on the extent to which partisanship shapes national economic perceptions. Somewhat suprisingly, these results showed that the conditional role of the local economy on the formation of economic perceptions did not vary significantly across levels of political knowledge. This likely suggests that the influence of changes in the local economic environment tend to overshadow the moderating influence of political knowledge for partisans.

These findings raise important implications not only for our understanding of how voters form perceptions of the national economy, but how partisans form their political opinions in general. This study has demonstrated that the cognitive processes through which citizens come to form economic opinions vary not only with subjective characteristics of the individual, but also with the contexts in which those individuals exist. In the past scholars have used the relationship between political and economic attitudes to make broad claims about the quality of democracy in

the United States. The findings presented here make it evident that such normative claims should be made with caution, as the decision-making processes of voters vary on the with the direction of an individual's political attitudes as well as with the environment that surrounds the individual. The quality of democracy and the presence of electoral accountability are never the same for any two individuals or any two localities. Instead, scholars need to take a better account of contextual effects when measuring public opinion and when gauging democratic performance overall.

5.1 **Author's Note**

A theme that has resonated throughout this study is that through motivated reasoning, partisans view the national economy in ways congruent with their political leanings – in-partisans view the economy favorably while out-partisans view the economy unfavorably. The purpose of this study has been to demonstrate how objective economic performance *below* the national-level moderates these partisan biases in economic perceptions. It is important that readers do not interpret the theoretical arguments or analytical findings of this study to imply any unidirectional causal relationship between political and economic attitudes. My goal has not been to discredit decades of research showing an influence of the economy on the electoral success of incumbent political figures. Nor has my goal been to discredit arguments that American voters are either incapable of or unwilling to update their political leanings based on subjective economic assessments. Rather, the goal of this study was to highlight the infinitely complex cognitive processes through which subjective economic perceptions are formed. Readers should not interpret the results of the preceding analyses as an assessment of the quality of democracy in the United States, but as evidence that such normative assessments should be made with caution. The possibility remains that some citizens might update their political leanings based on signals from their local economic environment. While the formation of economic perceptions prove to be tiresomely complicated, the inevitable truth is that despite levels of knowledge, political attitudes, economic opinions, or contextual characteristics, no two voters are alike. To make any generalizing claim about the quality of democracy in the United States is at best naive; to do so is to miss the forest for the trees.

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APPENDICES

CHAPTER 2 APPENDIX

Table A1. Summary Statistics, 1988 American National Election Study

	N	Mean	St. Dev.	Min	Max
Economic perceptions	1,170	1.92	0.72	1	3
In-party strength	1,170	0.96	1.17	0	3
Out-party strength	1,170	0.93	1.16	0	3
Presidential approval	1,170	2.72	1.19	1	4
Ideology	1,170	4.36	1.38	1	7
Employment status	1,170	0.04	0.19	0	1
Female	1,170	0.52	0.50	0	1
Nonwhite	1,170	0.13	0.34	0	1
Education	1,170	4.06	1.66	1	7
Age	1,170	44.45	16.74	17	92
General knowledge	1,170	0.59	0.24	0.00	1.00
Office Recognition	1,170	0.56	0.29	0.00	1.00
Ideological knowledge	1,170	0.56	0.30	0.00	1.00
Factual knowledge	1,170	0.66	0.28	0.00	1.00

Table A2. Summary Statistics, 2012 American National Election Study

	N	Mean	St. Dev.	Min	Max
Economic perceptions	4,733	2.00	0.81	1	3
In-party strength	4,733	1.16	1.27	0	3
Out-party strength	4,733	0.76	1.13	0	3
Presidential approval	4,733	2.56	1.28	1	4
Ideology	4,733	4.16	1.48	1	7
Employment status	4,733	0.07	0.26	0	1
Female	4,733	0.50	0.50	0	1
Nonwhite	4,733	0.37	0.48	0	1
Education	4,733	4.53	1.57	1	7
Age	4,733	50.25	16.51	17	90
General knowledge	4,733	0.67	0.21	0.00	1.00
Office Recognition	4,733	0.47	0.29	0.00	1.00
Ideological knowledge	4,733	0.76	0.27	0.00	1.00
Factual knowledge	4,733	0.66	0.19	0.00	1.00

Table A3. Exploratory Factor Analysis of Political Knowledge Items, 1988 American National Election Study

	Factor Loading[a]
Speaker	0.40
UK Prime Minister	0.46
Arafat	0.53
Russian Prime Minister	0.48
Secretary of State	0.51
Ted Kennedy	0.43
Party Ideology	0.63
Party Gov't Services	0.56
Party Defense Spending	0.56
Party Healthcare	0.64
Party Job Guarantees	0.61
Party Minority Aid	0.37
Candidate Ideology	0.62
Candidate Gov't Services	0.56
Candidate Defense Spending	0.59
Candidate Healthcare	0.58
Candidate Job Guarantees	0.63
Candidate Minority Aid	0.39
ΔUnemployment	0.31
ΔInflation	0.46
ΔDeficit	0.30
More Conservative Party	0.43
Senate Party	0.47
House Party	0.51

Note: Entries are unrotated principal factor loadings.

[a] The single retained factor explained 64% of the total variance in the latent construct.

Table A4. Exploratory Factor Analysis of Political Knowledge Items, 2012 American National Election Study

	Factor Loading[a]
Speaker of the House	0.50
Vice President	0.42
UK Prime Minister	0.40
Treasury Secretary	0.54
UN Secretary General	0.36
Party ideology	0.62
Party gov't services	0.53
Party defense spending	0.58
Party healthcare	0.63
Party job guarantees	0.62
Candidate ideology	0.60
Candidate gov't services	0.50
Candidate defense spending	0.59
Candidate healthcare	0.59
Candidate job guarantees	0.58
Candidate aid to minorities	0.46
Candidate environment	0.52
Current unemployment	0.38
Where to vote	0.29
Presidential terms	0.28
Senate terms	0.41
More conservative party	0.51
House election outcome	0.41
Size of deficit	0.38
What is medicare?	0.26
Federal spending	0.26

Note: Entries are unrotated principal factor loadings.

[a] The single retained factor explained 65% of the total variance in the latent construct.

CHAPTER 3 APPENDIX

All of the items listed below were included on each of the ANES time-series surveys from 1980 through 2012. Exact question wordings varied slightly in some years but can be found in the ANES cumulative codebook at http://www.electionstudies.org/studypages/cdf/cdf.htm. Each variable's name in the codebook is listed below.

Survey Variable Codings

Retrospective Economic Perceptions (VCF0871)

"Would you say that over the past year the nation's economy has gotten better, stayed about the same, or gotten worse?"
"Would you say much better [worse] or somewhat better [worse]?"

1 Much worse
2 Somewhat worse
3 About the same
4 Somewhat better
5 Much better

Partisanship (VCF0301)[1]

"Generally speaking, do you usually think of yourself as a Republican, a Democrat, an Independent, or what?"
"Would you call yourself a strong Democrat [Republican] or a not very strong Democrat [Republican]?"
For Independents: "Do you think of yourself as closer to the Republican or Democratic Party?"

-3 Strong out-party
-2 Weak out-party
-1 Independent leaning out-party
0 Pure independent
1 Independent leaning in-party
2 Weak in-party
3 Strong in-party

[1]The original coding for partisanship was a seven point scale ranging from strong Democrat to strong Republican. The measure was reverse coded for survey years in which a Democrat held the presidency and centered over zero (pure Independents) so that positive values indicate identification with the incumbent presidential party and negative values indicate identification with the out-party.

In-Partisan Strength

0 Pure independent or out-partisan
1 In-partisan leaning independent
2 Weak in-partisan
3 Strong in-partisan

Out-Partisan Strength

0 Pure independent or in-partisan
1 Out-partisan leaning independent
2 Weak Out-partisan
3 Strong Out-partisan

Employment Status (VCF0116)

0 Working now; retired; permanently disabled; homemaker; student
1 Temporarily laid off; unemployed

Education (standardized in analysis) (VCF0140a)

1 8 grades or less and no diploma or equivalency
2 9-11 grades with no further schooling
3 High school diploma or equivalency test
4 More than 12 years of schooling with no higher degree
5 Junior or community college level degree
6 B.A. level degree
7 Advanced degree

Nonwhite (VCF0106a)

0 White
1 Nonwhite

Female (VCF0104)

0 Male
1 Female

Age (standardized in analysis) (VCF0101)

# of years

Table A5. Survey Variable Means and Standard Deviations

Variable	Mean	Standard Deviation	Observations
Retrospective evaluations	2.61	1.44	29,404
Prospective evaluations	2.04	0.76	25,838
Partisanship	−0.02	2.11	29,514
In-partisan strength	0.92	1.17	29,514
Out-partisan strength	0.94	1.17	29,514
Presidential approval	2.58	1.21	28,691
Employment status	0.07	0.25	29,771
Education	3.96	1.66	29,754
Nonwhite	0.22	0.41	29,810
Female	0.55	0.50	29,689
Age	46.72	17.50	30,005

Source: 1980-2012 ANES Time-Series Surveys.

Table A6. Sample Sizes by State, 1980-2012 American National Election Studies

State	Observations	State	Observations
Alabama	22	Montana	37
Alaska	17	Nebraska	145
Arizona	389	Nevada	115
Arkansas	472	New Hampshire	274
California	3,189	New Jersey	739
Colorado	611	New Mexico	214
Connecticut	405	New York	1,895
Delaware	68	North Carolina	772
District of Columbia	47	North Dakota	72
Florida	1,508	Ohio	1,180
Georgia	1,045	Oklahoma	179
Hawaii	20	Oregon	576
Idaho	37	Pennsylvania	984
Illinois	958	Rhode Island	58
Indiana	800	South Carolina	257
Iowa	464	South Dakota	52
Kansas	399	Tennessee	934
Kentucky	169	Texas	2,486
Louisiana	466	Utah	243
Maine	63	Vermont	22
Maryland	543	Virginia	1,088
Massachesetts	670	Washington	638
Michigan	1,423	West Virgina	297
Minnesota	774	Wisconsin	782
Mississippi	161	Wyoming	317
Missouri	469		

Table A7. Net Changes in State Unemployment, by Survey Year

Year	Mean	Standard Deviation	Minimum	Maximum
1980	1.55	1.01	0.30	3.80
1982	2.26	1.03	0.70	6.40
1984	−1.19	0.53	−2.20	0.00
1986	−0.12	0.95	−1.40	2.40
1988	−0.49	0.45	−1.90	0.40
1990	0.66	0.68	−0.60	2.70
1992	0.31	0.81	−1.00	2.00
1994	−0.96	0.53	−2.00	0.10
1996	−0.28	0.37	−0.90	0.70
1998	−0.23	0.31	−1.20	0.50
2000	−0.10	0.36	−0.70	1.10
2002	0.33	0.39	−0.60	1.70
2004	−0.51	0.44	−1.20	0.70
2008	2.16	0.83	0.40	3.70
2012	−0.84	0.50	−1.90	.10
Full Sample	0.01	1.22	−2.20	6.40

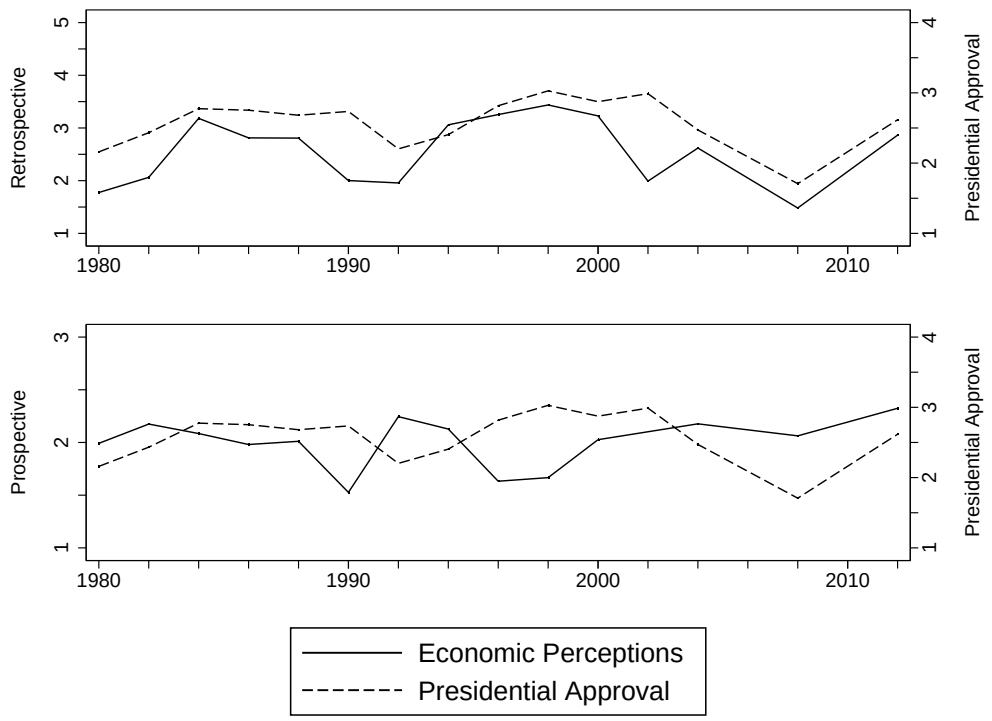
Notes: Unemployment data were obtained from the United States Bureau of Labor Statistics and are seasonally adjusted. Net changes indicate the 12-month change from November of the previous year to November of each survey year.

Table A8. Percent Changes in Per Capita Disposable Income, by Survey Year

Year	Mean	Standard Deviation	Minimum	Maximum
1980	10.21	1.58	6.15	12.94
1982	6.53	1.45	2.92	10.83
1984	10.18	1.60	6.21	14.17
1986	5.22	1.53	1.26	7.11
1988	7.56	1.83	2.79	10.89
1990	5.32	1.50	0.22	9.32
1992	5.97	1.17	3.84	7.94
1994	4.03	1.33	2.29	8.74
1996	4.18	1.00	−1.17	10.24
1998	5.65	1.29	3.25	8.90
2000	6.36	0.97	4.08	9.38
2002	3.49	1.07	1.02	6.01
2004	5.23	0.99	3.61	8.63
2008	4.18	2.66	−0.69	13.14
2012	3.13	0.81	−0.19	16.27
Full Sample	5.47	2.61	−1.17	16.27

Notes: Income data were obtained from the United States Bureau of Economic Analysis. Changes in per capita disposable income are measured as the percent change from the period prior to November of each survey year.

Figure A1. Economic Perceptions and Presidential Approval, 1980-2012



Notes: Data were obtained through the American National Election Studies, 1980-2012 Time Series Studies. For both economic perceptions and presidential approval, higher values indicate more positive evaluations.

Table A9. Mixed Effects Models of Economic Perceptions and Presidential Approval

	Model 3 Retrospective		Model 4 Prospective	
Fixed Effects	β	S.E.	β	S.E.
Approval	0.17^{***}	(0.02)	0.04^{**}	(0.02)
Approval*ΔUnemployment	-0.04^{c}	(0.01)	-0.02^{c}	(0.01)
Approval*Unemployment	0.03^{c}	(0.004)	0.03^{c}	(0.00)
Approval*Δ PCDI	0.03^{c}	(0.003)	0.01^{c}	(0.00)
Approval*log(PCDI)	0.21^{c}	(0.02)	0.09^{c}	(0.01)
PID	0.04^{***}	(0.003)	0.02^{***}	(0.003)
Employment Status	-0.21^{***}	(0.03)	0.05^{***}	(0.02)
Education	0.05^{***}	(0.01)	0.01^{*}	(0.00)
Nonwhite	-0.03^{*}	(0.02)	0.09^{***}	(0.02)
Female	-0.15^{***}	(0.01)	-0.05^{***}	(0.01)
Age	-0.01^{***}	(0.00)	-0.01^{***}	(0.00)
Age-squared	0.00^{***}	(0.00)	0.00^{***}	(0.00)
Intercept	2.34^{***}	(0.11)	1.89^{***}	(0.06)
Random Effects	γ	S.E.	γ	S.E.
Δ Unemployment	-0.18^{***}	(0.01)	0.02^{**}	(0.01)
Unemployment	-0.12^{***}	(0.01)	0.00	(0.01)
Δ PCDI	-0.08^{***}	(0.01)	0.00	(0.01)
log(PCDI)	-0.66^{***}	(0.08)	0.03	(0.03)
$\sigma_{Approval}$	0.04^{***}	(0.007)	0.02^{***}	(0.007)
$\sigma_{Intercept}$	0.14^{***}	(0.03)	0.03^{***}	(0.01)
$\text{Cov}(\sigma_{Approval}, \sigma_{Intercept})$	-0.79^{***}	(0.15)	1.00^{***}	$(3.6e-6)$
Observations	27,119		24,049	
Groups	51		51	
Wald Chi^2	$6,536.67^{***}$		$1,191.99^{***}$	

Note: Entries indicate maximum likelihood estimates with an unrestricted covariance structure; robust tandard errors are shown in parentheses. The dependent variable in Model 3 is a five-point measure of retrospective economic evaluations ranging from "much worse" to "much better"; the dependent variable in Model 4 is a three-point measure of prospective economic evaluations ranging from "worse" to "better."

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

^{c} Conditional relationship – see marginal effects for statistical significance

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