

# PRE-ANALYSIS PLAN:

## Opinions About Facts - Partisan Asymmetries in Economic Assessments

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### 1 Introduction

Popular wisdom has it that, in the United States, Republicans and Democrats live in different worlds. Most often, these worlds are described as the “real world” for Democrats, whereas Republicans are seen to be living in a partisan fairy-land. For example, in an analysis of Donald Trump’s Republicanism, Corey Robin describes “a happy avowal of contradiction” as a long-standing feature of conservatism, which is “a counter to the simpleminded rationalism that was supposed to animate the left” (Robin, 2018, p. 239). Or, as a slate.com commentator poignantly puts it “Finding facts and pursuing evidence and trusting science is part of liberal ideology itself. For many conservatives, faith and intuition and trust in revealed truth appear as equally valid sources of truth” (Ehrenreich, 2017)<sup>1</sup>. However, there is yet little scientific evidence to back up or contradict this conventional wisdom. A gap we attempt to close. Using survey evidence of perceived economic conditions, we aim to show that Republicans’ assessments are more sensitive to changes in political power, while Democrats react relatively more to changes in true economic conditions. While in this project, we stay silent on potential reasons for this asymmetry, we propose a series of explanations and channels as areas for future research at the end of this pre-analysis plan.

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<sup>1</sup><https://slate.com/technology/2017/11/why-conservatives-are-more-susceptible-to-believing-in-lies.html>

In contrast to several studies, which document disagreement on economic facts and credit this to motivated partisan beliefs on both sides (e.g. Bullock et al. (2015) or Comerford and Soll (2018)), we focus on the (alleged) asymmetry between Republicans and Democrats. Using economic assessments as a testing ground for partisan cognition has the advantage that assessments should be comparatively free of value judgements, and that we know, and are able to measure, the true state of the world. Furthermore, as Fiorina (1981) and Wolfers (2007) show, perceived economic conditions are highly relevant to political outcomes, such that asymmetries in these perceptions are of general interest.

As our main data source, we use high-frequency polling data from `civiqs.com`, which conducts daily online opinion surveys on a range of political and social questions. Further data sources will be added as controls for true economic conditions. The purpose of this pre-analysis plan is to commit to an empirical framework to avoid specification search and data mining. As we are writing this plan, we are not yet in possession of the data, and have no information on it except for three-year average responses and a graph of top-line trends. Hence, we are not able to specify our analyses down to the minutiae.

## 2 Data

In this project, we combine several data sources. Individual-level survey data is obtained from `civiqs.com`, and will be matched with supplementary economic data from different sources.

### 2.1 Survey Data

Survey data comes from `civiqs.com`. It includes answers to three questions and a set of socio-demographic covariates. It is a repeated cross-section.

Civiqs.com provides online opinion polling and survey services. It keeps its own, nationally representative pool of respondents and selects respondents each day using a list-based sampling methodology to correct for underrepresented groups in the panel.<sup>2</sup> Our data comes from Civiqs' daily tracking polls. These polls are conducted on a daily basis and include a range of political and economic questions. The time series

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<sup>2</sup>Since sampling is not fully random, we will use Stata's `svy` commands to adjust for survey design effects in our estimations.

we are interested in, range back to October 2016 and include about 125,000 responses over the whole survey period.<sup>3</sup> Civiqs uses a dynamic Bayesian multiple regression model with post-stratification weights to aggregate individual-level responses to daily trends. We will use both individual answers and the aggregate partisan cohort to assess our main hypothesis. For more details on Civiqs’ sampling methodology, see <https://civiqs.com/methodology/>.

We will focus on the responses to three questions:

- **National Economy: Current Condition** The exact wording of the question is “How would you rate the condition of the national economy right now?” Possible answers are “very good”, “fairly good”, “fairly bad”, “very bad” and “unsure”. Answers “unsure” will be coded as missing in the main analysis and indices adjusted accordingly. Because our main empirical specification uses linear regression, we recode the answers such that “very good”, “fairly good”, “fairly bad”, “very bad” are coded to be equal to 3, 2, 1 and 0 respectively.
- **Family Finances, Last Year** The exact wording of the question is “Over the last year, has your family’s financial situation:” Possible answers are “gotten better”, “stayed about the same”, “gotten worse” and “unsure”. Again, we will code category unsure as missing and recode the answers such that “gotten better”, “stayed about the same”, “gotten worse” are equal to 1, 0 and -1<sup>4</sup>, respectively.
- **National Economy: Direction** The exact wording of the question is “Do you think the nation’s economy is getting better or worse?” Possible answers are “getting better”, “staying about the same”, “getting worse” and “unsure”. “Unsure” will be coded as missing, whereas the other answers will be encoded in the same fashion as the answers to “Family Finances, Last Year”.

For all individuals in the sample, we observe home state, home city, a dummy for developed environment (urban/suburban/rural), gender, age, race, income, education level, and party identification. These will be used as covariates.

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<sup>3</sup>As of August 2018.

<sup>4</sup>We encode the answers differently to aid intuitive interpretability.

**Sample Size and Power** To stay within budget, we have chosen sample sizes to detect a conservative estimate of a minimum difference of 0.08 - 0.10 (two-sided t-test<sup>5</sup>) for our OLS and RDiT estimations, with power of 80% at the 5% - significance level<sup>6</sup>. Since the synthetic belief is a novel approach close to the synthetic control method, for which test-based inference is unavailable (Abadie, Diamond and Hainmueller, 2015), we cannot provide information on minimum detectable effect sizes and power. We will however conduct falsification tests and report results. For all questions we will use a sample of 1100 responses each. Since we consider using “National Economy: Direction” and “Family Finances, Last Year” as predictors in future work, the sample selection on these questions is dependent on the sample selected for “National Economy: Current Condition”. Observations will be chosen in the following fashion: 1) Construct a sample of 1100 responses for “National Economy: Current Condition”. Sample the 500 observations closest to 11/8/2016 on both sides. Sample another 600 observations by drawing a random sample of 60 responses per month for both the six months before and after the election (May-October 2016; November 2016 - April 2017). 2) For the other two questions, choose all responses from individuals in the “Current Condition”-sample. If this results in a sample size smaller than 1100, choose further responses by the same procedure as outlined in 1). Individuals with “Independent” party identification are excluded from the sampling procedure and a roughly equal split between Republicans and Democrats will be aimed at. All sampling will be executed by Civiqs alone.

## 2.2 Supplementary Data

For our analysis, we will combine data from different sources. We will use data on national and local economic conditions from the US Bureau of Economic Analysis and the US Bureau of Labor Statistics. Specifically, we will use the Regional Statistics of the BEA (<https://www.bea.gov/data/economic-accounts/regional>) and both the Quarterly Census of Employment and Wages and the Local Area Unemployment Statistics of the BLS (<https://www.bls.gov/cew/cewfaq.htm> and <https://www.bls.gov/lau/laufaq.htm>). Data on inequality come from the American Community Survey (ACS) (available under <https://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml>). We use data on nationwide indicators for GDP, prices and

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<sup>5</sup>Due to our extremely limited information on the data we chose to refrain from basing sample size considerations on F-tests. However, we will of course report F-statistics in our paper. Since adding covariates should most likely reduce variance, we expect power to be sufficient in regressions with covariates.

<sup>6</sup>Standard Deviations were assumed to be 0.5

employment from those sources, because we consider incorporating the effect of local economic conditions in further projects and want to keep our data sources consistent. Additionally, we will include further highly salient economic indicators such as interest rates, balance of payments, dollar exchange rates and stock market indices (Dow Jones, S & P 500) from the St. Louis FED FRED database (<https://fred.stlouisfed.org/>).

### 3 Main Hypothesis and Specifications

Figure 1 shows economic assessments over time for both Democrats (Panel A) and Republicans (Panel B). Democrats’ assessments on the whole are positive, whereas Republicans’ start mainly negative and turn gradually more positive after the 2016 election, with a significant jump on election day. These patterns are strongly suggestive of motivated partisan cognition for Republicans. We propose that Republicans do indeed align their beliefs to a partisan view of the world. In contrast, Democrats are comparatively more responsive to true underlying economic conditions. To test this, we run three separate econometric specifications.

**Main Hypothesis: In their economic assessments and expectations, Republicans put more weight on the political environment, whereas Democrats put relatively more weight on factual economic conditions.**

**Specification 1: Ordinary Least Squares** We will run the following regression on the partisan-split sample (total:  $n = 1100$ ) with OLS:

$$Y_{it} = \beta_0^P + \beta_1^P RPresid_t + \beta_2^P E_t + \beta_3^P X_{it} + \beta_4^P Expec_{it} + \epsilon_{it} \quad (1)$$

We chose to estimate effects for both parties separately since differences-in-differences is not applicable as the Democrats are only “untreated”<sup>7</sup> by assumption. Hence, we treat the 2016 election as a quasi-experimental event for which we conduct an event study.

$Y_{it}$  is either the answer to any of the three questions coded on the scales as in 2.1, or  $Pr(PositiveAssessment)$ , the probability of a positive assessment (“very good” and

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<sup>7</sup>that is, not affected by the election

“fairly good”) of the economic situation,  $Pr(Better/Same)$ , the probability of an improvement of household financial conditions or economic outlook, respectively. For additional analysis, we will also assess the dynamics of  $Pr(Unsure)$ , the probability of giving an answer “unsure”. All coefficients are indexed with  $P$ , which stands for “party” and is  $R$  for Republicans and  $D$  for Democrats.  $RPresid_t$  is a dummy that switches on during a Republican Presidency.  $E_t$  is a vector of economic indicators to measure economic conditions at time  $t$  (see 2.2).  $X_{it}$  is the vector of demographic covariates (see 2.1) which we include to check that partisanship does not proxy for socio-economic background.<sup>8</sup> Of these covariates, the most crucial is education.<sup>9</sup> In one specification, we will control for expectations by including the answer to “National Economy, Direction”,  $Expect_{it}$ , in the regression for the other two questions to rule out that differential expectations are driving the patterns in assessments.<sup>10</sup> For all analyses, we will adjust p-values as suggested by Romano and Wolf (2016). We will use heteroskedasticity-robust standard errors throughout all OLS specifications.

As consistent with the hypothesis, we expect  $\beta_1^R$  (the partisan effect for Republicans) to be larger than zero, whereas  $\beta_2^R$  (the effect of factual economic conditions for Republicans) should be indistinguishable from zero. For the Democrats we expect the opposite, that is  $\beta_1^D = 0$  and  $\beta_2^D > 0$ .

A less restrictive interpretation of our hypothesis is, instead of having Republicans care only about partisanship and Democrats only about factual conditions, to hypothesize on the relative strength of the parameters, which is also the way in which we verbalize our hypothesis above. In this interpretation, we expect  $|\beta_1^R| > |\beta_1^D|$ <sup>11</sup> and  $\beta_2^R < \beta_2^D$ .

We propose two variants of our main OLS specifications. One is to test whether the relevance of factual economic conditions is sensitive to political conditions, and the other is to assess the interaction between state of the economy, political environment and the

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<sup>8</sup>Additionally, we will estimate the propensity score of belonging to a certain party  $pr^P(X_{it})$  and include this in a separate regression instead of  $X_{it}$  to get a more precise estimate.

<sup>9</sup>We will additionally run a set of pairwise comparisons of the most educated Republicans versus the least educated Democrats to assess the role of education for the susceptibility to motivated reasoning.

<sup>10</sup>Still, even if asymmetries in expectations explain all asymmetries in assessments, the main hypothesis cannot be ruled out since we then might have evidence for one-sided “motivated expectations”/overconfidence.

<sup>11</sup>We use absolute values here because according to motivated cognition theory, the effect of a Republican Presidency on the Democrats should be negative!

impact of various factors on assessments. First, we test whether economic conditions matter more or less to partisans when one’s own party is in power:

$$Y_{it} = \beta_0^P + \beta_1^P RPresid_t + \beta_2^P E_t + \beta_3^P RPresid_t \times E_t + \beta_4^P X_{it} + \beta_5^P Expec_{it} + \epsilon_{it} \quad (2)$$

The predictions about  $\beta_1^P$  and  $\beta_2^P$  remain the same. For  $\beta_3^D$  we expect a value indistinguishable from zero. The reason is that, according to our hypothesis, if Democrats only take factual conditions into consideration, they should do so regardless of the political environment. For Republicans, both  $\beta_3^R > 0$  and  $\beta_3^R = 0$  are theoretically possible. We call  $\beta_3^R > 0$  partially motivated beliefs (facts matter, but only when the party is right) and  $\beta_3^R = 0$  fully motivated beliefs (facts never matter, only partisanship).

Second, we run a further set of estimations in which we classify economic conditions in good and bad conditions. This is a more intricate version of the estimation above, which we now analyse for different economic conditions as well. We do this to test more “traditional” theories of motivated cognition. These, e.g. Le Yaouanq (n.d.) or Bénabou (2013) would predict partisans to be responsive to information as long as it is consistent with their world view. In this line of reasoning, the interaction of  $RPresid_t$  and  $E_t$  should be significant depending on the state of the economy. To test this, we run Equation 2 once for time periods in which the economy is good and once for time periods in which the economy is bad.<sup>12</sup> If the prior that only a president of one’s own party is good for the economy is held, then  $\beta_3^R$  should be significant and positive if the economy is good, and insignificant if the economy is bad. However, these theories would predict motivated cognition on both sides, i.e. the Democrats suppress positive information about the economy during a Republican presidency, so  $\beta_3^D$  should be insignificant if the economy is good and significant and positive if the economy is bad.<sup>13</sup> We do not observe a reaction of Democrats to the election in the topline trends, so we consider it unlikely that these fully symmetric theories hold up in our setting.

**Specification 2: Regression Discontinuity in Time** Specification 1 only allows us to compare before- and after-election averages. To separate the immediate effect of

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<sup>12</sup>We will classify the economy into states in two ways: 1) improvement/worsening compared to previous month. 2) better/worse conditions than 12-month average. We will run regressions separately for both economic states and assess significance of the interactions.

<sup>13</sup>Conversely, we expect  $\beta_2^R$ , the effect of economic conditions on Republicans during a Democratic presidency to be insignificant if economic conditions are good, but significant and positive if conditions are bad and vice versa for Democrats.

the change in power on assessments and the incremental adjustment after, we use a Regression Discontinuity in Time approach. It also allows us to quantify the size of the discontinuity, i.e. what part of assessments is moved just because of a nominal change in power. Additionally, the inclusion of a vector of economic conditions in Equation 1 in addition to the Presidency Dummy might induce bias due to feedback effects between the economy and the election (especially  $\beta_1^P$  in Equation 1 is susceptible to this bias). The two following approaches allow us to rule these concerns out, because they incorporate these feedback effects into the counterfactual.

We will run a controlled regression discontinuity in time specification for all three questions on the subsample of Republicans and Democrats separately and compare both slopes and threshold effects. In accordance with our hypothesis, we expect no jump and flat slopes for the Democrats (controlling for economic conditions, there is no trend in economic assessments). For Republicans, we expect a positive jump at election day and subsequently a slight positive time trend, even if we control for election-induced economic changes. The reason that we expect a positive adjustment even after the election is that inauguration - i.e. the actual start of the “Republican” economy - takes place a few months after the election. So we expect the reversal of assessments to be stretched out over this period, in which the economy is still nominally Democratic but the switch is certain. After this adjustment period, we expect the trend to flatten again.

In practice, we will use a covariate-adjusted local linear estimator as suggested by Calonico et al. (2018).<sup>14</sup> As covariates, we will use the same vectors of  $X_{it}$  and  $E_t$  as in Specification 1. We will report estimations for both data-driven optimal bandwidth as chosen by the Stata Package **rdrobust** and the bandwidth available in our data (6 months). We will use a uniform kernel such that all observations are given equal weight. We do this to make sure that we do not overweight individuals who might select into responding a survey as close as possible to the election for expressive reasons. Although we consider selection-into-responding unlikely due to civiqs’ list-based sampling strategy, we do this as an additional sanity check. In contrast to standard sharp regression discontinuity, regression discontinuity in time designs require adjustment for

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<sup>14</sup>Chiefly for presentation reasons, as the **rdplot** package does not yet allow for plots with covariates, we will also conduct an augmented local linear estimation as suggested by Hausman and Rapson (2018). That is, we will run a simple OLS regression of assessments on socio-demographic covariates and economic conditions for both parties and save the residuals. Those residuals are assessments orthogonal to economic conditions and individual characteristics. We use these as input for a standard RDiT without controls.



autoregressive processes (Hausman and Rapson, 2018). In principle, assessments of the economy should be serially correlated. However, the repeated-cross section is an advantage in this case, since observations in  $t$  and  $t + 1$  are independent of each other. Yet, as economic conditions are highly autoregressive, we will use robust standard errors to adjust for serial correlation in the error term.

**Specification 3: Synthetic Beliefs** The reason why we do not estimate Specification 1 with a difference-in-difference model is that, as previously mentioned, the Democrats are not a true control group, since they are subject to the election “treatment” as well. For this reason, we construct a synthetic belief, which can serve as a counterfactual for how each partisan group’s assessments would have developed in absence of the election.

The basic idea behind synthetic beliefs is that, in a rational world, assessments of the economy should only be based on economic conditions. That is, we assume that assessments are some sort of function of economic conditions. If we know this function, we can map economic conditions into assessments. Hence, we can predict assessments after the election using the pre-election association **as if the only thing that changed were economic conditions**. If there is a difference between the predicted assessment and the assessments we have in our data, the assumption that economic assessments are only a function of economic conditions is violated.

We expect no significant difference between synthetic beliefs and actual assessments for Democrats, but a pronounced difference for Republicans, according to our hypothesis.

The synthetic belief (SB) was inspired by the synthetic control method introduced by Abadie, Diamond and Hainmueller (2010). In practice, we will use the time series of aggregate assessments by partisanship for only two questions “National Economy: Current Condition” and “National Economy: Direction” since it makes little sense to use national indicators for private information. We use aggregate trends and not individual responses, since we cannot track individuals over time due to the repeated-cross section structure of the data.<sup>15</sup> We split time series into a pre- and post-election period.

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<sup>15</sup>Also, the use of the aggregate cohort in our opinion increases the validity of our approach, since the collective intelligence incorporated in the aggregation increases the plausibility of the only assumption necessary for this method: (Rational) Assessments are some function of economic conditions.

Using pre-election values, we create a mapping from a rich set of economic indicators (as specified in 2.2) into assessments. We will try to adapt the familiar SCM algorithm to our purposes if possible, if not, we will use a straightforward polynomial fit. With the mapping we obtained in this step, we predict a synthetic belief on the basis of post-election economic outcomes. We will predict one synthetic belief for each of the two questions above using the other in addition to economic indicators as a predictor.

This approach has several advantages. First, it allows us to test whether the Democrats are truly only affected by changing economic conditions. Second, by running placebo elections (cutting the training period before the actual election), we can check whether it is indeed the change in power that causes Republicans to change their assessments. We can also rule out that anything else about the economy, but whose economy it is, changes at the election date. Third, the procedure can also incorporate different understandings of “the economy” since it creates two functions of assessments. A possible explanation that we previously could not address is that Republicans and Democrats have vastly different conceptions of the economy in terms of important indicators. The synthetic belief solves this issue. And fourth, the synthetic belief allows us to gauge the magnitude of the partisan distortion.

Of course, synthetic beliefs are not exact counterfactuals of how assessments would be if there had been no change in power, since they incorporate politically induced changes in the economy. However, in our case this is a clear advantage, since we do want to know how a rational (i.e. based on changes in economy conditions) response to the election would have looked like sans partisan cognition.

## **4 Channels and Alternative Explanations - Future Work**

In the following, we propose a series of potential (alternative) explanations for partisan cognition. For future work, we also outline a few ideas for identifying these channels. We propose that the patterns we document above are indicative of partisan asymmetries in the susceptibility to motivated cognition. It is unclear why only Republicans should be subject to this cognitive peculiarity, so our research not only documents motivated cognition in the field, but also opens up questions as to the conditions and channels of this distortion in information processing.

**Information-Based Explanations** Partisan asymmetries in assessments of the economy can be explained by partisan asymmetries in information. If members of different parties receive information from different distributions, or the same information is already presented with partisan slant, rational updating will lead to asymmetries in assessments. It will not be cognition that is motivated and biased, but information. However, this is still unable to explain the discontinuity on election day that we observe in our data by itself.<sup>16</sup>

- **Inference using Coarse Information Sets/Correlation Neglect** When answering survey questions on the economy, respondents might not have access to or make use of all relevant and available information, but rather proxy their answers with more readily available information or draw their conclusions from coarser information sets. These information sets might be local economic conditions or your own or family’s financial situation. We propose to test for this by including local economic conditions as a crude proxy for private information sets in our regression.

There are three cognitive biases that lead to inference using coarse information sets. First, the availability heuristic, according to which individuals use readily available information to answer more complex questions. Second, the affect heuristic: As Comerford and Soll (2018) write in their study of partisan differences in economic expectations, people tend to replace complicated questions of the form “what is X?” with “how do you feel about X?”. A third cognitive bias, following Ortoleva and Snowberg (2015), is correlation neglect. When people receive information from one part of the distribution, they fail to account for the fact that signals are correlated and update as if they were not. We cannot distinguish between these three channels in our setting. Undue influence of local and private economic conditions is indicative of any of the three biases. However, we can test if Republicans or Democrats are more susceptible to inference from coarse information sets, and whether this can in part explain our findings.

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<sup>16</sup>Only if information also changes discontinuously, e.g. because partisan media try to make “their” candidate look good and the opposing candidate bad, can the discontinuity be explained by asymmetries in information supply. However, if this is only the case for Republican media, our case stands unchallenged because it is likely that demand for partisan cognition drives this hypothetical media response.

- **Biased Information Supply through the Media** There is ample evidence for the impact of the media on political outcomes (DellaVigna and Kaplan, 2006) and for media bias and agenda-setting (Gentzkow and Shapiro, 2010). Obviously, this explanation cannot fully rule out partisan motivated cognition, since media selection is endogenous. People, who desire confirmation of their beliefs, read or watch what fits snugly with their world view. There is thus a reinforcement mechanism between partisan media and partisan cognition. To pin down the effect of media bias on asymmetric assessments, we are considering the use of Sinclair Broadcast Group owned TV stations as a natural experiment in the spirit of DellaVigna and Kaplan (2006). We also consider exploring whether the frequency and framing of economic news in partisan outlets changes depending on who is in power using sentiment analysis of clearly partisan outlets such as twitter accounts or FoxNews/CNN (c.f. Lowry (2008)).
- **Information Avoidance** There is ample evidence that individuals avoid information when they expect it might be “bad news” for them (Golman, Hagmann and Loewenstein, 2017). This is also true for the political realm. Anecdotal evidence from TV ratings suggests that “political camps are more interested in watching news when it reflects well on their favorites, and vice versa” (Bauder, 2019)<sup>17</sup>. We also consider using data from Google Trends to investigate if and how individuals are searching for information on the economy.
- **Opinion Leaders and Peer Effects** Another point of interest to us is how these informational asymmetries permeate through partisan groups. If strong spillovers exist and only in-group members’ assessments serve as points of references, then small deviations can become large differences in aggregate. We consider using Facebook’s social connectedness index to assess how peers’ economic circumstances affect economic assessments (Bailey et al., 2017). Political scientists Bisgaard and Slothuus (2017) document that party elites’ framing of content strongly effects partisan perceptions of economic conditions. In their setting, informational asymmetries - for whatever reason - are handed down to a party’s followers. What we document might thus not be partisan cognition so much on the receivers’ end, but we might simply be measuring a “Trump effect on truth”, as our data spans a presidential campaign and presidency that is in some ways seen as an outlier.<sup>18</sup>

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<sup>17</sup><https://www.apnews.com/6a418de605ab4fb5a8cddf958ac190f0>

<sup>18</sup>For example, politifact.org reports scores of false/mostly false (sum) for Donald Trump of 55%

**Extended Models of Motivated Cognition** Previous models of motivated cognition, such as Le Yaouanq (n.d.), predict polarization on both sides, i.e. if the prior is “an opposing president cannot be good for the economy”, then whenever power is in the hands of the opposing party, economic assessments of the other party’s followers should be bad regardless of the state of the economy. We do have suggestive patterns in our data (Fig. 1), but only for Republicans. We sketch two extended models of motivated cognition that incorporate partisan asymmetries in the intensity and incidence of motivated cognition. These are not mutually exclusive.

- **Identity-based motivated cognition** Individuals receive identity utility from a set of beliefs (world view). Whenever information is not in accordance with said world view, it is suppressed at a cost. Parties do not only differ in what they think is right and wrong, but also on what issues are more important to them and how many shades of a belief are contained in the world view. Beliefs that are relatively more constitutive to identity are more distorted than those that are not. It is thus not the cognitive bias that is stronger for one party, but how entrenched their world view is on one particular belief. Unfortunately, we cannot test this mechanism in our setting.
- **Motivated cognition-cycles** According to Bénabou (2013) beliefs are distorted if they lead to higher anticipatory utility. These motivated beliefs allow individuals to take up actions that would not be utility-maximizing if the belief reflected the state of the world correctly. Consider a model of voting, in which voters both reward/punish incumbents for good/bad economic conditions (instrumental motive)<sup>19</sup> and want to vote for their party’s candidate (expressive motive). These two motives can conflict if an incumbent from the opposing party has a strong economic record, or vice versa. If a suppression of information is possible, one way to resolve this conflict is to distort beliefs such that the opposing incumbent’s economy is perceived as bad (one’s own incumbent’s perceived as good). As suppression of information comes at a cost, motivated beliefs only arise when they matter. That is, shortly prior to an election in states of the world when the economy is strong under an incumbent from an opposing party or when the economy

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and Mike Pence (48 %), which is higher than previous presidents, presidential candidates and vice presidents, compared to Barack Obama (23%) and Joe Biden (28%), Mitt Romney (31%), Hillary Clinton (24%) or John McCain (38%). See <https://www.politifact.com/personalities/>

<sup>19</sup>This can for example be founded in voters desiring to elect the candidate that maximizes income. If the economic competence of the challenger is unknown, any incumbent that delivers better-than-average economic conditions should be re-elected (c.f. Rogoff and Sibert (1988)).

is weak under one's own incumbent. After the election, information processing goes back to normal. As yet, we cannot test this model since our data covers only one election. However, we hope to obtain data from the 2018 House and Senate election and the 2020 presidential election at a later stage.

Both of these extended models of motivated cognition could explain the patterns we observe in our data. They are distinguished by the fact that the identity-based model gives rise to motivated beliefs and polarization in the long run, whereas in the cycling model they are only a temporary phenomenon.

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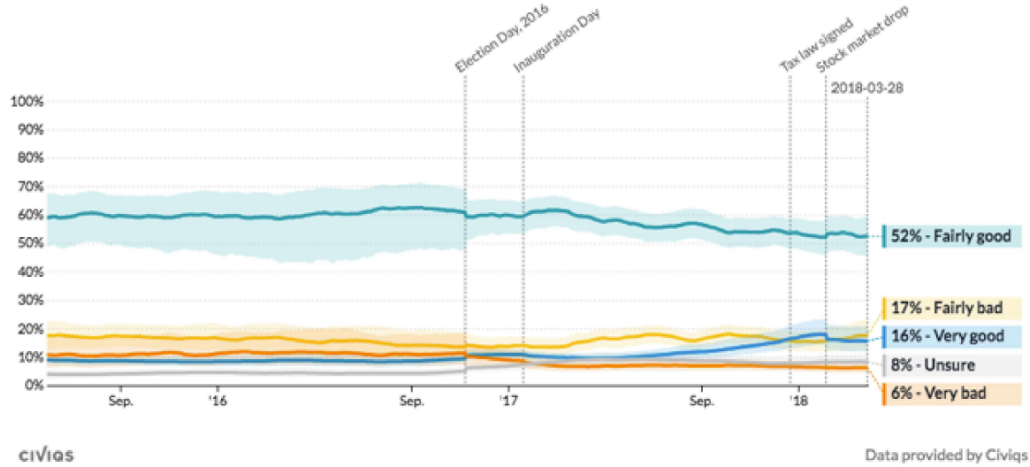


# Appendix

**How would you rate the condition of the national economy right now?**

NATIONAL, Registered Voters: June 01, 2015 – March 28, 2018

Refined by: **Party: Democrat**

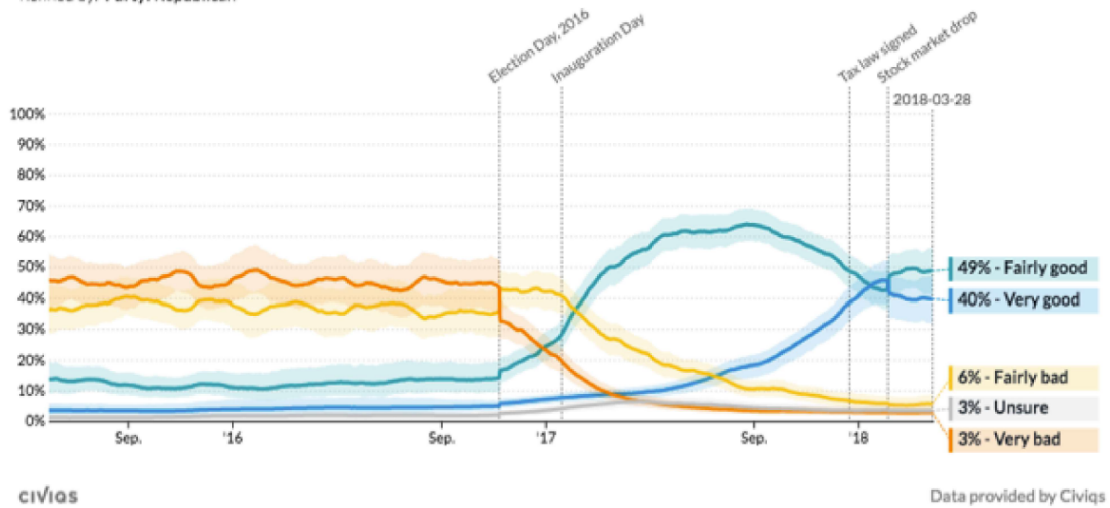


(a) Panel A: Democrats

**How would you rate the condition of the national economy right now?**

NATIONAL, Registered Voters: June 01, 2015 – March 28, 2018

Refined by: **Party: Republican**



(b) Panel B: Republicans

Figure 1: Partisan Differences in Economic Beliefs