

## **PUBLIC ATTITUDES ABOUT MACROECONOMIC POLICY IN THE U.S.<sup>1</sup>**

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## Abstract

This study is the first to demonstrate whether the organization of attitudes about macroeconomic policies in the American public parallels the major schools of economic thought. We find that Americans align across a dimension defined by Keynesian and neoclassical policy views, but we also find that Americans do not fall into two polarized camps. Moreover, it is the first analysis to demonstrate the relationship of macroeconomic attitudes with partisanship, general ideology, retrospective economic evaluations, and sophistication. The analysis exploits a long panel—11 waves over the 2012-2017 period—that allows for analysis of individual-level change in attitudes, which we find to be much greater among Republicans than Democrats during the period under study. We find a strong relationship between opinion on macroeconomic policy issues and partisanship and general ideology, a very modest relationship between macroeconomic policy issues and retrospective economic evaluations, and substantial stability with measurable change. And we demonstrate the macroeconomic economic attitudes are related to presidential vote in 2016, although the effect is much smaller than the effect of partisanship, general ideology, and retrospective economic evaluations.

**Key words:** Public opinion, macroeconomics, economic policy, partisanship, retrospective economic evaluations

## **Public Attitudes about Macroeconomic Policy in the U.S.**

Over the last century, most economists and a large majority of ordinary citizens have accepted that the government should play a significant role in managing the economy by adopting policies that foster employment, encourage economic growth, and control inflation. Nevertheless, economists and the American publics have always exhibited considerable variation about the proper form, extent, and timing of government intervention. The historically severe Great Recession (2007-2009) changed some views and initiating some new directions in macroeconomic thinking,<sup>2</sup> but there is reason to believe that the economic views of policy-making elites have more fully sorted into two broadly defined schools of thought in recent decades that we define as Keynesian and neoclassical.

Everyone wants a healthy economy, but there are sharp disagreements about the macroeconomic policies that make it possible. Within contemporary macroeconomic theory, there are competing schools of thought with alternative recommendations about how to manage the economy – and, in particular, how to revive a lagging economy, such as the circumstances that prevailed during and after the Great Recession. Yet remarkably little is known about the attitudes of Americans toward macroeconomic policies and their electoral impact. Social science and popular survey research have given considerable attention to fiscal policies regarding taxing and spending, but the correspondence between

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<sup>2</sup> Examples include much greater emphasis on the zero lower bound for interest rates set by monetary policy and concerns about “secular stagnation.”

Americans' attitudes and the major schools of economic thought that inform policy making remains unexamined, as do the political foundations and implications of those attitudes.

Our purpose in this paper is to report tentative answers to four questions. Do public attitudes about macroeconomic policy align with the two major schools of economic thought—the Keynesian and neoclassical schools? What economic, political, and social factors influence those macroeconomic attitudes? How, and among which individuals, have those macroeconomic attitudes changed in recent years? Do attitudes about macroeconomic policies influence vote choice in presidential elections?

We address these questions using a national panel study conducted from July 2012 to July 2017. The panel allows us to identify both cross-sectional variation in public attitudes about macroeconomic policies and the degree of temporal stability of those views. We find that Americans are aligned on a dimension defined by Keynesian and neoclassical policy views, but we also find that Americans do not fall into two polarized camps. We also find a strong relationship between opinion on macroeconomic policy issues and partisanship and general ideology, a very modest relationship between macroeconomic policy issues and retrospective economic evaluations, and substantial stability with measurable change. And we demonstrate the macroeconomic economic attitudes are related to presidential vote in 2016, although the effect is much smaller than the effect of partisanship, general ideology, and retrospective economic evaluations.

### **Macroeconomic Schools of Thought and Public Attitudes**

Our analysis focuses on public attitudes about macroeconomic policies and their relationship with two major schools of economic thought: Keynesian and neoclassical. The British economist John Maynard Keynes wrote his seminal *General Theory of Employment,*

*Interest, and Money* in 1936 as an attempt to explain the economic collapse of the Great Depression. He is best known for recognizing the limits of market adjustment alone in correcting the cyclical unemployment caused by economic recession. He diagnosed the cause of economic stagnation and unemployment as the result of insufficient spending or “aggregate demand.” His work, and that of many of his followers, argues that a poorly-performing economy may not be able to correct itself quickly. But if the source of a weak economy is low aggregate demand, then government policy can stimulate the economy through measures that increase private or public spending—tax cuts, stimulus spending, and expansionary monetary policy. Also, higher household spending, and therefore lower saving (holding after-tax income constant) can improve economic conditions. Mainstream Keynesians usually see the problem of insufficient demand as temporary, although it can persist for years, especially if the government does not take actions to stimulate spending. A more fundamentalist Keynesian view places a higher priority on the importance of demand stimulus over a longer horizon. In the short-term, however, there is consensus among Keynesians that the primary source of most economic fluctuations is demand and the policies that target demand can help to stabilize the economy.

Keynesianism served as the dominant guide for macroeconomic policy in the United States until the stagflation of the 1970s. But some economists argued that the simultaneous acceleration of inflation and rise in unemployment of the middle 1970s exposed a fundamental flaw in Keynesian macroeconomics. A rival school of economic theory, “new classical” or “neoclassical” macroeconomics, emerged in response to the purported empirical failures of Keynesian theory and the associated criticism of the typical models used by Keynesian macroeconomics.

The neoclassical school argues that economic output is driven by the supply of resources (inputs) and technology. Adjustments of prices and wages bring markets to equilibrium quickly and efficiently. Measured unemployment could arise from a mismatch between jobs and skills or between the geographic distribution of jobs and workers' location preference. Unemployment also may be caused by "search frictions"—the decision by unemployed workers to forego a current job opportunity in the hope that continued search will create a more favorable match. From this perspective, unemployment is largely the result of choice and not really "involuntary." (Although the conditions under which choices are made, such as the closing of a major local business, may be unfavorable for the affected workers.) According to this perspective, the primary economic problem is not insufficient spending, will not be solved by "stimulus" policy, and a surge in government spending or looser monetary policy may cause undesirable inflation. Even in a weak economy, many neoclassical economists would predict that government activity is usually less productive than private activity and should be minimized. Instead, low and stable taxes and minimal government regulation serve to encourage labor supply, productivity, and technological development and keep the economy on a long-term pattern of growth. Moreover, neoclassical economists believe that household savings can expand the capital available to the production-side of the economy and should therefore be encouraged.

It is useful to understand that there is some asymmetry in the way these two broad schools of thought regard their counterpart. Most, if not all, Keynesian economists recognize that the supply-side forces emphasized in neoclassical macroeconomics influence the economy's potential over some horizon. Long-run sustained growth certainly

requires expansion of the supply side. But, for Keynesian economists, changes in the condition of supply usually are not the primary engine of short-to-medium-term economic fluctuations (the “stagflation” of the 1970s being something of an exception). For mainstream Keynesians, the short run is dominated by the demand side and the long run by the supply side. This point implies a somewhat nuanced perspective on desirable economic policy. In the short run, if the economy suffers from excessive unemployment and output is below its long-run (supply-driven) sustainable path, demand stimulus policies are desirable. But over longer horizons and when unemployment is low, most Keynesians also agree that it is important to pay attention to the supply side. For neoclassical economists, demand fluctuations are largely dismissed as directly important for either short-run fluctuations or long-run growth. In the neoclassical view, the supply side rules over any horizon and the associated policy recommendations are usually much the same regardless of the state of the economy.

### **Theories of Public Opinion and the Macroeconomic Schools of Thought**

Our central concern is whether public opinion about macroeconomic policies are sorted as the two major macroeconomic perspectives might suggest. The subject brings into play three related bodies of work in political science. Studies of economic voting question the independence of economic evaluations from partisanship, an issue that also may be relevant to the effect partisanship might have on opinion about macroeconomic policies. Studies of ideological coherence raise the question of how citizens’ process information about complex public issues. Recent studies of partisan sorting—the rising correlation among responses to survey questions about public issues—imply that

macroeconomic attitudes may be a part of larger process of change in the distribution of public opinion.

*Lessons from the Study of Economic Voting*

The relationship between partisanship and economic evaluations has long been a subject of controversy among political scientists. A large body of political science addresses the effect of retrospective evaluations of national economic conditions on vote choice in U.S. presidential elections, a subject often labeled “economic voting” (Alvarez and Nagler 1995, 1998; Fiorina 1981; Kiewiet 1983; Lewis-Beck 1988; Nadeau and Lewis-Beck 2001; Norpoth 2004).<sup>3</sup> The thrust of the first wave of studies is that economic evaluations matter, but a second wave of studies qualified that finding by observing that economic attitudes are at least partially influenced by partisanship (Anderson et al. 2004; Enns, Kellstedt, and McAvoy 2012; Evans 1999; Evans and Andersen 2006; Johnston et al. 2005; Wilcox and Wlezien 1996; Wlezien, Franklin, and Twiggs 1997). Lewis-Beck, Nadeau, and Ellis (2008), drawing on ANES, British, and Canadian panel surveys and estimating two-stage models with instrumental variables., demonstrate that retrospective evaluations of national economic conditions remain important predictors of vote choice in national elections. The observation that evaluations of economic conditions are at least partly endogenous to partisanship suggests that partisanship also may shape opinion about macroeconomic policy that is intended to address those conditions. As packages of policy

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<sup>3</sup> The voluminous literature on economic voting has focused predominantly on the impact of economic performance on the fates of incumbents – on an “elementary reward-punishment” (for a review of the studies, see Lewis-Beck and Stegmaier 2000) calculus of a typical voter. In this literature, scholars have considered individual-level evaluations such as prospective and retrospective personal and sociotropic evaluations and the effect of those evaluations on vote choice, primarily in U.S. presidential elections.



prescriptions, the views of Keynesian and neoclassical economists may be subsets of larger liberal and conservative ideologies that divide partisan elites.<sup>4</sup>

*Lessons from the Study of Political Ideology, Considerations, and Sophistication*

The policy prescriptions of the two schools of thought tie quite directly to more general liberal-conservative ideologies in modern American politics and to the policies advocated by the two major parties. To be sure, the arguments of both schools have evolved (Hall and Taylor 1988), but they appear to distinguish elites of the two political parties since the mid-20th century. Liberals and Democrats are associated with Keynesian policies, as exemplified by efforts to stimulate the economy through government outlays, such as the 2009 American Recovery and Reinvestment Act (“stimulus” package). Indeed, a National Public Radio segment that aired in January 2009 was entitled, “Obama Gives Keynes his First Real-World Test.”<sup>5</sup> Conservatives and Republicans have been associated with neoclassical policies in their opposition to government spending and taxation, support for reducing deficits, and emphasis on deregulation to unleash the productivity of private industry. Neoclassical economic theory provides the intellectual support for “supply-side economics” that was popularized in the first Reagan presidential campaign of 1980.

Nevertheless, it is reasonable to hypothesize that the complexity of economic policy is such a barrier to understanding that, even with structured elite cues, the coherence in

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<sup>4</sup> Quinn and Shapiro (1991) draw this connection in describing “ideological partisanship” for the two schools of economic thought that is distinguished partisan differences grounded in economic class or self-interest. The ideological component refers to different visions of society and the associated views of the best use of government. Ideological partisanship, which concerns the contending theories of political economy the in this account, does not map well on to economic class or economic self-interest.

<sup>5</sup> <http://www.npr.org/templates/story/story.php?storyId=100018973>

attitudes implied by the schools of thought is not found in the mass public, as Converse (1964) argued for ideology and complex ideas more generally. The fragmented nature of much public discourse about economic policies surely deepens confusion about the competing models of the economy's behavior. The problem of comprehension is further magnified by the fact that Keynesian economists may well favor ideas associated with supply-side policy to improve long-run growth and efficiency. Therefore, measuring attitudes about macroeconomic issues involves the use of survey questions that address "hard" issues for the general public, in contrast to the "easy" issues that concern, for example, views about personal or national economic conditions (Carmines and Stimson 1980, 1989).

The complexity of macroeconomic policy and the schools of economic thought suggest that political and economic sophistication may influence the coherence and direction of macroeconomic attitudes. The effect of sophistication on political or economic evaluations has long been contested. Sophistication may produce greater sensitivity to cues from elites and is associated with more strongly held ideological and partisan commitments, but it also may be associated with the possession of independent information about public affairs, which makes individuals less readily influenced by changing events (see Park and Smith 2013 for a review of the arguments). Moreover, there may be asymmetries in sophistication across demographic, ideological, and partisan categories that affect macroeconomic attitudes and have significant political implications.

Nevertheless, the political science of public opinion demonstrates that opinion is responsive to changes in the content of information flowing through the political and economic environment and gives us some guidance about where to look for it. Zaller's

(1992) thesis implies that change in public opinion is shaped by exposure to new considerations—information emanating from elites, the media, and social networks—that may reinforce, counter, or supplant existing considerations to shape responses to survey questions. Exposure to new considerations and their effect on opinion are registered differentially among citizens. Highly sophisticated, attentive citizens exhibit little change in opinion over time because their attitudes are more firmly held. Unsophisticated, inattentive citizens exhibit little change in opinion over time because they are not exposed to information that might alter their opinions. Moderately sophisticated, attentive citizens are most susceptible to having their opinions changed by exposure to new considerations.

Lupia and McCubbins (1998) extend this line of argument by adding that people choose to expose themselves to new information and the information sources to use. Thus, if individuals choose information sources on the basis of partisanship or ideology, the opinions that are measured in surveys will be correlated with party and ideology. It also implies, but is not tested by Lupia and McCubbins, that more frequent cues will more tightly structure opinions and fading cues may weaken the structure of opinions.

#### *Lessons from Studies of Partisan Sorting*

The observation of considerable partisan sorting in recent decades suggests that macroeconomic attitudes and more general ideologies may have become more strongly related and more strongly connected to partisanship. Sorting refers to a process in which attitudes across a wide range of issues become more highly correlated, leading a liberal or conservative view on one issue to better predict views on other issues. Sorting, it is argued, has produced liberal and conservative, Democratic and Republican, camps. By some accounts, sorting began among the U.S. elites as early as the late 1950s (Carmines and

Stimson 1989), although most accounts emphasize sorting among national legislators and the general public since the 1980s (Abramowitz and Saunders 1998; Fiorina 2017).

The observation of strongly sorted attitudes appears to run contrary to Converse's account and suggests that the public is heavily influenced by cues from a political and media elite that has become more fully sorted by party in attitudes about macroeconomic policies. This represents the argument of Popkin (1994), Lupia and McCubbins (1998), and others (Zaller 1992), who observe that, contrary to Converse (1964), a high level of conceptualization or factual knowledge is not required for the acquisition of seemingly coherent attitudes. Instead, the information environment generates cues from trusted sources that shape attitudes in a way that appears to map on to the recognized ideological scales and may map on to the schools of economic thought.

### **Hypotheses**

Our analysis first seeks to answer a descriptive question: Do public attitudes about macroeconomic issues align with the Keynesian and neoclassical schools of economic thought? With that assessment in hand, we consider the relationship of macroeconomic attitudes, measured on scales derived from a set of survey questions, to partisanship, broad ideology, economic evaluations, and sophistication about political and economic issues. We begin with the most obvious cross-sectional implications of previous studies of ideological constraint and sorting:

**H1.** Public attitudes about macroeconomic policy are structured by the prescriptions of the Keynesian and neoclassical schools of economic thought.

**H2.** Keynesian and neoclassical scales are strongly correlated with partisanship.

**H3.** Keynesian and neoclassical scales are strongly correlated with general liberal-conservative ideology.

**H4.** Keynesian and neoclassical scales are correlated with retrospective economic evaluations.

The sophistication required to understand Keynesian and neoclassical arguments is almost certainly not widely distributed in the American public. Because Keynesian thought makes government policy contingent on economic conditions, we hypothesize that sophistication conditions acceptance of Keynesian views. If Keynesians are largely liberals and Democrats, as we expect, then Democrats' may be divided about Keynesian views in a manner correlated with sophistication, while Republicans' neoclassical views are more universally held by partisans:

**H5.** Among Democrats, sophistication is positively correlated with pro-Keynesian views and negatively correlated with neoclassical views. (b) Among Republicans, sophistication is not correlated with Keynesian or neoclassical views.

Political science gives us less guidance about the expected *change* in opinion about macroeconomic policies in recent years. The powerful influence of partisanship and general ideology on macroeconomic attitudes suggests there should have been little change in macroeconomic attitudes among individuals over the span of a few years. Nevertheless, the work of Zaller and others lead us to predict that changes in the information environment will alter to some extent the considerations that come to mind when asked survey questions.

For opinion about macroeconomic policy, a reasonable conjecture is that the volume of relevant information has declined in the years since the Great Recession of 2007-2009. This conjecture is supported by circumstantial evidence that the attention given to macroeconomic issues has faded in recent years. In Figure 1, we report the frequency that several terms related to the national economy appeared in the *New York Times* since 2012.<sup>6</sup>

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<sup>6</sup> The three terms presented in Figure 1 are examples of a broader trend. For example, "taxes" went from being mentioned in 13,323 articles in the 18-month period from January 2012 to June

Plainly, the frequency of newspaper mentions of the macroeconomy has declined in the period since the Great Recession, which should reduce the frequency of cues that signal Keynesian and neoclassical prescriptions. This yields two hypotheses about change in attitudes since 2012, as measured on Keynesian and neoclassical scales, that we construct from available data (see below):

**H6.** Between 2012 and 2017, public attitudes about macroeconomic policy became less homogeneously Keynesian or neoclassical.

**H7.** Between 2012 and 2017, public attitudes about macroeconomic policy became less strongly correlated with partisanship and general ideology.

Finally, to demonstrate that the attention to opinion about macroeconomic policy matters, we consider the effect of macroeconomic policy attitudes on presidential vote, where, it is reasonable to assume, opinion about macroeconomic policies is most likely to be influential. We design a model that accounts for the effects of partisanship and retrospective economic evaluations. Macroeconomic attitudes, like retrospective economic evaluations, may be partly endogenous to partisanship. But, also like retrospective economic evaluations, macroeconomic attitudes are predicted to have some independent effect on vote choice.

**H8.** Attitudes about macroeconomic policy have an independent effect on presidential vote choice, accounting for the possible effect of partisanship and economic evaluations on macroeconomic attitudes.

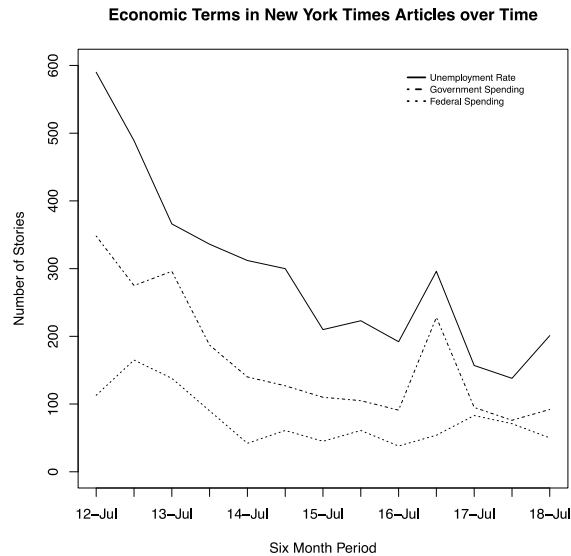
The analysis is conducted using a relevant battery of questions on macroeconomic policies included in *The American Panel Survey* (TAPS) every six months from July 2012

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2013, and only 9,281 articles in eighteen-month period from January 2016 to June 2017, despite both spanning a presidential election. The only economic term that showed consistently increased reporting in the New York Times over the period was “tariffs,” which is sensible as Donald Trump, as both a candidate and president, made tariffs a central part of his campaign and administration.

through July 2017. TAPS was a monthly online survey of about 2000 U.S. adults. TAPS panelists were recruited as a national probability sample with an addressed-based sampling frame in the fall of 2011 by GfK for the Weidenbaum Center at Washington University. Individuals without internet access were provided a laptop and internet service at the expense of the Weidenbaum Center. In a typical month, over 1700 of the panelists complete the online survey.<sup>7</sup>

**Figure 1.** The Frequency of *New York Times* Stories that Mention Key Economic Terms



### Data and Methods

The panel data enable four kinds of analysis to evaluate the eight hypotheses. First, the fit of opinion about macroeconomic policies to the positions advocated by the two schools of economic thought is considered. In doing so, we examine (a) the frequency of nonresponse to provide perspective on the relative difficulty of questions about

<sup>7</sup> More technical information about the survey is available at [taps.wustl.edu](http://taps.wustl.edu). Unless otherwise noted, all analyses are weighted by the CPS for mid-2012.

macroeconomic policies and (b) inter-item correlations to evaluate the coherence of economic attitudes as suggested by the two schools. Second, we evaluate the relationship of macroeconomic attitudes to partisanship, general ideology, retrospective economic evaluations, and sophistication early and late in the 2012-2017 period. Third, we look for evidence of change and stability in macroeconomic attitudes over the period. Fourth, we estimate models of presidential voting in 2016 that account for the possible endogeneity of economic attitudes to partisanship.

### *Measurement of Macroeconomic Attitudes*

TAPS included a wide range of questions about the economy and economic policy.

A ten-question battery on economic policies was prefaced by this statement:

Policymakers often design policies to address immediate, short-term economic conditions, but these policies may have beneficial or harmful effects in the long run. We are interested in your views about the factors that improve or harm the American economy.

Consider the following policies that might be adopted *during a recession or weak economy*. Describe your views about how effective each of the policies listed below would be in improving the national economy during a recession or weak economy.

Thus, the focus of the analysis is attitudes about economic policy in the context of a recession. For each of ten items, each panelist was asked to “describe your views about how effective each of these policies listed below would be in improving the national economy during a recession or weak economy.” The response set is:

1. greatly improves the economy
2. improves the economy
3. has little effect on the economy
4. harms the economy
5. greatly harms the economy
6. don't know



Table 1. Economic Policy Items and the Positions of the Major Schools of Economic Thought in the Short Term with a Weak Economy

	School of Thought	
	Keynesian	Neoclassical
Raise government spending	supports	opposes
Raise taxes	opposes	opposes
Reduce government deficits	opposes	supports
Increase the money supply	supports	opposes
Lower regulations on business	no preference	supports
Stimulate more consumer spending	supports	opposes
Encourage more household saving	opposes	supports
Raise wages	ambiguous	opposes
Encourage better use of technology by business	no preference	supports
Lower taxes of foreign goods coming into the U.S.	(weakly) opposes	supports

The ten items and the Keynesian and neoclassical position are listed in Table 1. Perhaps the clearest distinction between the two schools concerns the questions about government spending and consumer spending. Keynesians clearly support raising government spending and stimulating more consumer spending in a weak economy and neoclassical economists oppose both. Although Keynesian economists recognize long-term benefits of household saving, they would consider a weak economy a bad time to pursue policies designed to encourage saving. Neoclassical theories typically assume higher saving will be channeled automatically into more private investment and therefore is good for the economy without qualification. Neoclassical economists usually support deficit reduction because in the neoclassical model a lower government deficit releases funds for business investment. While many Keynesian economists would prefer a lower deficit, other things equal, in a period of weak economic conditions, a Keynesian would oppose policies specifically designed to reduce the government deficit because either lower

government spending or higher taxes will reduce demand and low demand is viewed as the primary problem in a weak economy.

Most economists are in favor of free international trade and would support lowering taxes on foreign imports to the U.S. Nevertheless, Keynesians recognize a social cost from cheaper imports in a weak economy because higher imports could reduce demand for domestic production that might not be replaced, leading to greater unemployment.

Keynesian economists usually support expansionary monetary policy because they argue that lower interest rates stimulate more borrowing and spending that a weak economy needs. From the neoclassical perspective, a higher money supply leads to undesirable higher inflation and they therefore largely oppose expansionary monetary actions.

Although the differences on wages are less clear cut, the neoclassical school explains unemployment in a weak economy, at least in part, as the result of wages that do not decline adequately (for example, because workers prefer to search for a better offer rather than accept a job at a lower wage) and therefore would likely oppose any attempt to raise wages in a weak economy. Some Keynesians might also recognize the failure of wages to adjust downward as a source of unemployment. Others, however, see low wages as a barrier to demand growth and would support policies and institutions that increase wages.

Neoclassical economists support lowering regulations on business and encouraging better use of technology by business as the key to stimulating the “supply side” of the economy. Keynesians recognize the importance of supply growth over the longer term, but they emphasize insufficient demand and put less emphasis on regulation and disincentives to invest in new technology as problems in a weak economy.

Finally, Keynesians *and* neoclassical economists would oppose the strategy of raising taxes as a short-term solution for improving the national economy during a period of weakness, albeit for different reasons. For Keynesians the problem is insufficient demand and raising taxes could reduce spending, especially if those tax increases fell on lower and middle income households. They have less concern about higher business taxes or tax increases on wealthy families. The neoclassical supply-side analysis strongly opposes tax increases because they reduce the incentive to work, save, and invest. Therefore, tax increases hurt the economy especially when they affect businesses, investors, and entrepreneurs, a group that on average is likely to have higher income and wealth.

We construct a simple additive scale for both Keynesian and neoclassical views. The scales are highly but not perfectly correlated because of the presence of the same positions for the two schools and the presence of an ambiguous position for one of the schools.

#### *Other Variables*

Demographic variables are measured in TAPS at the point that each panelist joins the panel. The coding of the variables and descriptive for these variables are included in Table 2. In addition to the Keynesian and neoclassical scales, the analysis incorporates a standard sociotropic measure of retrospective economic evaluations, called “economic perception” in some reports (Lewis-Beck, Nadeau, and Elias 2008), which are measured in TAPS every other month for all panelists. Partisanship is measured with the standard party identification questions.

Table 2. Variables Used in the Analysis

Variable	Measure
Keynesian scale (MEA-K) 2012	Additive scales based upon Table 1
Neoclassical scale (MEA-N) 2012	
Keynesian scale (MEA-K) 2017	
Neoclassical scale (MEA-N) 2017	
Partisanship (PID)	Traditional 7-point scale where 1=Strong Democrat and 7=Strong Republican
General ideology (IDEOL)	7-point scale where 1=Very liberal and 7=Very conservative
Retrospective econ. evals. (REE) 2012	4-point scale ranging where 1=poor and 4=excellent
Retrospective econ. evals. (REE) 2017	
Education	16-point scale ranging from no formal education to doctorate degree.
Political Information	Number of Correct Answers to 10-item political knowledge battery
Female	1 = female; 0 = male
Age	Age at time of entry into panel, adjusted for time of wave
White	Self-reported ethnicity, 1 = white, 0 = non-white
Black	Self-reported ethnicity, 1 = black, 0 = non-black
Hispanic	Self-reported ethnicity, 1 = Hispanic, 0 = non-Hispanic
Other	Self-reported ethnicity, excluded category in models
Income	16-point scale ranging from below \$10,000 to \$300,000 or more

### *Methods*

For H1-H5, we use the first and next-to-last waves in our panel, July 2012 and July 2017, to determine how the structure of macroeconomic opinions and their relationship to partisanship, general ideology, and retrospective economic attitudes may have changed over the period. For H1 on the structure of macroeconomic opinions, we consider (a) the frequency of “don’t know” responses to determine whether panelists exhibit opinion as much on the macroeconomic questions as on other policy or issue questions and (b) the fit of a single dimension and the item loadings in an unrotated principal components analysis. For H2, H3, and H4, we use the additive scales (MEA-K, MEA-N) to examine and estimate

their correlation with partisanship (PID), general ideology (IDEOL), and retrospective economic evaluations (REE). Ideology is self-reported location on a five-point liberal-conservative scale. Retrospective economic evaluation is the standard sociotropic measure.

For H6 and H7, which concern change in macroeconomic attitudes, we exploit the panel design. H6 concerns the effects of fading partisan stimuli on macroeconomic policy, which requires that we inspect within-party change in scores on the macroeconomic scales. The parties are predicted to become less distinctive on these scales as we move farther from the intense partisan stimuli present during the Great Recession. H7, which predicts fading correlations between macroeconomic scores and partisanship and general ideology, is tested by examining estimates of multivariate models of individual-level change in MEA-K and MEA-N in several waves.

H8 concerns the independent effect of MEA-K and MEA-N on presidential vote. Our analysis parallels the panel analysis of Lewis-Beck, Nadeau, and Elias (2008) for the effect retrospective economic evaluations on presidential vote. In this case, we estimate the effect of partisanship (PID), retrospective economic evaluations ( $REE_t$ ) macroeconomic attitudes (MEA-K, MEA-N), and demographic controls (DC) on presidential vote in 2016. The basic model is a cross-sectional model:

$$\text{Vote}_t = a + b \text{PID}_t + c \text{REE}_t + d \text{MEA}_t + \text{DC} \quad (1)$$

In these models partisanship is coded +1, 0, or -1 for being of the same party as the incumbent president, in a manner parallel to a similar analysis of retrospective economic evaluations and voting in Lewis-Beck, Nadeau, and Elias (2008).

A dynamic model exploits the 11 waves of panel data for measurements of partisanship and macroeconomic attitudes. To explore the possible effects of PID on MEA, we consider two versions:

$$\text{Vote}_t = a + b \text{PID}_{t-1} + c \text{REE}_t + d \text{MEAt}_t + \text{DC} \quad (2)$$

Equation (2) frees contemporary macroeconomic attitudes from the potentially distorting influence of contemporary partisanship. We leave REE at time  $t$  on the assumption that contemporaneous economic evaluations may influence contemporaneous macroeconomic policy attitudes. Following Lewis-Beck, Nadeau, and Elias (2008), the models are estimated as probit models.

To overcome possible simultaneous equation bias and correlated error bias, we construct instruments, labeled PID', REE', and MEA', in a manner parallel to the instrumental variables used in Lewis-Beck, Nadeau, and Elias (2008). The instrumental variables are described in the Appendix and the three instruments are substituted in equations (1) and (2). We then estimate two-stage probit models for equations (2) and (3) to observe the effect of MEA as endogenous to PID in estimates of their effects on presidential vote.

## Findings

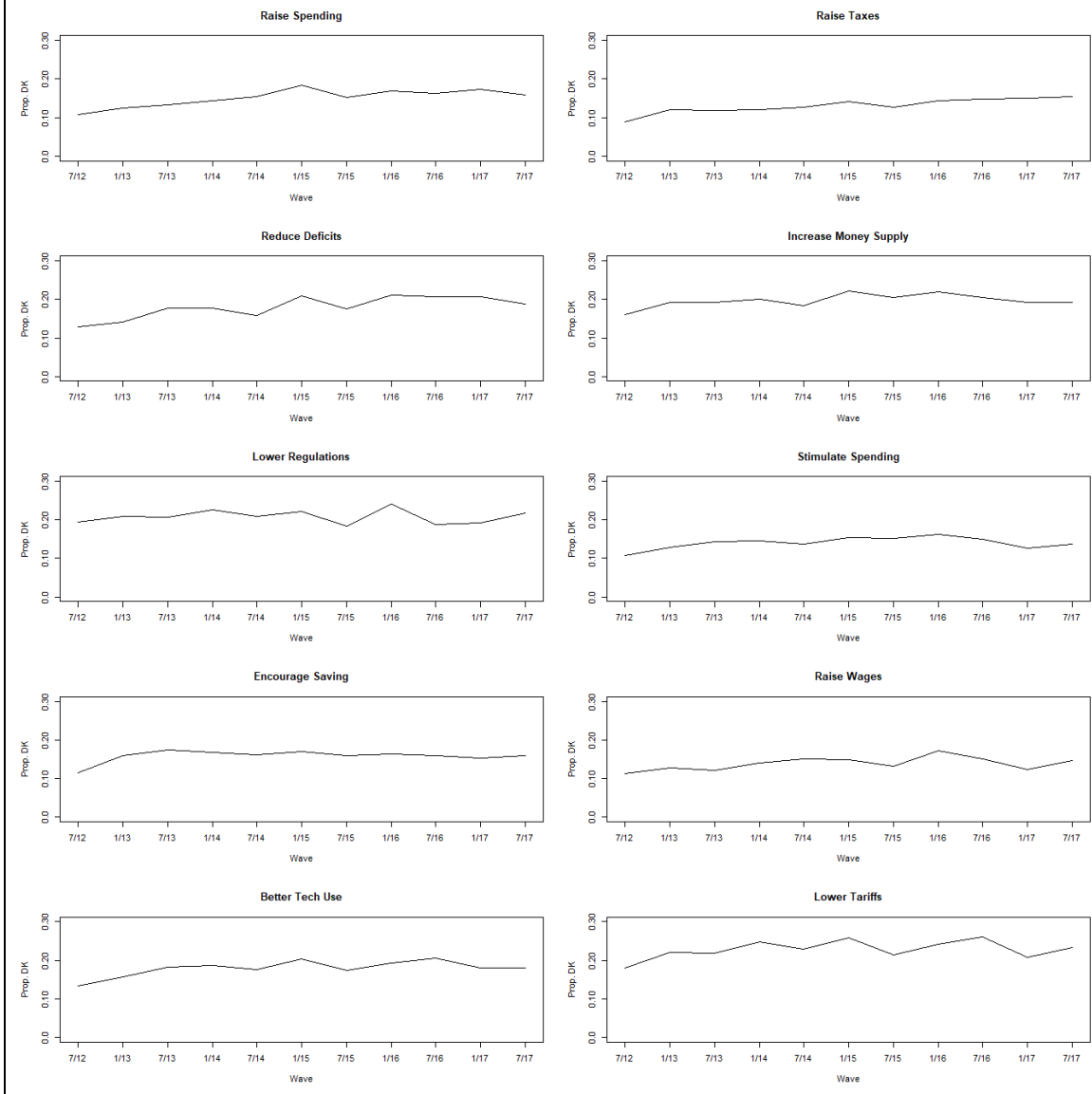
### **H1. Public attitudes about macroeconomic policy are structured by the prescriptions of the Keynesian and neoclassical schools of economic thought.**

We consider three aspects of the structure of attitudes about macroeconomic policy. First, we consider nonresponse to the questions that comprise the Keynesian and neoclassical scales. Second, we evaluate the scales with a principal components analysis. Third, we examine the distribution of panelists on the scales. We conclude that the frequency of nonresponse is only slightly higher for the questions used in our scales than

is typical for survey questions about current events and a single dimension underlies responses to our questions, but the distributions on the Keynesian and neoclassical scales are not polarized or bimodal. Rather, most Americans hold opinions that are not consistently Keynesian or neoclassical.

Figure 2 depicts frequency of refusal and “Don’t Know” responses to each question used in our Keynesian and neoclassical scales from July 2012 through July 2017. The items that are most readily answered by the sample have to do with fiscal policy questions regarding taxes and spending, questions that address issues that are frequently a part of political discourse. Nearly 90 percent have an opinion on whether raising government spending and consumer spending are good or bad ideas for the economy, and whether raising wages and encouraging more household spending would be advisable. In contrast, nearly 20 percent of respondents could not say whether they thought raising regulations on businesses would have a good or bad effect on the economy in the short-term, although this is an important aspect of neoclassical economics. About 18 percent of respondents could not say whether reducing import taxes on foreign goods coming to the U.S. would have a good or bad effect on the economy in the short-term (even though the two schools of thought dictate somewhat different views on this item).

**Figure 2. Proportion of Panelists with Refusal or Don't Know Responses to Economic Policy Questions, 2012-2017**



The proportion of refusals and DKs for the more difficult of these questions is higher than is typical for survey questions on current issues. In a battery of 22 questions about a wide range of current issues—ranging from Medicare to immigration to abortion—the average nonresponse was less than 10 percent. Thus, there is some preliminary evidence that the macroeconomic questions used here to measure Keynesian and neoclassical views



are more difficult than is common for typical survey questions about current events, which may produce more measurement error. Equally important, the difficulty suggests that finding coherent Keynesian and neoclassical attitudes is less likely than finding a consistent ideology from typical survey questions. (Moreover, the number of refusals and DKs does not deteriorate over time, which reduces our concern about panel conditioning for the twice-a-year design used here.)

In Table 3, we report the results an unrotated principal components analysis on the eight items that were *ex ante* identified as part of the Keynesian school of thought and the ten items that were *ex ante* identified as part of the neoclassical school of thought. We expect to see a single significant factor for each scale. Table 2 lists these factor loadings for July 2012; similar results are obtained in other waves.

Table 2. Factor Loadings of Economic Policy Items, First Factor

raise government spending	0.71
raise taxes	0.52
reduce government deficits	-0.48
increase the money supply	0.44
lower regulations on business	-0.50
stimulate more consumer spending	0.31
encourage more household saving	-0.28
raise wages	0.41
encourage better use of technology by business	0.11
lower taxes of foreign goods coming into the U.S.	-0.08
Eigenvalue, Factor 1	1.80
Eigenvalue, Factor 2	0.76
Cronbach's $\alpha$	0.61
<b>N</b>	1108
Note: unweighted exploratory factor analysis. Individual items range from 1 to 5, indicating level of agreement with given policy proposal during a period of economic recession.	

The presence of a single factor is consistent with H1. Opinions on government spending show the strongest relationship to the first factor, with taxes, deficits, money

supply, and business regulation also showing a strong connection. In contrast, the use of technology and taxes on foreign goods are very weakly related to the underlying dimension. A second factor does not reach the traditional 1.0 eigenvalue for significance (not shown). Thus, attitudes about government spending are central to the underlying dimension and the related issues of deficits and government regulation are closely connected.

One variable, raising taxes, shows a correlation with the underlying dimension that requires interpretation. For taxes, the positive factor loading (0.52) in the first column of results tells us that, in the cross section, citizens who support raising government spending as a means of stimulating the economy *also are more likely to support* raising taxes. Nevertheless, no group -- Democrats or Republicans, liberals or conservatives -- supports raising taxes, although a few more Democrats than Republicans support more spending *and* raising taxes (Table 4).

While the items form a single attitudinal dimension by commonly used statistical standards, Americans do not fall neatly into two camps. Neither distribution is bimodal. To the contrary, the distributions for our additive indexes are unimodal, centered around the middle of the scales, and not heavily skewed in any direction (see Figure 3). Thus, while Americans are aligned on a Keynesian-neoclassical scale, they are not polarized. Rather, the bulk of Americans hold mixed views that place them in the middle of the scale.<sup>8</sup>

It is possible that the unimodal distributions shown in Figure 3 camouflage differences between subgroups of Americans that shape the composition of political elites and policy choices. Partisan preference is the most obvious possibility so we show

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<sup>8</sup> The neoclassical scale, which is based on two more questions than the Keynesian scale (regulation is one of them), shows somewhat greater variance than the Keynesian scale.

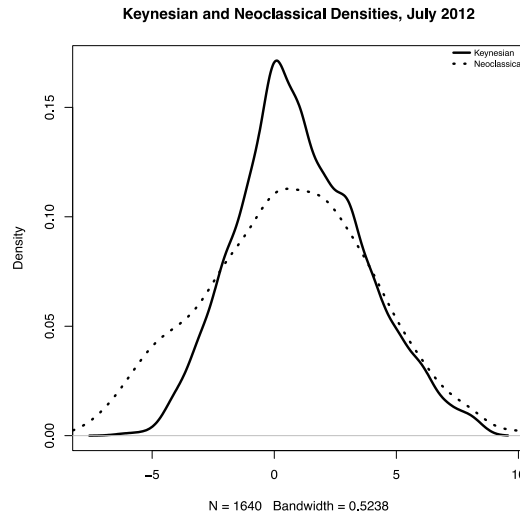
distributions on the Keynesian and neoclassical scales for self-identified Democrats and Republicans in Figure 4. Plainly, the two groups of partisans exhibit different means – Democrats are more Keynesian and less neoclassical than Republicans on average – but the differences appear less significant than popular discourse seems to suggest. Neither group of partisans is strongly skewed to the high end of the two scales. Partisan differences are somewhat larger on the neoclassical scale, which includes an item on regulation that is not the Keynesian scale. We do not find major changes over the 2012-2017 period.

Table 4. Percent of Panelists Responding that Policy Improves the Economy in a Recession

<i>Policy</i>	<i>Democrats</i>	<i>Republicans</i>
	% Responding Improves	% Responding Improves
Raise government spending	35.30	13.87
Raise taxes	22.98	6.24
Reduce government deficits	51.98	68.37
Increase the money supply	51.47	29.88
Lower Regulations on Business	25.67	67.29
Stimulate More Consumer Spending	79.17	71.91
Encourage more Household Saving	36.77	39.47
Raise wages	67.83	55.32
Encourage Better Use of Technology	61.68	61.15
Lower Taxes on Foreign Goods Coming into the U.S.	24.86	22.12

Percentages reflect the percent of each partisan group indicating that the proposed policy would improve the economy during a recession. Figures are from the 2012 wave of TAPS and are weighted using poststratification weights accounting for internet access.

Figure 3. Kernel Density Distributions, Keynesian and Neoclassical Additive Indexes, July 2012

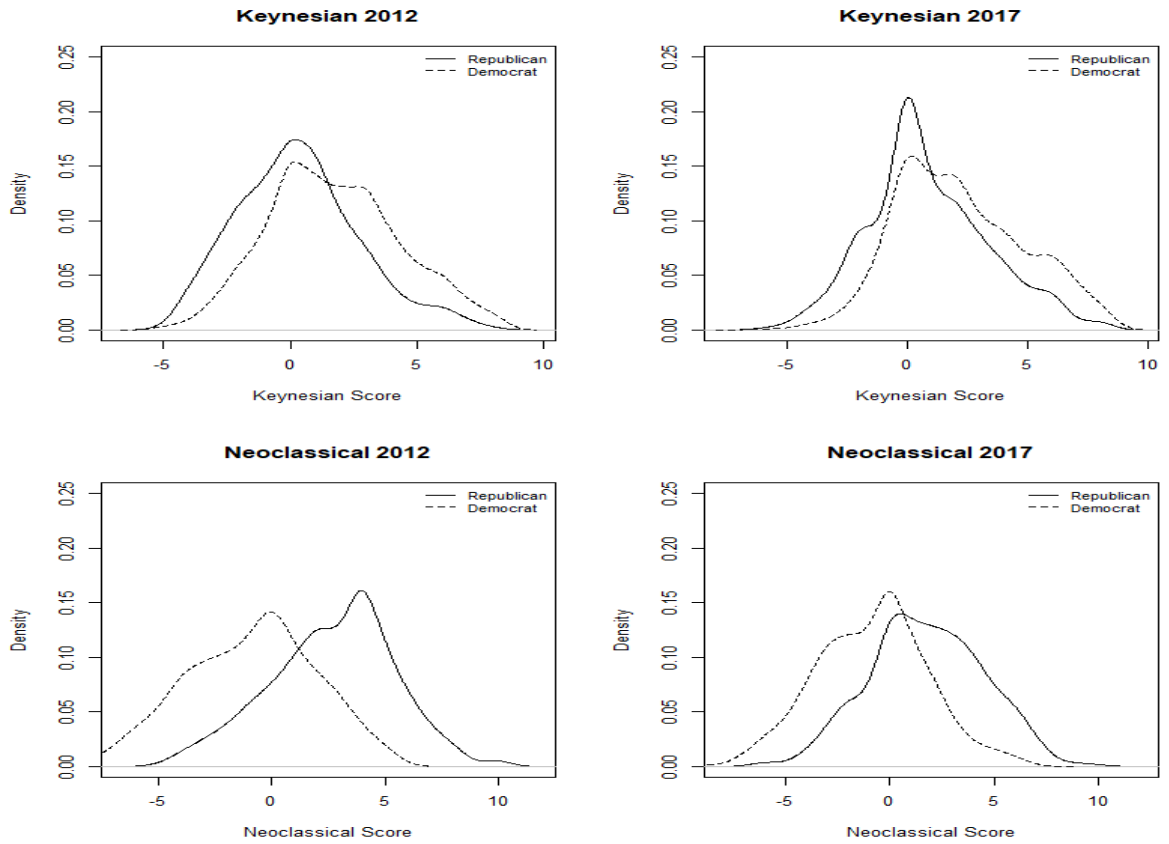


**H2. Keynesian and neoclassical scales are strongly correlated with partisanship.**

**H3. Keynesian and neoclassical scales are strongly correlated with general liberal-conservative ideology.**

Table 5 presents the estimates for a more comprehensive model of Keynesian and neoclassical views. We present the results for cross-sectional models at the beginning and end of our period of study. Consistently, we find strong, significant associations with respect to partisanship. For example, in 2012, all else equal, a panelist identifying as a “Strong Republican” was predicted to be approximately 3 points higher on the Neoclassical scale than an individual who identifies as a “Strong Democrat.” While this difference in marginal effects is slightly weaker in 2017, the relationship is still relatively strong (the marginal difference in extremes of approximately 2.5). Thus, we are able to confirm H2 that both scales are strongly correlated with partisanship and this relationship endures throughout the panel.

Figure 4. Kernel Density Distributions, Keynesian and Neoclassical Scales, by Partisanship, July 2017



Similarly, H3 is confirmed in the estimates reported in Table 5. Liberals are more Keynesian and less neoclassical in their scale scores than conservatives, even taking partisanship into account. While we did not hypothesize an effect for ethnicity, Table 5 shows that both black and Hispanic minorities became quite strongly Keynesian and weakly neoclassical between 2012 and 2017.

Table 5. Determinants of Macroeconomic Policy Preferences, OLS Estimates

	Keynesian 2012	Keynesian 2012	Keynesian 2017	Keynesian 2017	Neoclassical 2012	Neoclassical 2012	Neoclassical 2017	Neoclassical 2017
Partisanship	-0.13**	0.12	-0.19***	0.04	0.42***	-0.20	0.35***	-0.16
	0.07	0.14	0.06	0.11	0.08	0.17	0.07	0.13
Ideology	-0.29***	-0.26***	-0.11*	-0.07	0.42***	0.33***	0.23***	0.15*
	0.08	0.08	0.06	0.06	0.09	0.10	0.08	0.09
Education	-0.01	-0.01	0.14***	0.14***	-0.02	-0.01	-0.09**	-0.09*
	0.07	0.07	0.05	0.05	0.05	0.07	0.05	0.05
Political Information	0.08*	0.23**	0.15***	0.28***	-0.10*	-0.47***	-0.13**	-0.41**
	0.05	0.09	0.05	0.09	0.05	0.09	0.06	0.09
Political Information x Partisanship		-0.04**		-0.04**		0.10***		0.08***
		0.02		0.02		0.02		0.02
Female	-0.15	-0.16	-0.18	-0.18	-0.32	-0.29	-0.05	-0.05
	0.22	0.22	0.17	0.17	0.23	0.23	0.20	0.20
Age	0.02**	0.01**	0.01	0.01	0.00	0.00	0.01	0.01
	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Black	-0.16	-0.00	-0.66**	-0.62**	0.60	0.20	0.61*	0.53
	0.43	0.44	0.28	0.29	0.52	0.57	0.33	0.34
Hispanic	-0.23	-0.19	-1.13***	-1.12***	0.01	-0.11	1.26***	1.24***
	0.36	0.37	0.30	0.30	0.38	0.39	0.35	0.35
Race: Other	-0.06	-0.03	-0.84**	-0.87**	0.45	0.39	0.42	0.49
	0.35	0.34	0.35	0.33	0.44	0.40	0.51	0.48
Household Income	0.07**	0.07**	0.04	0.03	-0.07**	-0.07**	0.03	0.04
	0.03	0.03	0.03	0.03	0.03	0.03	0.04	0.04
Retrospectiv e Evaluation	-0.11	-0.13	0.24*	0.21	-0.22	-0.20	-0.16	-0.11
	0.16	0.17	0.14	0.14	0.19	0.18	0.16	0.16
Intercept	1.32	0.30	-0.71	-1.60**	-0.86	1.63	-0.68	1.23
	1.01	1.10	0.64	0.81	1.06	1.27	0.79	0.93
R <sup>2</sup>	0.10	0.10	0.17	0.17	0.24	0.27	0.18	0.20
N	1408	1408	1821	1821	1399	1399	1811	1811

Table entry is the weighted OLS coefficient with standard error below.

\* $p < 0.1$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$ , two-tailed

**H4. Keynesian and neoclassical scales are correlated with retrospective economic evaluations.**

We are unable to confirm H4, that posits a relationship between current period retrospective economic evaluations and macroeconomic policy preferences (Tables 5 and 6). For 2017, we find weak evidence that those individuals who had more positive appraisals of the economy were more likely to be pro-Keynesian, but this relationship was only significant at 0.1 level. The direction of this relationship changes over the course of the panel, which may reflect the known pattern that the incumbent president's partisans report more favorable views of the current economy than his opponents (Enns, Kellstedt, and McAvoy 2012). The move from a Democratic to a Republican president during the period in a direction consistent with this pattern. Obviously, the effect of retrospective economic evaluations on macroeconomic policy preferences is small and fragile.

**H5. Among Democrats, sophistication is positively correlated with pro-Keynesian views and negatively correlated with neoclassical views. (b) Among Republicans, sophistication is not correlated with Keynesian or neoclassical views.**

Table 5 also presents the results of the relationships between political characteristics and macroeconomic attitudes, with the addition of an interaction between partisanship and political information. Confirming H5, we find that more sophisticated Democrats to be more pro-Keynesian relative to their less sophisticated copartisans and the most sophisticated Republicans should be more pro-Neoclassical relative to their less sophisticated fellow Republicans. Partisans with the highest capacity are the most likely to exhibit the expected partisan relationships with macroeconomic preferences. We find little evidence that the nature of this conditional relationship changed from 2012 to 2017.

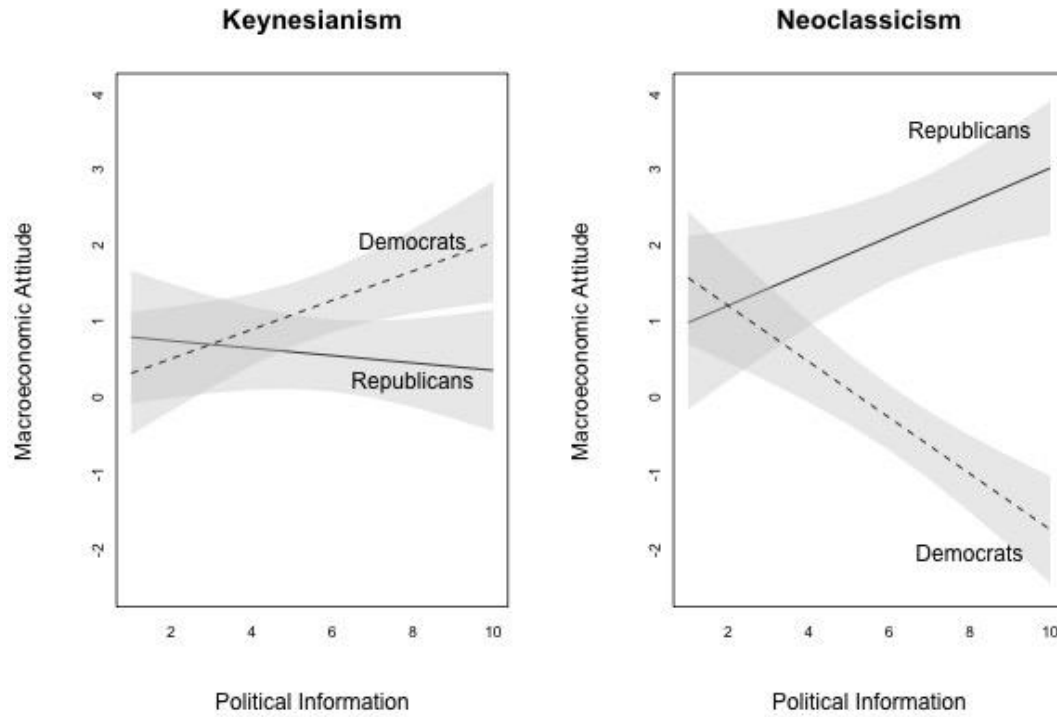
Figure 5 illustrates this conditionality of effects. In the left panel, we display the predicted measure on the Keynesian scale for panelists. At the lowest levels of political information, all else equal, our model predicts no significant differences in macroeconomic attitudes between Republicans and Democrats.<sup>9</sup> First, it should be noted that the slope of the political information effect is much steeper among Democrats, particularly on Keynesianism, suggesting little variation in attitudes among Republicans across the spectrum of political information. Second, it is only among the most sophisticated (those scoring roughly a 7 or above on the 10-question questionnaire) that the observed macroeconomic attitudes are predicted to be significantly distinct, with Democrats predicted to be more Keynesian. This interaction is more pronounced when considering the Neoclassical scale, as demonstrated in the right panel. For example consider that the model predicts a difference of roughly 4.7 points between Strong Republicans and Strong Democrats who score a 10 on political information, but this difference is predicted to be only 0.6 for similar panelists with a political information score of 3 on the scale.

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<sup>9</sup> For illustrative purposes, we set the 7-point party identification variable to represent Strong Republicans and Strong Democrats.



Figure 5. Predicted Macroeconomic Attitude Score by Party and Political Information, 2012

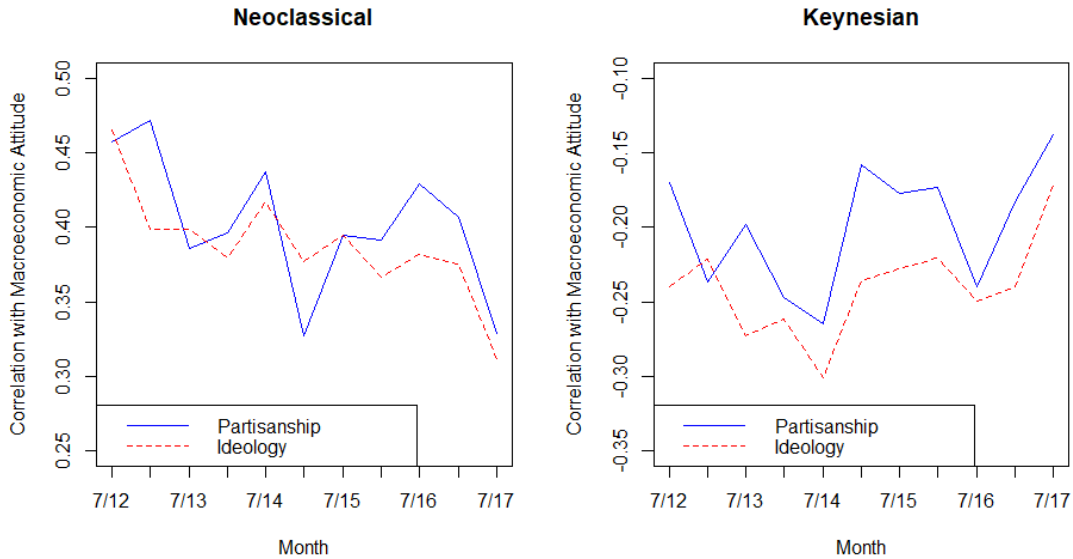


**H6. Between 2012 and 2018, public attitudes about macroeconomic policy became less homogenously Keynesian or neoclassical.**

**H7. Between 2012 and 2018, public attitudes about macroeconomic policy became less strongly correlated with partisanship and general ideology.**

Figure 6 displays the trends in the correlation between MEA scores and ideology and partisanship over the period of our study. From 2012 through 2017, the magnitude of the relationship between each partisan identity and the respective MEA has weakened. That is, we observe weaker ties between macroeconomic policy preferences and partisanship to be weaker. This also is shown in Table 5, in which we see shrinking coefficients for partisanship and ideology between 2012 and 2017. Thus, H6 is confirmed.

Figure 6. Correlation of Partisanship with Macroeconomic Attitudes Scales, 2012-2017.



Note: Data are bivariate correlation coefficients for January and July TAPS waves.

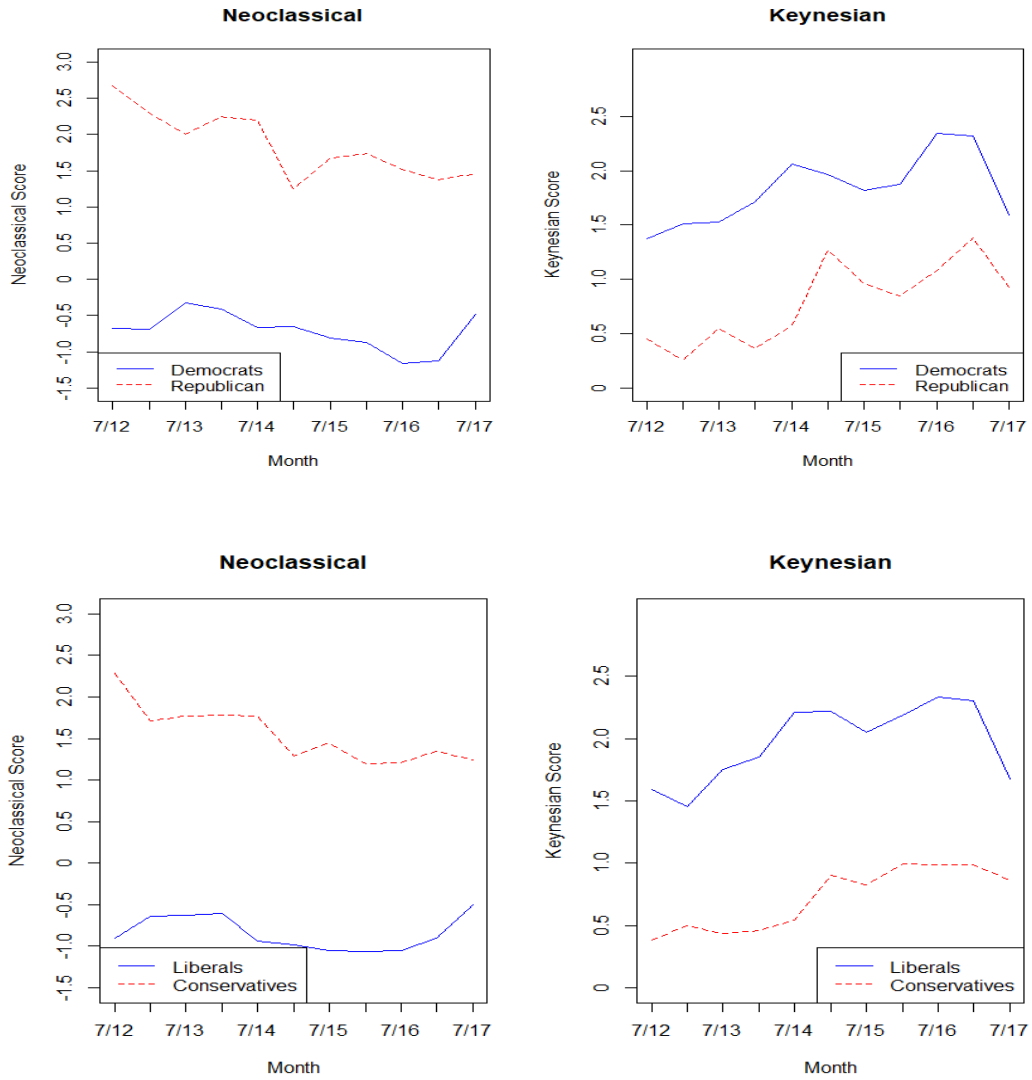
To further understand this change in the relationship between partisanship and ideology with MEA, we examine the mean score of each scale by party and ideological identity across time in Figure 7. We witness declining support for the neoclassical views and increasing support for Keynesian views, and most of the change is due to a softening of views among Republicans and conservatives. Democrats and liberals became somewhat more Keynesian, but Republicans and conservatives showed greater change. At the end of the period, the partisan and ideological lines were not as rigidly drawn as they were at the beginning of the period, consistent with H7.

**H8. Attitudes about macroeconomic policy have an independent effect on presidential vote choice, accounting for the possible effect of partisanship and economic evaluations on macroeconomic attitudes.**

As we have indicated, estimating the effects of macroeconomic attitudes on vote choice is complicated by the possibility that those attitudes are at least partly endogenous to partisanship. To account for the possibility that partisanship is exogenous, we exploit the panel design of TAPS to include lagged variables and construct instruments for partisanship and macroeconomic attitudes in a two-stage process to address the possibility of bias due to correlated errors. Our analysis parallels the treatment of retrospective economic evaluations and the vote in Lewis-Beck, Nadeau, and Elis (2008).

In Table 6 we present the results from a series of probit estimations evaluating the relationship between presidential vote choice and macroeconomic attitudes. As section A shows, we find that lags and contemporaneous forms of both macroeconomic attitudes variables and partisan identification are significantly associated with presidential vote (that is, those with more Keynesian macroeconomic preferences in 2014 and 2016 were more likely to vote for Hillary Clinton and those with more neoclassical attitudes were more likely to vote for Donald Trump.). When both the party identification and macroeconomic attitudes variable are of the same lag, it is possible that partisan identification is contaminating the strength of the effect, thus a stronger test of the MEA's relationship to vote choice may be found in column III of both sets of outcome variables. Here, we lag party identification, but we use the 2016 MEA. We find that the effect of the MEA decreases, suggesting that partisanship may influence the relationship between vote choice and MEA. Nonetheless, the effect for MEA remains in the expected direction and significant.

Figure 7. Correlation of Partisanship with Macroeconomic Attitudes Scales, By Party and Ideology, 2012-2017.



Note: Data are bivariate correlation coefficients for January and July TAPS waves.

This panel analysis still may suffer from endogeneity. As a result, in panel B we construct a series of instruments with a two-stage probit analysis. In Column I, lagged partisanship from 2014 is used as an instrumental variable constructed from various demographic controls collected upon entry into the panel to predict vote choice in the 2016 presidential election. Column I displays the results from the first instrumental variable

analysis. In this model, the lagged partisanship effect suggests that, unsurprisingly, party identification has a strong, exogenous effect on vote choice. The magnitude of this effect remains relatively unchanged regardless of the strength of the instrument we choose (as demonstrated by the similar effects when general ideology and previous vote choice are included in the derivation of the instrument—that is, Columns II and III, respectively).

While the models in Panel B demonstrate a strong exogenous effect of partisanship, they provide little evidence for a relationship between either MEA and vote choice. With endogenous biases reduced, the magnitude of the estimated effects of MEA on vote choice are substantially reduced. The results of these models suggest that removing the biases associated with endogeneity between partisanship and vote choice only increase the estimated effect of partisanship. Nonetheless, it should be noted that a moderate instrument provides a significant, albeit reduced, coefficient for MEA.

In Panel C, however, we include instruments for both MEA and PID, and the estimates reveal a lower magnitude for the estimated exogenous partisanship measure. Furthermore, we find that MEA has a significant effect on vote choice in the predicted direction. That is, those panelists who reported more pro-Keynesian opinions were significantly more likely to vote for Hillary Clinton in the 2016 presidential election. The magnitude of these effects should be understood within the context of their scale. For example, consider the Neoclassical model in column III of panel C. While the estimated coefficient is significant, a shift from the 25th to the 75th percentile (-2 to +2) represents only a marginal swing of roughly .05 in the probability of voting for the Democrat for president. Thus, MEA provide significant, but modest, effects on presidential vote choice.

Table 6. The Effects of Partisanship and Macroeconomic Attitudes on 2016 Presidential Vote, Panel Tests and Exogenous Specifications						
	Keynesianism			Neoclassicism		
	(I)	(II)	(III)	(I)	(II)	(III)
<i>A. Preliminary Panel Estimates (Probit)</i>						
PID (16)	1.31*** (.07)			1.24*** (0.07)		
PID (14)		1.31*** (0.08)	1.30*** (0.08)		1.25*** (0.08)	1.25*** (0.08)
MEA (16)	0.12*** (0.02)		0.11*** (0.02)	-0.13*** (0.02)		-0.13*** (0.02)
MEA (14)		0.13*** (0.02)			-0.16*** (0.02)	
Log Likelihood	-441.30	-346.28	-358.55	-427.91	-323.24	-344.11
N	1173	944	951	1166	935	943
<i>B. Exogenous PID, Macroeconomic Attitude, and the Vote: Panel Tests (Two-Stage, Probit Estimates)</i>						
MEA (16)	0.01 (0.03)	0.04** (0.02)	0.02 (0.02)	-0.01 (0.04)	-0.05** (0.01)	-0.02 (0.02)
PID' (14, broad x)	1.88*** (0.07)			1.88*** (0.07)		
PID' (14, mod x)		1.82*** (0.08)			1.81*** (0.08)	
PID' (14, strict x)			1.78*** (0.08)			1.77*** (0.08)
Log Likelihood	-1282.21	-1116.11	-725.34	-1233.94	-1095.09	-720.78
N	871	870	675	864	863	671
<i>C. Exogenous PID, Exogenous Macroeconomic Attitude, and the Vote: Panel Tests (Two-Stage, Probit Estimates)</i>						
MEA' (16)	0.32*** (0.07)	0.33*** (0.05)	0.27*** (0.08)	-0.36*** (0.02)	-0.36*** (0.02)	-0.23** (0.12)
PID' (14, broad x)	1.03* (0.56)			0.17 (0.63)		
PID' (14, mod x)		0.90** (0.43)			0.10 (0.46)	
PID' (14, strict x)			1.16*** (0.41)			1.23** (0.54)
Log Likelihood	-3380.76	-3172.18	-2298.41	-3421.08	-3194.97	-2319.31
N	866	865	671	859	858	667

These results differ from the Lewis-Beck, Nadeau, and Elias (2008) findings in one important respect--the MEA effect on vote choice is much weaker than the effect of retrospective economic evaluations on vote choice. While both macroeconomic policy attitudes and retrospective economic evaluations are correlated with partisanship,

macroeconomic policy attitudes have a stronger connection with partisanship than evaluations of the current economy and therefore have a much weaker effect on vote choice than retrospective economic evaluations once partisanship is taken into account.

### **Conclusion**

This study is the first to take a serious look at Americans' views of macroeconomic policy and their fit to the Keynesian and neoclassical schools of economic thought. We find that Americans' views of macroeconomic policy are aligned on a dimension defined by Keynesian and neoclassical policy views, but Americans do not fall into two polarized camps. Moreover, we find a strong relationship between opinion on macroeconomic policy issues and partisanship and general ideology, a very modest relationship between macroeconomic policy issues and retrospective economic evaluations. Exploiting a panel with 12 waves over the 2012-2018 period that allows for serious analysis of individual-level change in attitudes, we find substantial stability, measurable change, and greater change among Republicans than Democrats. Republicans lost some of their more strictly neoclassical views as time passed after the Great Recession and the prominence of economic issues is media coverage faded somewhat. Further exploiting the panel design to address the potential endogeneity of macroeconomic attitudes to partisanship, simultaneous equation bias, and correlated error bias, we demonstrate the macroeconomic economic attitudes are related to presidential vote in 2016, although the effect is much smaller than the effect of partisanship, general ideology, and retrospective economic evaluations.

This initial exploration of the structure and effect of macroeconomic attitudes generates more questions that warrant attention in future research. The unidimensionality of macroeconomic attitudes may be—and, we would guess, certainly is—dependent on the cues emanating from the public discourse of political and economic elites, which evolves over long periods of time. It is likely that the dimensionality is a part of a larger process of sorting in the American public that is observed for public attitudes more generally (Fiorina 2017). However, we do not find a “disappearing center” or polarized camps, as Abramowitz has argued. Instead, we find differences in central tendencies by party affiliation, but the two sets of partisans are both distributed in a unimodal fashion, show little skewness, and are greatly overlapping. Elites appear to be more fully polarized on macroeconomic policies than the American general public.

We found that Democrats are not as strongly Keynesian as Republicans are neoclassical. On the surface, this would appear to make it more difficult for Democrats to choose macroeconomic policies that meet the expectations of the base than it is for Republicans. However, there is a hint that Republicans’ strong neoclassical views softened as the reinforcement of public discourse about economic policy faded in the years after the Great Recession. These processes that generate differences between the parties in the cross section and over time deserve more study.

Political science has given far more attention to the effect of retrospective economic evaluations on vote choice than to the public’s attitudes about macroeconomic evaluations. This may be justified. At least as judged by 2016 presidential vote choice, the impact of macroeconomic views is much smaller than the impact of retrospective economic



evaluations. Nevertheless, views on macroeconomic policies have a measurable effect on vote choice independent of retrospective economic evaluations.

Survey questions about macroeconomic issues surely are difficult for many members of the general public. For at least some macroeconomic issues, we find more nonresponse than for typical questions about public affairs. We also find that political knowledge facilitates the mapping of ideology to Keynesian and neoclassical views. Especially for Democrats, sophistication tends to produce more strongly Keynesian views. The ebb and flow in sophistication about macroeconomic issues in response to economic events and public discourse warrants more investigation.

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## Appendix

**Table A1.** Factor Loadings of Economic Policy Items, First Factor, Omitting Technology and Trade Variables  
(Loadings Inconsistent with Table 1 Directionality are Indicated in Italics)

	School of Thought	
	Keynesian	Neoclassical
raise government spending	0.73	0.72
raise taxes	<i>0.47</i>	0.53
reduce government deficits	-0.48	-0.48
increase the money supply	0.43	0.43
lower regulations on business	n/a	-0.49
stimulate more consumer spending	0.32	0.29
encourage more household saving	-0.31	-0.28
raise wages	<i>0.34</i>	0.38
Eigenvalue, Factor 1	1.47	1.76
Eigenvalue, Factor 2	0.46	0.47
Cronbach's $\alpha$	0.62	0.66
<b>N</b>	1230	1194
Note: unweighted. Principal components analysis, unrotated.		

## **Description of Instruments**

- PID' (14, broad x): Education, Income, Sex, Age, Race, Church Attendance
- PID' (14, mod x): Education, Income, Sex, Age, Race, Church Attendance, Ideology
- PID' (14, strict x): Education, Income, Sex, Age, Race, Church Attendance, Ideology, Reported Vote Choice in 2012.
- MEA' (16): Education, Income, Sex, Age, Race, Church Attendance, Ideology, Political Interest, Egocentric Retrospective Economic Evaluation.

Table A2. Correlates of Macroeconomic Policy Preferences with Scales Omitting Technology and Trade Items

	Keynesian 2012	Keynesian 2012	Keynesian 2017	Keynesian 2017	Neoclassical 2012	Neoclassical 2012	Neoclassical 2017	Neoclassical 2017
Partisanship	-0.12**	0.12	-0.21***	0.01	0.42***	-0.17	0.38***	-0.12
	0.06	0.12	0.06	0.11	0.07	0.15	0.06	0.12
Ideology	-0.31***	-0.27***	-0.15**	-0.12*	0.44***	0.36***	0.30***	0.22***
	0.07	0.07	0.04	0.06	0.08	0.08	0.08	0.08
Education	-0.04	-0.04	0.10**	0.10**	0.01	0.01	-0.09*	-0.09*
	0.06	0.06	0.04	0.04	0.06	0.06	0.05	0.05
Political Information	0.06	0.20**	0.16***	0.29***	-0.09**	-0.44***	-0.14**	-0.43**
	0.04	0.08	0.04	0.07	0.04	0.07	0.05	0.08
Political Information x Partisanship		-0.04**		-0.04**		0.09***		0.08***
		0.02		0.02		0.02		0.02
Female	-0.13	-0.14	-0.16	-0.16	-0.27	-0.23	0.01	0.01
	0.19	0.19	0.16	0.16	0.19	0.19	0.19	0.18
Age	0.01	0.01**	0.00	0.00	0.01	0.01	0.01	0.01
	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Black	-0.10	0.05	-0.60**	-0.57**	0.38	0.01	0.33	0.25
	0.37	0.38	0.25	0.26	0.45	0.50	0.35	0.35
Hispanic	-0.25	-0.21	-0.96***	-0.95***	0.14	0.02	1.05***	1.03***
	0.31	0.32	0.28	0.28	0.30	0.31	0.30	0.31
Race: Other	0.08	0.10	-0.82**	-0.85***	0.24	0.18	0.46	0.54
	0.28	0.27	0.30	0.29	0.33	0.30	0.44	0.42
Household Income	0.04*	0.04	0.03	0.03	-0.05*	-0.05*	0.04	0.05
	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Retrospectiv e Evaluation	-0.10	-0.11	0.21*	0.19	-0.28*	-0.26*	-0.18	-0.13
	0.14	0.14	0.13	0.13	0.16	0.15	0.16	0.16
Intercept	2.03**	1.09	0.11	-0.75	-1.80*	0.57	-1.57**	0.35
	0.88	0.97	0.60	0.74	0.95	1.16	0.76	0.89
R <sup>2</sup>	0.09	0.09	0.17	0.18	0.29	0.31	0.24	0.26
N	1412	1412	1822	1822	1406	1406	1817	1817

Table entry is the weighted OLS coefficient with standard error below.

\* $p < 0.1$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$ , two-tailed

Table A3. Full Results from Table						
	Keynesianism			Neoclassicism		
	(I)	(II)	(III)	(I)	(II)	(III)
<i>A. Preliminary Panel Estimates (Probit)</i>						
PID (16)	1.31*** (.07)			1.24*** (0.07)		
PID (14)		1.31*** (0.08)	1.30*** (0.08)		1.25*** (0.08)	1.25*** (0.08)
MEA (16)	0.12*** (0.02)		0.11*** (0.02)	-0.13*** (0.02)		-0.13*** (0.02)
MEA (14)		0.13*** (0.02)			-0.16*** (0.02)	
Years Education	0.11*** (0.03)	0.13*** (0.02)	0.09*** (0.03)	0.11*** (0.03)	0.09*** (0.03)	0.10*** (0.03)
Income	-0.00 (0.01)	0.01 (0.02)	0.01 (0.02)	0.00 (0.00)	0.01 (0.02)	0.01 (0.02)
Female	0.38*** (0.10)	0.38*** (0.11)	0.33*** (0.11)	0.35*** (0.10)	0.39*** (0.11)	0.28*** (0.11)
Age	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.01* (0.00)	0.01* (0.00)
White	-0.38*** (0.12)	-0.34** (0.14)	-0.35** (0.14)	-0.38*** (0.124)	-0.36*** (0.14)	-0.33** (0.14)
Intercept	-1.64*** (0.38)	-1.73*** (0.42)	-1.68*** (0.41)	-1.52*** (0.39)	-1.64*** (0.43)	-1.61*** (0.42)
Pseudo R <sup>2</sup>	0.46	0.47	0.46	0.47	0.50	0.47
N	1173	944	951	1166	935	943
<i>B. Exogenous PID, Macroeconomic Attitude, and the Vote: Panel Tests (Two-Stage, Probit Estimates)</i>						
MEA (16)	0.01 (0.03)	0.04** (0.02)	0.02 (0.02)	-0.01 (0.04)	-0.05** (0.01)	-0.02 (0.02)
PID' (14, broad x)	1.88*** (0.07)			1.88*** (0.07)		
PID' (14, mod x)		1.82*** (0.08)			1.81*** (0.08)	
PID' (14, strict x)			1.78*** (0.08)			1.77*** (0.08)
Years Education	0.03 (0.03)	0.04 (0.03)	0.05 (0.04)	0.04 (0.04)	0.06* (0.03)	0.06 (0.04)
Income	0.04*** (0.02)	0.04** (0.02)	0.04* (0.02)	0.04** (0.02)	0.03** (0.01)	0.04* (0.02)
Female	0.04 (0.11)	0.07 (0.10)	0.06 (0.12)	0.02 (0.11)	0.05 (0.11)	0.06 (0.12)
Age	0.01* (0.00)	0.01* (0.00)	0.01 (0.00)	0.01* (0.00)	0.01* (0.00)	0.01* (0.00)
White	0.27 (0.16)	0.14 (0.14)	0.19 (0.15)	0.27 (0.17)	0.12 (0.14)	0.19 (0.15)
Intercept	-1.50*** (0.41)	-1.58*** (0.40)	-1.71*** (0.48)	-1.58*** (0.41)	-1.69*** (0.41)	-1.73*** (0.49)
N	871	870	675	864	863	671
<i>C. Exogenous PID, Exogenous Macroeconomic Attitude, and the Vote: Panel Tests (Two-Stage, Probit Estimates)</i>						
MEA' (16)	0.32***	0.33***	0.27***	-0.36***	-0.36***	-0.23**



	(0.07)	(0.05)	(0.08)	(0.02)	(0.02)	(0.12)
PID' (14, broad x)	1.03* (0.56)			0.17 (0.63)		
PID' (14, mod x)		0.90** (0.43)			0.10 (0.46)	
PID' (14, strict x)			1.16*** (0.41)			1.23** (0.54)
Years Education	0.00 (0.03)	0.01 (0.03)	0.04 (0.04)	0.01 (0.03)	0.01 (0.03)	0.06 (0.04)
Income	-0.01 (0.03)	-0.01 (0.02)	-0.01 (0.03)	-0.02 (0.02)	-0.02 (0.02)	0.00 (0.03)
Female	0.16 (0.11)	0.16 (0.10)	0.12 (0.12)	0.09 (0.09)	0.09 (0.09)	0.07 (0.13)
Age	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.01 (0.00)
White	-0.22 (0.25)	-0.30* (0.17)	-0.18 (0.21)	-0.36* (0.19)	-0.40*** (0.13)	-0.09 (0.24)
Intercept	-0.65 (0.56)	-0.60 (0.55)	-1.09* (0.63)	-0.01 (0.58)	0.01 (0.54)	-1.17 (0.76)
N	866	865	671	859	858	667

### **Question Wording:**

**Macroeconomic Attitudes:** Policymakers often design policies to address immediate, short-term economic conditions, but these policies may have beneficial or harmful effects in the long run. We are interested in your views about the factors that improve or harm the American economy. Consider the following policies that might be adopted during a recession or weak economy. Describe your views about how effective each of the policies listed below would be in improving the national economy during a recession or weak economy [greatly improves the economy; improves the economy; has little effect on the economy; harms the economy; greatly harms the economy; don't know]

- raise government spending
- raise taxes
- reduce government deficits
- increase the money supply
- lower regulations on business
- stimulate more consumer spending
- encourage more household saving
- raise wages
- encourage better use of technology by business
- lower taxes on foreign goods coming into the U.S.

**Age:** What is your date of birth? [Month; Day; Year]

**Income:** We want to know about the total income in your household. What was your household income in the past year? [below \$10,000; \$10,000 to \$19,999; \$20,000 to \$29,999; \$30,000 to \$39,999; \$40,000 to \$49,999; \$50,000 to \$59,999; \$60,000 to \$69,999; \$70,000 to \$79,999; \$80,000 to \$89,999; \$90,000 to \$99,999; \$100,000 to \$124,999; \$125,000 to \$149,999; \$150,000 to \$199,999; \$200,000 to \$249,999; \$250,000 to \$299,999; \$300,000 or more]

**Education:** What is the highest level of school you have completed? [No formal education; 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, or 4<sup>th</sup> grade; 5<sup>th</sup> or 6<sup>th</sup> grade; 7<sup>th</sup> or 8<sup>th</sup> grade; 9<sup>th</sup> grade; 10<sup>th</sup> grade; 11<sup>th</sup> grade; 12<sup>th</sup> grade No Diploma; High School Graduate – high school DIPLOMA or the equivalent (GED); Some college, but no degree; Associate degree; Bachelor's degree; Master's degree; Professional degree; Doctorate degree]

**Gender:** Are you male or female? [Male; Female]

**Hispanic Identity:** This question is about Hispanic ethnicity. Are you of Spanish, Hispanic, or Latino descent? [Yes; No]

**Race:** Please check one or more categories below to indicate what race(s) you consider yourself to be. [White; Black or African American; American Indian or Alaska Native; Asian/Pacific Islander]

**Partisanship:** Generally speaking, do you usually think of yourself as a [Democrat, a Republican/Republican, a Democrat], an independent, or what? [Democrat; Republican; Independent; Other, please specify]. Would you call yourself a strong [Democrat/Republican] or a not very strong [Democrat/Republican]? [Strong; Not Very Strong] Do you think of yourself as CLOSER to the [Democratic Party or Republican Party/Republican Party or Democratic Party]?

### **Political Information:**

- Which party holds a majority of seats in the U.S. House of Representatives in Washington? [Democrats; Republicans; Independents; Don't know]
- How many votes are required in Congress to override a presidential veto? [a simple majority of one house of Congress; a simple majority of both houses of Congress; a two-thirds majority of one house of Congress; a two-thirds majority of both houses of Congress; Don't know]
- How long is one term for a member of the U.S. Senate? [two years; four years; six years; eight years; Don't know]

- The ability of a minority of senators to prevent a vote on a bill is known as: [a veto; a filibuster; enrollment; suspension of the rules; Don't know]
- Who is the Vice President of the United States? [Nancy Pelosi; John Boehner; Joseph Biden; Harry Reid; Don't know]
- A president may serve: [one term; two terms; three terms; any number of terms; Don't know]
- Members of the U.S. Supreme court serve [two-year terms; ten-year terms; life terms; terms determined by the president; Don't know]
- Who is Chief Justice of the United States Supreme Court? [John Roberts; Antonin Scalia; Mitt Romney; Hillary Clinton; Don't know]
- Social Security is: [the benefit program for senior citizens; the responsibility of the Department of Defense; operated by state governments; funded by the personal income tax; Don't know]
- On which of the following federal programs is the most money spent each year? [aid to foreign countries; Medicare; subsidies to farmers; education; Don't know]

**Political Interest:** In general, how interested are you in politics and public affairs? [Very interested; Somewhat interested; Slightly interested; Not at all interested]

**Church Attendance:** How often do you attend formal religious services? [More than once a week; Once a week; Once or twice a month; A few times a year; Only on special occasions; Never]

**Ideology:** In terms of your political views, do you think of yourself as: [Very liberal; Liberal; Slightly liberal; Moderate; Slightly conservative; Conservative; Very conservative; Don't know]

**2012 Presidential Vote:** In the presidential election, who did you vote for? [Barack Obama; Mitt Romney; other candidate]

**2016 Presidential Vote:** In the presidential election, who did you vote for? [Hillary Clinton; Donald Trump; Gary Johnson; Jill Stein; Evan McMullin; Other candidate]

**Egocentric Retrospective Economic Evaluation:** Are the current economic conditions in your household and in the country excellent, good, only fair, or poor? [excellent; good; only fair; poor; not sure]