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Partisan Bias in Inflation Expectations

Abstract

We examine partisan bias in inflation expectations. Our dataset includes inflation expectations of the New York Fed's Survey of Consumer Expectations over the period June 2013 to June 2018. The results show that inflation expectations were 0.46 percentage points higher in Republican-dominated than in Democratic-dominated US states when Barack Obama was US president. Compared to inflation expectations in Democratic-dominated states, inflation expectations in Republican-dominated states declined by 0.73 percentage points when Donald Trump became president. We employ the Blinder-Oaxaca decomposition method to disentangle the extent to which political ideology and other individual characteristics predict inflation expectations: around 25% of the total difference between inflation expectations in Democratic-dominated versus Republican-dominated states is based on how partisans respond to changes in the White House's occupant (partisan bias). The results also corroborate the belief that voters' misperceptions of economic conditions decline when the president belongs to the party that voters support.

JEL code: C13, D72, E31, P44
Keywords: Inflation expectation, partisan bias, political ideology, voters' perceptions, Blinder-Oaxaca, US president

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1. Introduction

Political ideology influences economic assessments (partisan bias). Citizens rate the economy more favorably when their preferred party is in office (e.g., Wlezien et al. 1997; Duch et al. 2000; Palmer and Duch 2001; Bartels 2002; Evans and Andersen 2006; Ladner and Wlezien 2007; Gerber and Huber 2010; Stanig 2013; Gillitzer and Prasad 2018; Mian et al. 2018; Benhabib and Spiegel 2019). New studies, such as Mian et al. (2018) and Benhabib and Spiegel (2019), use survey data from the University of Michigan's Survey of Consumers. Perceptions about inflation are ignored, Bartels (2002) being the exception.[1] An important reason for ignoring inflation expectations is that respondents to surveys tend to confuse price levels with inflation. Suitable data on inflation expectations was also not available. We examine partisan bias in inflation expectations with new data on inflation expectations provided by the Survey of Consumer Expectations of the New York Federal Reserve Bank. Investigating the determinants of inflation expectations is useful for describing why local factor prices differ across regions because expectations of future prices influence nominal wages (Dickens et al. 2007). Rising inflationary expectations likewise may suggest that citizens expect governments to pursue expansionary fiscal policies and, in turn, reduce their consumption expenditures (Barro 1974, 1979).

Measuring assessments of inflation expectations and examining partisan bias relates to the origins of the partisan theories (Hibbs 1977, 1987; Chappell and Keech 1986; Alesina 1987; see Schmidt 1996 and Potrafke 2017, 2018 for surveys). Partisan theories describe how leftwing and rightwing governments seek support from their constituencies: leftwing governments cater to blue-collar and low-income citizens; rightwing governments cater to white-collar and high-income citizens. Partisan theories model the economy with reference to

[1] In the United States, the Federal Reserve's employees expect inflation to be higher under Democratic presidents than under Republican ones (Gandrud and Grafström 2015).

a Phillips curve, which describes a negative tradeoff between the inflation rate and the unemployment rate. Governments implement fiscal policies and encourage central banks to pursue expansionary monetary policies to realize their preferred combinations of inflation and unemployment.[2] Leftwing governments implement expansionary fiscal policies and encourage central banks to pursue expansionary monetary policies in order to keep unemployment low and, in turn, accept high inflation rates, at least in the short run. Clearly, independent central banks are not constrained by governments' directives. Whether or not a central bank is (in)dependent depends on the extent to which governments have means to influence monetary policies and, in turn, inflation (on ideology-induced monetary policies, see, for example, Belke and Potrafke 2012; Cahan et al. 2019; Giesenow and de Haan 2019). Citizens who form expectations about inflation likely are to take into account governments' fiscal policies, the degree of central bank independence, and central bankers' policy preferences.[3] The constituencies of leftwing governments especially are concerned about unemployment and tend to have limited regard for the depreciation of assets and wealth that sets in when inflation is rising rapidly. Rightwing governments, by contrast, implement more restrictive fiscal and monetary policies to keep inflation rates low because their high-income constituencies possess assets and wealth; they therefore are more concerned about inflation than about unemployment.

Political business cycle theories predict that election-motivated politicians will implement expansionary fiscal and monetary policies before elections, government ideology notwithstanding (Nordhaus 1975; Rogoff and Sibert 1988; Rogoff 1990; see de Haan and Klomp 2013 and Dubois 2016 for surveys). Expansionary fiscal and monetary policies are

[2] In the United States, government ideology influences economic policy-making and outcomes such as economic growth (e.g., Blinder and Watson 2016; Cahan and Potrafke 2017; see Potrafke 2018 for a survey). On ideology, see also Bjørnskov (2005), Benabou (2008) Facchini and Melki (2014) and Laméris et al. (2018). On behavioral political economy, see Schnellenbach and Schubert (2015).

[3] Governments and central banks influence inflation by fiscal and monetary policies. Clearly, inflation also frequently is influenced by events that are exogenous to governments' and central banks' policies. Oil crises are a prime example. Bernholz (2015) summarizes the determinants of inflation.

likely to give rise to lower unemployment just before elections and increasing inflation afterwards, particularly if inflation is "sluggish" (Nelson 1998; Kocherlakota 2016). But voters cannot punish incumbents for rising inflation rates after elections (Bernholz 1983, 2001a, b).

Partisan bias in inflationary expectations can also arise because citizens have their own political ideologies – the economic policy platforms of the individual parties notwithstanding (North 1991; Denzau and North 1994). When rising inflation is perceived as producing poor economic conditions, for example, Democratic voters will expect inflation rates to be higher under Republican governments just because they believe that economic conditions worsen under Republicans. In a similar vein, Republican voters will expect inflation rates to be higher under Democratic governments because Republican voters may consider Democratic governments to be incompetent or improvident.

Our results show that inflation expectations were around 0.46 percentage points higher in Republican (red) dominated US states than in Democratic (blue) dominated US states when Barack Obama was US president. Higher expected inflation rates in Republican than in Democratic constituencies may well corroborate the belief that Republican constituencies are more concerned about inflation than are Democratic constituencies. Republican constituencies also tend to expect Democratic governments to implement expansionary policies that are likely to give rise to higher inflation – as partisan theories predict. Compared to inflation expectations in Democratic-dominated states, inflation expectations in Republican-dominated states declined by 0.73 percentage points when Donald Trump became president. We employ Blinder and Oaxaca's decomposition method to disentangle the extent to which political ideology and other individual characteristics predict inflation expectations. We find that about 25% of the total difference between inflation expectations in red and blue states is explained

by how partisans respond to changes in presidential administrations (partisan bias). The results corroborate the belief that voters' misperceptions of economic conditions decline when the president belongs to the party the voters support.

2. Previous studies of partisan bias in assessments of the economy

Empirical evidence on partisan bias in economic assessments is compelling: many studies examining such partisan bias report that economic conditions (both retrospective and prospective) are described as being better when the supported political party is in office or has just won an election (e.g., Duch et al. 2000; Palmer and Duch 2001; Bartels 2002; Evans and Andersen 2006; Ladner and Wlezien 2007; Gerber and Huber 2010; Gillitzer and Prasad 2018; Mian et al. 2018; Benhabib and Spiegel 2019). Scholars often assess opinions on the economy on the basis of survey data from countries such as the United States and the United Kingdom. The dependent variables in such studies are assessments of the general national economic performance and of respondents' own financial situations. Political ideology often is self-reported; just a few new studies employ macro data, such as party vote shares at the county and state level. Table 1 summaries the related literature.

In the United States, political ideology influences economic assessments (Duch et al. 2000; Bartels 2002; Mian et al. 2018; Benhabib and Spiegel 2019). In the 1980s, for example, Democratic and Republican voters evaluated unemployment and inflation rates under President Ronald Reagan quite differently. The unemployment rate fell from 7.1% in 1980 to 5.5% in 1988. The inflation rate declined from 13.5% in 1980 to 4.1% in 1988. However, only 30% of survey participants identifying with the Democrats (but 80% of strong Republicans) reported that unemployment had fallen. In a similar vein, 50% of strong

Democrats (but 13% of strong Republicans) reported that the inflation rate had risen since 1980 (Bartels 2002). The Democratic Party won the 2006 midterm congressional elections; Gerber and Huber (2010) interviewed survey respondents just before and after the election to compare how expectations changed. Respondents were much more likely to report that their own household's economic situation and general economic performance would improve when they were Democrats than when they were Republicans. The share of state congressional representatives from the same party as the incumbent president was positively correlated with expectations about the national economy (Benhabib and Spiegel 2019). Partisan bias in economic assessments intensified over the 2008–2016 period (Mian et al. 2018).

In the United Kingdom, supporters of incumbent governments had more accurate expectations about general national economic performance than supporters of the opposition (Ladner and Wlezien 2007). Compared to citizens not supporting the incumbent government, supporters of the incumbent government also were more likely to believe that the British economy strengthened and that individual household incomes increased (Evans and Andersen 2006).

In Hungary, government supporters reported more positive evaluations of national economic performance and household financial situations (both retrospective and prospective) than non-supporters of the governments (Palmer and Duch 2001).

In Australia, survey respondents were more likely to report that their personal financial situations and general economic conditions (both current and next year) were better when the party they supported was in office than when the party they did not support was governing (Gillitzer and Prasad 2018).

These results from surveys in the different countries reflect identity-based expressive behavior (Hillman 2010). Respondents attributed to reality characteristics that were consistent with the outcomes that based on their chosen political identity they would have wanted to be true.

Previous studies have ignored inflation expectations (an exception is Bartels 2002). Two important reasons can be identified for ignoring those expectations. First, respondents tend to confuse price levels with inflation rates. Second, suitable data assessing inflationary expectations were not available to researchers. We employ new data on such expectations, based on individual estimates of the probability distribution for future inflation rates.

3. Data

The New York Fed's Survey of Consumer Expectations (SCE) from the Center for Microeconomic Data (CMD) compiles data on inflation expectations to examine how such expectations influence citizens' behavior (Armantier et al. 2013).[4] The SCE is a monthly survey conducted to assess how consumers form, update and act based on their expectations for many economic variables and outcomes. The SCE compiles the data by administering an internet-based survey with a rotating panel of approximately 1,300 heads of households, who participate in the panel for up to 12 months (Armantier et al. 2016). "Its overall goal is to fill the gaps in existing data sources (such as the University of Michigan Survey of Consumers, the Federal Reserve Board's Survey of Consumer Finances, and the Bureau of Labor Statistics' Consumer Expenditure Survey) pertaining to household expectations and behavior by providing a more integrated data approach. The SCE aims to cover a broad range of economic outcomes, including inflation…" (Armantier et al. 2016, p. 52). A notable

[4] Source: Survey of Consumer Expectations, © 2013-2018 Federal Reserve Bank of New York (FRBNY). The SCE data are available without charge at http://www.newyorkfed.org/microeconomics/sce and may be used subject to license terms posted there. The FRBNY disclaims any responsibility or legal liability for the present analysis and our interpretation of Survey of Consumer Expectations data.

difference to earlier datasets aiming to measure inflation expectations is that the SCE is designed to minimize respondents' confusion about prices and inflation rates. Surveys of inflationary expectations typically avoid the term "inflation" and ask about expected changes in "prices" (such as the Michigan Survey; see Curtin 2006). In contrast, the SCE is based on psychological evidence showing that respondents understand the concept of inflation and can express their views quantitatively (Bruine de Bruin et al. 2013).

We obtain individuals' inflation expectations from the SCE survey question that asks respondents to select a specific bin containing their inflation expectations. This question provides the opportunity to insert personal guesses, expressed in percentages, within ten bins, the structure of which is as follows:]-∞; -12], [-8; -12], [-4; -8], [-2; -4], [-2; 0], [0; 2], [2; 4], [4; 8], [8; 12] and [12, ∞[. Our baseline sample includes 78,174 responses from 11,469 participants.

The reported bin probabilities are used to fit an underlying parametric density distribution following the approach adopted by Engelberg et al. (2009). A generalized beta distribution is adopted when the respondent assigns a positive probability to three or more outcome intervals and an isosceles triangular distribution when the respondent locates all probability mass in two intervals. When a respondent assigns all probability mass in one interval, a uniform distribution is assumed. Based on the relevant parametric density distribution, the mean of each individual's reported density is determined and used in our study (Armantier et al. 2017). The SCE survey also encompasses individual characteristics of the respondents. The dataset includes information on, for example, income, age, education, numeracy and region.

To collect information about whether a respondent lives in a US state with Republican or Democratic majorities in the presidential elections (red or blue state), we combine the SCE with data from the US election report, which records the popular votes in election results (270towin 2018). The data are not available on the individual level. We therefore consider

voting outcomes in presidential elections at the state level and distinguish states with Republican and Democratic majorities. Hardly any within-state variation is available for exploitation over the 2013-2018 period because just two presidential elections were held (political majorities switched from the 2012 to the 2016 election in only seven states). We therefore exploit between-state variation and identify states that had Democratic or Republican majorities for extended periods of time. We employ averages of party vote shares in the presidential elections in years 2000, 2004, 2008, 2012 and 2016. In the baseline model, we adopt a threshold of 55% of the vote totals to generate dummy variables for red and blue states: an individual state is red when the Republicans received 55% or more of the votes; an individual state is blue when the Democrats received 55% or more of the votes. The other states are swing states. For robustness tests, we apply other thresholds, such as 52% or 58%, to distinguish red from blue states (see Tables A1 to A4 in the appendix).

The baseline model includes 12 blue, 20 red, and 19 swing states (we consider Washington, D.C. as well – inferences do not change when we exclude the 233 of 78,174 respondents who live in the District of Columbia). The blue states are, for example, Hawaii, Massachusetts and California. The red states include Wyoming, Oklahoma and Texas (see Table 2).

The descriptive statistics reported in Table 3 show that the average inflation expectation is higher in red states (3.91%) than in blue states (3.63%). That difference is statistically significant at the 1% level. Over the period running from June 2013 to December 2016 (Obama's presidency), the average inflation expectations were 4.10% in red states and 3.68% in blue states (not shown in Table 3). Voters in red states tend to believe that the Democratic government under Barack Obama during the 2013–2016 period implemented expansionary policies that gave rise to higher inflation rates. When high inflation is perceived as indicating deteriorating economic conditions, voters in red states – who, on average, favored Republican presidents over Democratic ones – also tend to believe that economic

conditions deteriorate. Inflationary expectations may be linked to political ideologies (North 1991; Denzau and North 1994). Over the January 2017–June 2018 period (Trump's presidency) average inflation expectations were 3.49% in red states and 3.52% in blue states.

Table 3 also suggests many other differences in the personal characteristics of the respondents in red and blue states. For example, citizens in red states are on average older and have lesser cognitive abilities (as measured by numeracy and educational attainment) than citizens in blue states. The share of citizens with low incomes is higher in red than in blue states and the share of citizens with high income likewise is lower in blue states.

We now examine whether the correlation between political ideology and inflation expectations remains statistically significant when we control for personal characteristics of the respondents and year fixed effects.

4. Empirical strategy

We estimate the baseline model by ordinary least squares (OLS) and regress individual inflation expectations on a dummy variable for blue ("blue") states and a dummy variable for red ("red") states (swing states are the reference category), respondents' individual characteristics, and year fixed effects:

$$y_i = \beta_0 + \beta_1 * \text{blue}_i + \beta_2 * \text{red}_i + \boldsymbol{X_i'\gamma} + \zeta_t + \varepsilon_i, \qquad (1)$$

where y_i is the inflation expectation of individual i; β_1 and β_2 are the parameters for red and blue states, $\boldsymbol{X_i}$ is a vector of individual characteristics with corresponding parameters $\boldsymbol{\gamma}$; and ζ_t are fixed effects for years $t = 2014, \dots, 2018$ (with 2013 being the reference category for the periods 2013–2018 and 2013–2016; 2017 is the reference year for the 2017–2018 period). We tested the null hypothesis of homoscedasticity in the error terms using a Breusch-Pagan test and reject the

null hypothesis at the 1% level. To correct for heteroscedasticity, we use heteroscedasticity robust standard errors.

To disentangle the difference in inflation expectations into a part that is explained by differences in individual characteristics, such as age or educational background, and a part that is based on political ideology (differences in coefficients) we employ the Blinder-Oaxaca decomposition method using the results of the models in Equation (2).

The Blinder-Oaxaca decomposition method was first developed to investigate labor market discrimination (Oaxaca 1973; Blinder 1973). We use the generalized Blinder-Oaxaca decomposition method as proposed by Neumark (1988) and Oaxaca and Ransom (1994). That decomposition divides the difference in mean outcomes into a portion that is explained by differences in the explanatory variables (including year fixed effects), and a part that remains unexplained by differences in the explanatory variables.

$$\triangle \overline{Y} = \overline{Y}_{red} - \overline{Y}_{blue} = \boldsymbol{\overline{X}'_{red}\widehat{\beta}_{red} - \overline{X}'_{blue}\widehat{\beta}_{blue}}$$

$$\triangle \overline{Y} = \boldsymbol{\overline{X}'_{red}\widehat{\beta}_{red} + \overline{X}'_{red}\widehat{\beta}^{*} - \overline{X}'_{red}\widehat{\beta}^{*} + \overline{X}'_{blue}\widehat{\beta}^{*} - \overline{X}'_{blue}\widehat{\beta}^{*} - \overline{X}'_{blue}\widehat{\beta}_{blue}}$$

$$\triangle \overline{Y} = \underbrace{\boldsymbol{(\overline{X}_{red} - \overline{X}_{blue})'\widehat{\beta}^{*}}}_{\Delta\ in\ characteristics} + \underbrace{\boldsymbol{\overline{X}'_{red}(\widehat{\beta}_{red} - \widehat{\beta}^{*}) + \overline{X}'_{blue}(\widehat{\beta}^{*} - \widehat{\beta}_{blue})}}_{\Delta\ in\ coefficients\ (political\ ideology)} \qquad (2)$$

where $\overline{Y}_{red}$ ($\overline{Y}_{blue}$) is the average inflation expectation of citizens living in red (blue) states and $\boldsymbol{\overline{X}'_{red}}$ ($\boldsymbol{\overline{X}'_{blue}}$) is a vector containing the means of the independent variables in red (blue) states; $\boldsymbol{\widehat{\beta}_{red}}$ $\left(\boldsymbol{\widehat{\beta}_{blue}}\right)$ is a vector of the estimates from the regression for citizens living in red (blue) states only; and $\boldsymbol{\widehat{\beta}^{*}}$ is the coefficients obtained from a pooled model over citizens living in both red and blue states without including the dummy variables for the states in that model.

The first part in equation (2) captures the differences in average characteristics between citizens living in Republican-dominated states and citizens living in Democratic-dominated states. If the citizens in Republican-dominated states and Democratic-dominated states have the same average characteristics, that part is zero and the differences in inflation expectations cannot be explained by differences in respondents' characteristics.

The second part in equation (2) captures differences in coefficients between citizens living in Republican-dominated states and citizens living in Democratic-dominated states. This second part is different from zero whenever $\widehat{\boldsymbol{\beta}}_{\boldsymbol{blue}} \neq \widehat{\boldsymbol{\beta}}^{*} \neq \widehat{\boldsymbol{\beta}}_{\boldsymbol{red}}$ holds, i.e., it also may be different from zero if the average characteristics in red and blue states are identical. So, even if, for example, citizens living in Republican-dominated states and citizens living in Democratic-dominated states had, on average, the same level of education, inflation expectations could well differ because of political ideology (difference in coefficients).

Bootstrapped standard errors are calculated using 500 iterations to determine the statistical significance of the foregoing terms.

5. Results

5.1 OLS

Table 4 shows the results of estimating the OLS model when we consider dummy variables for red and blue states (swing states are the reference category). When we consider the full sample (2013–2018) in column (1), the blue-state dummy variable has a positive sign, but does not turn out to be statistically significant. The red-state dummy variable has a positive sign and is statistically significant at the 1% level, indicating that inflation expectations in red states were around 0.29 percentage points higher than in swing states. A Wald test shows that the difference of 0.24 between blue and red states also is statistically significant at the 1% level. In column (2), we consider only the 2013–2016 period, when the Democrat Barack Obama was US president. The dummy variable for blue states has a negative sign and still lacks statistical significance; the point estimate of red states is still positive and statistically significant at the 1% level, but is larger than in column (1) when the full sample is used. Inflation expectations were around 0.39 percentage points higher in red states than in swing

states. Compared to blue states, inflation expectations in red states are 0.46 percentage points higher, an effect that is statistically significant at the 1% level. In column (3), we consider the 2017–2018 period only, when Republican Donald Trump was US president. The results change drastically: the dummy variable for blue states has a positive sign and is statistically significant at the 1% level, indicating that inflation expectations were around 0.27 percentage points higher in blue states than in swing states. By contrast, the dummy variable for red states lacks statistical significance. We investigate whether the coefficients of the dummy variables blue and red are equal. The results show that the difference of 0.27 between red and blue states is statistically significant at the 5% level. Overall, models 2 and 3 indicate that the inflation expectations of Republican-dominated declined by 0.73 percentage points relative to the inflation expectations of Democratic-dominated states when Donald Trump became president.

Our results also suggest misperceptions about inflation expectations that are related to political ideology. Real inflation rates[5] were lower than citizens expected: the real inflation rate was 1.92% over the period from June 2014 to December 2017 (12 months ahead of inflation expectations during Obama) and 2.12% over the January 2018 to June 2019 period (12 months ahead of inflation expectations during Trump). Citizens in Democratic-dominated states predicted, on average, inflation rates more precisely than citizens in Republican-dominated states when Obama was president. By contrast, citizens in Democratic-dominated states predicted, on average, inflation rates less precisely than citizens in Republican-dominated states when Trump was president. Consequently, misperceptions about inflation expectations declined when the president belonged to the party voters supported.

We acknowledge that we measure political ideology with average presidential vote shares at the state level and do not have access to individual voting data. Consequently, the

[5] Source: https://data.bls.gov/timeseries/CUUR0000SA0L1E?output_view=pct_12mths.

charge of committing the ecological fallacy is tempting.[6] Our results based on political ideology at the state level are, however, stark and describe how individual inflation expectations differ between states with Republican and Democratic majorities.

Personal characteristics explain a good deal of the cross-state variation in inflation expectations (on how personal characteristics correlate with inflation expectations in Germany, see Hayo and Méon 2019). Citizens aged 40-60 years and older than 60 report inflation expectations some 0.65 and 0.56 percentage points higher than citizens aged 40 or below (column 1). The inflation expectations of citizens with high numeracy skills are around 0.44 percentage points below those of citizens having low numeracy skills (column 1). In a similar vein, citizens with high incomes have lower inflation expectations than citizens with low incomes.

One may well maintain that inferences are likely to depend on using the 55% threshold to distinguish red from blue states. We therefore replace the dummy variables for red and blue states with the presidential vote share of the Democratic Party's candidate. The results in Table 5 show that the point estimate of the presidential vote share for the Democratic Party is negative and statistically significant at the 1% level in column (1) when the 2013–2018 period is considered. The numerical meaning of the measured effect is that inflation expectations declined by 0.008 percentage points when the presidential vote share of the Democratic candidate increased by one percentage point. When considering the 2013–2016 period only (column 2), the results suggest that inflation expectations fell by 0.019 percentage points when the presidential vote share for the Democratic Party increased by one percentage point. The effect of the presidential vote share for the Democrats on inflation expectations is

[6] In the Distinct of Columbia, the average Democratic vote share was 89.66% over the past two elections. A vote share of 100% would be identical to employing political ideology at the individual level. Data from the District of Columbia therefore comes quite close to purely ideological voting decisions. In the District of Columbia, the average inflation expectation during the observed period is 3.26%. When Obama was president, the average inflation expectation was 2.41%, whereas it is 5.5% since Trump has been president. Thus, the change in the average inflation expectation with changes in the governing party is especially pronounced in the District of Columbia, indicating quite strongly that average inflation expectations in Democratic states are driven by Democratic voters. Other studies suggest that (aggregated) macro variables tend to predict individual voting behavior quite well (e.g., Alabrese et al. 2019; Potrafke and Roesel 2019).

negative and statistically significant at the 1% level; however, when Donald Trump was president (column 3), inflation expectations increased by 0.018 percentage points when the presidential vote share of the Democratic Party increased by one percentage point.

5.2 Blinder-Oaxaca decomposition

Table 6 shows the results of the Blinder-Oaxaca decomposition method and displays three rows. First, the "total difference" summarizes in percentage points the unconditional mean difference in inflation expectations between citizens living in red and blue states: 0.28 percentage points over the 2013–2018 period (column 1) and 0.43 percentage points over the 2013–2016 period (column 2). The estimate of -0.03 percentage points over the 2017–2018 period does not turn out to be statistically significant (column 3). Second, "individual characteristics" indicates that 0.21 percentage points of the differences in average inflation expectations between citizens living in blue states and red states are explained by the observed individual characteristics of the respondents. The point estimate of the individual characteristics hardly changes across columns (1) to (3), indicating that the observed individual characteristics explain a substantial fraction of the difference in inflation expectations, the party of the US president notwithstanding. The estimate of the "coefficients: political ideology" does, however, drastically change across columns (1) to (3). In column (1), 0.07 percentage points (or 25%) of the 0.28 percentage points of total difference are explained by how partisans respond to the US president over the 2013–2018 period. In column (2), 0.22 percentage points (or 50%) of the 0.43 percentage points of total difference are explained by how partisans respond to the US president over the 2013–2016 period. The negative estimate of the political ideology and the positive estimate of the individual characteristics offset each other in column (3). Those results clearly suggest that partisans adjust their inflation expectations when the US president changes.

5.3 Robustness tests

In the baseline model, we use thresholds of 55% of the votes to distinguish red from blue states. Inferences do not change when we use other thresholds, such as 52% or 58% (see Tables A1 to A4 in the appendix). Another potential source of bias may be that the results are driven by individual states. We examine whether our results are sensitive to including/excluding individual states (jackknife test). To account for a potential omitted variable bias, we also include other sociodemographic characteristics of the respondents, such as sex, being black and being married. We also regress inflation expectations over the 2013–2016 period on voting outcomes in the presidential elections in 2012 and inflation expectations over the 2017–2018 period on voting outcomes in the 2016 presidential elections. The inferences are not affected.

Our sample includes more observations under Barack Obama than Donald Trump. To examine whether results are based on the smaller Trump sample versus the Obama sample, we sample observations from the Trump period randomly with replacement until the number of observations from the Trump period equals the number during the Obama period. We also restrict the number of observations under Obama by considering the 2013–2014 period. Again, our inferences do not change.

Our results may reflect Democrat or Republican respondents' expectations being closer to the "true" level of inflation, which would contradict the partisan bias argument. To examine whether forecasting errors vary across individuals, we re-estimate our model using the differences in expected and monthly realized inflation as the dependent variable. Because the measured inflation rate does not vary across states, the point estimates for the blue and red state dummy variables basically do not change when compared to the baseline model (see Table A5 in the appendix).

To investigate whether our results are driven by outliers in individual states, we replace the individual inflation expectations by the state averages of inflation expectations and re-estimate the models. In order to account for the number of respondents in individual states, we first take the state average of inflation expectations for each observation, maintaining the overall number of observations in the model. The results are again quite similar to the baseline results and our inferences do not change. Moreover, we estimated the models at the state level assuming one state, one vote. Doing so reduces the number of observations significantly. The coefficient estimates on the blue and red state dummy in the overall model do not turn out to be statistically significant. The inferences do not change when we consider the periods under Obama and Trump separately.

6. Conclusion

Previous studies of partisan bias in voters' assessments of the economy ignored inflation expectations. An important reason was a lack of data on inflation expectations. We have examined partisan bias in inflation expectations as measured by the individual density forecasts for inflation from the New York Fed's Survey of Consumer Expectations (SCE) from the Center for Microeconomic Data (CMD). The data are available for the period running from June 2013 to July 2018. The results show that expected inflation was higher in states with Republican majorities than in states with Democratic majorities or swing states when Barack Obama was US president (2013–2016). The suggestion is that Republican constituencies were likely to expect Democratic governments to implement expansionary fiscal and monetary policies that generate rising inflation (partisan theories) or just believe that economic conditions deteriorate when Democrats are in office (with ideology as described by Douglass North). By contrast, expected inflation was higher in states with

Democratic rather than Republican majorities when Donald Trump was US president (2017–2018), indicating partisan bias in US inflation expectations.

Using the Blinder-Oaxaca decomposition method, we have disentangled the extent to which differences in inflation expectations between red and blue states are based on respondents' personal characteristics, such as age and educational background, and political ideologies. The results show that about 0.21 percentage points of the higher average expected inflation rate expectation in states with Republican majorities (0.43 percentage points in total) are explained by survey respondents' personal characteristics. Another 0.21 percentage points are explained by political ideology when Barack Obama was US president (2013–2016). When Donald Trump was US president in our sample (2017–2018), the difference in inflation expectations between red and blue states declined by some 0.3 percentage points and can still be explained by respondents' personal characteristics such as age and educational background, but not by political ideology. Moreover, changes in average inflation expectations in red and blue states show how misperceptions respond to changes in White House control.

Future research could employ data from other industrialized countries to examine whether incumbent political party affiliations influence citizens' perceptions about economic policies as they seem to do in the United States. The platforms of established political parties have converged in many industrialized countries and government ideology has retreated into the background (see, for example, Potrafke 2017 for a survey). Consequently, new populist political parties entered the political arena. When citizens' perceptions about economic policies differ, it is conceivable that political competition between established political parties returns.

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Table 1: Related previous studies reporting partisan bias

Study	Time period	Database	Political ideology measured by	Influence on
Mian et al. (2018)	1995-2017	University of Michigan Survey of Consumers	Self-reported support of individual political parties	Index of consumer expectations
Mian et al. (2018)	2008-2017	Gallup	Self-reported support of individual political parties	National economy is getting better
Gillitzer and Prasad (2018)	1994-2015	Consumer Sentiment Survey in Australia	Self-reported support of political parties	Personal finances (current and next year) General economic conditions (current and next year)
Benhabib and Spiegel (2018)	2005-2016	University of Michigan Survey of Consumers	Share of state congressional representatives from the same party as the incumbent president	National economy is getting better (5 years)
Gerber and Huber (2010)	2006	2006 Cooperative Congressional Election Survey	Self-reported support of individual political parties	Household's economic performance and general national economic performance
Ladner and Wlezien (2007)	1992, 1996, 2000	American National Election Studies	Self-reported support of individual political parties	General national economic performance
Ladner and Wlezien (2007)	1992, 1997	British Election Studies	Self-reported support of individual political parties	General national economic performance
Evans and Andersen (2006)	1992-1997	British Election Studies	Self-reported support for incumbent party	General national economic performance (retrospective)
Bartels (2002)	1980-2000	American National Election Surveys	Self-reported support of individual political parties	Many indicators measuring economic conditions
Palmer and Duch (2001)	1997	Hungarian Markets and Democracy Survey	Self-reported support for incumbent government	General national economic performance and household's financial situation (retrospective and prospective)
Duch et al. (2000)	1992	American National Election Survey	Self-reported support of individual political parties	National economic performance (retrospective and prospective)

Table 2: Voting shares in blue states, red states and swing states

State		Blue 2000	2004	2008	2012	2016	Red 2000	2004	2008	2012	2016	Average blue share	Average red share	Classified as
Alabama	**AL**	41.6	36.8	38.7	38.4	34.4	56.5	62.5	60.3	60.6	62.1	37.98	60.40	red
Alaska	**AK**	27.7	35.6	37.9	40.8	36.6	58.6	61.2	59.4	54.8	51.3	35.72	57.06	red
Arizona	**AZ**	44.7	44.4	45.1	44.6	45.1	51	54.9	53.6	53.7	48.7	44.78	52.38	swing
Arkansas	**AR**	45.9	44.5	38.9	36.9	33.7	51.3	54.4	58.7	60.6	60.6	39.98	57.12	red
California	**CA**	53.4	54.3	61	60.2	61.7	41.7	44.4	37	37.1	31.6	58.12	38.36	blue
Colorado	**CO**	42.4	47	53.7	51.5	48.2	50.8	51.7	44.7	46.1	43.3	48.56	47.32	swing
Connecticut	**CT**	55.9	54.3	60.6	58.1	54.6	38.4	43.9	38.2	40.8	40.9	56.70	40.44	blue
Delaware	**DE**	55	53.3	61.9	58.6	53.4	41.9	45.8	36.9	40	41.9	56.44	41.30	blue
District of Columbia	**DC**	85.2	89.2	92.5	90.9	90.5	9	9.3	6.5	7.3	4.1	89.66	7.24	blue
Florida	**FL**	48.8	47.1	51	50	47.8	48.8	52.1	48.2	49.1	49	48.94	49.44	swing
Georgia	**GA**	43	41.4	47	45.5	45.6	54.7	58	52.2	53.3	50.8	44.50	53.80	swing
Hawaii	**HI**	55.8	54	71.8	70.6	61	37.5	45.3	26.6	27.8	29.4	62.64	33.32	blue
Idaho	**ID**	27.6	30.3	36.1	32.6	27.5	67.2	68.5	61.5	64.5	59.3	30.82	64.20	red
Illinois	**IL**	54.6	54.8	61.9	57.6	55.8	42.6	44.5	36.8	40.7	38.8	56.94	40.68	blue
Indiana	**IN**	41	39.3	49.9	43.9	37.9	56.6	59.9	48.9	54.1	56.8	42.40	55.26	red
Iowa	**IA**	48.5	49.3	53.9	52	41.7	48.2	49.9	44.4	46.2	51.2	49.08	47.98	swing
Kansas	**KS**	37.2	36.6	41.7	38	36.1	58	62	56.6	59.7	56.7	37.92	58.60	red
Kentucky	**KY**	41.4	39.7	41.2	37.8	32.7	56.5	59.5	57.4	60.5	62.5	38.56	59.28	red
Louisiana	**LA**	44.9	42.2	39.9	40.6	38.5	52.6	56.7	58.6	57.8	58.1	41.22	56.76	red
Maine	**ME**	49.1	53.6	57.7	56.3	47.8	44	44.6	40.4	41	44.9	52.90	42.98	swing
Maryland	**MD**	56.6	56	61.9	62	60.3	40.2	43	36.5	35.9	33.9	59.36	37.90	blue
Massachusetts	**MA**	59.8	62.1	61.8	60.7	60	32.5	36.9	36	37.5	32.8	60.88	35.14	blue
Michigan	**MI**	51.3	51.2	57.4	54.2	47.3	46.1	47.8	41	44.7	47.5	52.28	45.42	swing
Minnesota	**MN**	47.9	51.1	54.1	52.7	46.4	45.5	47.7	43.8	45	44.9	50.44	45.38	swing
Mississippi	**MS**	40.7	39.8	43	43.8	40.1	57.6	59.5	56.2	55.3	57.9	41.48	57.30	red
Missouri	**MO**	47.1	46.1	49.3	44.4	38.1	50.4	53.3	49.4	53.8	56.8	45.00	52.74	swing
Montana	**MT**	33.4	38.6	47.3	41.7	35.8	58.4	59.1	49.5	55.4	56.2	39.36	55.72	red
Nebraska	**NE**	33.3	32.7	41.6	38	33.7	62.2	66	56.5	59.8	58.8	35.86	60.66	red
Nevada	**NV**	46	48.1	55.1	52.4	47.9	49.5	50.7	42.7	45.7	45.5	49.90	46.82	swing
New Hampshire	**NH**	46.8	50.4	54.1	52	47	48.1	49	44.5	46.4	46.6	50.06	46.92	swing
New Jersey	**NJ**	56.1	53	57.3	58.3	55	40.3	46.2	41.7	40.5	41	55.94	41.94	blue
New Mexico	**NM**	47.9	49	56.9	53	48.3	47.8	49.8	41.8	42.8	40	51.02	44.44	swing
New York	**NY**	57.8	57.9	62.8	63.3	58.4	33.1	39.8	36.1	35.2	36.2	60.04	36.08	blue
North Carolina	**NC**	43.2	43.6	49.7	48.4	46.2	56	56.1	49.4	50.4	49.8	46.22	52.34	swing
North Dakota	**ND**	33.1	35.5	44.6	38.7	27.2	60.7	62.9	53.3	58.3	63	35.82	59.64	red
Ohio	**OH**	46.5	48.7	51.5	50.7	43.6	50	50.8	46.9	47.7	51.7	48.20	49.42	swing
Oklahoma	**OK**	38.4	34.4	34.4	33.2	28.9	60.3	65.6	65.6	66.8	65.3	33.86	64.72	red
Oregon	**OR**	47	51.6	56.7	54.2	50.1	46.5	47.4	40.4	42.2	39.1	51.92	43.12	swing
Pennsylvania	**PA**	50.6	51	54.7	52	47.9	46.4	48.5	44.3	46.6	48.6	51.24	46.88	swing
Rhode Island	**RI**	61	59.4	63.1	62.7	54.4	31.9	38.7	35.2	35.2	38.9	60.12	35.98	blue
South Carolina	**SC**	40.9	41	44.9	44.1	40.7	56.8	58.1	53.9	54.6	54.9	42.32	55.66	red
South Dakota	**SD**	37.6	38.4	44.7	39.9	31.7	60.3	59.9	53.2	57.9	61.5	38.46	58.56	red
Tennessee	**TN**	47.3	42.5	41.8	39.1	34.7	51.1	56.8	56.9	59.5	60.7	41.08	57.00	red
Texas	**TX**	38	38.2	43.7	41.4	43.2	59.3	61.1	55.5	57.2	52.2	40.90	57.06	red
Utah	**UT**	26.3	26.4	34.4	24.8	27.5	66.8	72.7	62.6	72.8	45.5	27.88	64.08	red
Vermont	**VT**	50.6	58.9	67.5	66.6	55.7	40.7	38.8	30.4	31	29.8	59.86	34.14	blue
Virginia	**VA**	44.4	45.6	52.6	51.2	49.8	52.5	53.8	46.3	47.3	44.4	48.72	48.86	swing
Washington	**WA**	50.2	52.8	57.7	56.2	54.3	44.6	45.6	40.5	41.3	38.1	54.24	42.02	swing
West Virginia	**WV**	45.6	43.2	42.6	35.5	26.5	51.9	56.1	55.7	62.3	68.6	38.68	58.92	red
Wisconsin	**WI**	47.8	49.7	56.2	52.8	46.5	47.6	49.3	42.3	45.9	47.2	50.60	46.46	swing
Wyoming	**WY**	27.7	29.1	32.5	27.8	21.6	67.8	69	64.8	68.6	67.4	27.74	67.52	red

Table 3: Descriptive statistics

		Red	Blue	t-test statistic
Inflation Expectation		3.91% (5.19)	3.63% (4.78)	5.67***
Age	Age under 40	28.01% (0.45)	26.90% (0.44)	2.51**
	Age 40 to 60	39.30% (0.49)	41.46% (0.49)	-4.44***
	Age over 60	32.69% (0.47)	31.64% (0.47)	2.27**
Numeracy	Numeracy low	29.54% (0.46)	26.44% (0.44)	7.01***
	Numeracy high	70.46% (0.46)	73.56% (0.44)	-7.01***
Region	West	9.67% (0.30)	33.05% (0.47)	-58.60***
	Northeast	0.03% (0.02)	43.90% (0.50)	-120***
	South	72.50% (0.45)	8.31% (0.28)	180.52***
	Midwest	17.80% (0.38)	14.74% (0.35)	8.44***
Education	Less than BA	12.84% (0.33)	10.09% (0.30)	8.82***
	Some College	36.00% (0.48)	29.23% (0.45)	14.71***
	College	51.16% (0.50)	60.68% (0.49)	-19.53***
Income	Income under 50k	40.82% (0.49)	29.65% (0.46)	23.94***
	Income 50k to 100k	36.07% (0.48)	33.56% (0.47)	5.35***
	Income over 100k	23.11% (0.42)	36.79% (0.48)	-30.31***
Year	2013	8.96% (0.29)	14.46% (0.35)	-17.14***
	2014	18.91% (0.39)	19.90% (0.40)	-2.54**
	2015	20.69% (0.41)	17.44% (0.38)	8.44***
	2016	19.48% (0.40)	18.54% (0.39)	2.41**
	2017	21.11% (0.41)	20.16% (0.40)	2.38**
	2018	10.85% (0.31)	9.50% (0.29)	4.55***
Number of observations N		18,103	23,629	

Note: the number of observations is identical for all independent variables. The number of observations for the inflation expectation is 17931 for red states and 23474 for blue states.
*** indicates significance at the 1% level, ** indicates significance at the 5% level, * indicates significance at the 10% level, standard deviations in parentheses

Table 4: OLS regression results with dummy variables for blue and red states

	Model 1 2013–2018	Model 2 2013–2016	Model 3 2017–2018
Blue	0.041	-0.069	0.270***
	(0.044)	(0.052)	(0.082)
Red	0.281***	0.390***	0.004
	(0.049)	(0.059)	(0.084)
Age 40 to 60	0.653***	0.779***	0.353***
	(0.042)	(0.051)	(0.074)
Age over 60	0.560***	0.746***	0.131*
	(0.042)	(0.051)	(0.076)
Num High	-0.437***	-0.370***	-0.603***
	(0.049)	(0.060)	(0.088)
Northeast	-0.453***	-0.532***	-0.278***
	(0.054)	(0.066)	(0.095)
Midwest	-0.432***	-0.461***	-0.393***
	(0.051)	(0.062)	(0.087)
South	-0.368***	-0.500***	-0.052
	(0.052)	(0.062)	(0.093)
Some College	0.366***	0.082	1.026***
	(0.077)	(0.092)	(0.139)
College	-0.169**	-0.501***	0.598***
	(0.073)	(0.088)	(0.131)
50k < Income < 100k	-0.380***	-0.391***	-0.366***
	(0.045)	(0.054)	(0.080)
Income over 100k	-0.792***	-0.798***	-0.785***
	(0.045)	(0.055)	(0.079)
Year 2014	-0.154**	-0.160**	
	(0.066)	(0.066)	
Year 2015	-0.865***	-0.873***	
	(0.064)	(0.064)	
Year 2016	-0.929***	-0.932***	
	(0.064)	(0.064)	
Year 2017	-0.958***		
	(0.063)		
Year 2018	-0.781***		0.195***
	(0.072)		(0.064)
Constant	4.793***	4.997***	3.406***
	(0.106)	(0.122)	(0.165)
Observations	78174	54858	23316

Standard errors in parentheses.
*** indicates significance at the 1% level
** indicates significance at the 5% level

* indicates significance at the 10% level

Table 5: OLS regression results with voting shares for blue

	Model 4 2013–2018	Model 5 2013–2016	Model 6 2017–2018
Vote share blue	-0.008*** (0.003)	-0.019*** (0.003)	0.018*** (0.005)
Age 40 to 60	0.653*** (0.042)	0.779*** (0.051)	0.353*** (0.074)
Age over 60	0.559*** (0.042)	0.747*** (0.051)	0.126* (0.076)
Num High	-0.441*** (0.049)	-0.373*** (0.060)	-0.611*** (0.088)
Northeast	-0.435*** (0.054)	-0.499*** (0.066)	-0.295*** (0.096)
Midwest	-0.442*** (0.050)	-0.462*** (0.061)	-0.413*** (0.084)
South	-0.325*** (0.050)	-0.451*** (0.060)	-0.016 (0.090)
Some College	0.365*** (0.077)	0.080 (0.092)	1.029*** (0.139)
College	-0.171** (0.073)	-0.503*** (0.088)	0.600*** (0.130)
50k < Income < 100k	-0.379*** (0.045)	-0.391*** (0.054)	-0.362*** (0.080)
Income over 100k	-0.784*** (0.045)	-0.790*** (0.055)	-0.771*** (0.078)
Year 2014	-0.152** (0.066)	-0.159** (0.066)	
Year 2015	-0.861*** (0.064)	-0.871*** (0.064)	
Year 2016	-0.925*** (0.064)	-0.930*** (0.064)	
Year 2017	-0.953*** (0.063)		
Year 2018	-0.775*** (0.072)		0.196*** (0.064)
Constant	5.256*** (0.170)	6.000*** (0.198)	2.574*** (0.294)
Observations	78174	54858	23316

Standard errors in parentheses.
*** indicates significance at the 1% level
** indicates significance at the 5% level
* indicates significance at the 10% level

Table 6: Results of Blinder-Oaxaca decomposition

	2013–2018	2013–2016	2017–2018
Total difference	0.279***	0.426***	-0.033
	(0.048)	(0.061)	(0.091)
Individual characteristics	0.211***	0.210***	0.217***
	(0.035)	(0.044)	(0.068)
Coefficients:	0.068**	0.216***	-0.250***
political ideology	(0.030)	(0.036)	(0.058)
Observations	41405	28938	12467

Bootstrapped standard errors in parentheses.
*** indicates significance at the 1% level
** indicates significance at the 5% level
* indicates significance at the 10% level

Table A1: OLS regression results with dummy variables for blue and red states, threshold 52%

	Model 7 2013–2018	Model 8 2013–2017	Model 9 2017–2018
Blue	-0.002	-0.123**	0.266***
	(0.044)	(0.052)	(0.079)
Red	0.103**	0.121**	0.033
	(0.047)	(0.057)	(0.080)
Age 40 to 60	0.654***	0.781***	0.353***
	(0.042)	(0.051)	(0.074)
Age over 60	0.561***	0.750***	0.127*
	(0.042)	(0.051)	(0.076)
Num High	-0.438***	-0.369***	-0.606***
	(0.049)	(0.060)	(0.088)
Northeast	-0.450***	-0.541***	-0.237**
	(0.054)	(0.065)	(0.094)
Midwest	-0.426***	-0.445***	-0.394***
	(0.050)	(0.062)	(0.087)
South	-0.318***	-0.434***	-0.025
	(0.053)	(0.064)	(0.094)
Some College	0.365***	0.079	1.030***
	(0.077)	(0.092)	(0.139)
College	-0.172**	-0.507***	0.603***
	(0.073)	(0.088)	(0.131)
50k < Income < 100k	-0.380***	-0.392***	-0.362***
	(0.045)	(0.054)	(0.080)
Income over 100k	-0.790***	-0.799***	-0.774***
	(0.045)	(0.055)	(0.078)
Year 2014	-0.151**	-0.158**	
	(0.066)	(0.066)	
Year 2015	-0.858***	-0.866***	
	(0.064)	(0.064)	
Year 2016	-0.922***	-0.925***	
	(0.064)	(0.064)	
Year 2017	-0.952***		
	(0.063)		
Year 2018	-0.772***		0.196***
	(0.072)		(0.064)
Constant	4.815***	5.044***	3.353***
	(0.108)	(0.126)	(0.166)
Observations	78174	54858	23316

Standard errors in parentheses.
*** indicates significance at the 1% level
** indicates significance at the 5% level
* indicates significance at the 10% level

Table A2: OLS regression results with dummy variables for blue and red states, threshold 58%

	Model 10 2013–2018	Model 11 2013–2017	Model 12 2017–2018
Blue	-0.046	-0.097*	0.058
	(0.048)	(0.057)	(0.089)
Red	0.301***	0.496***	-0.141
	(0.069)	(0.084)	(0.117)
Age 40 to 60	0.656***	0.786***	0.348***
	(0.042)	(0.051)	(0.074)
Age over 60	0.563***	0.757***	0.128*
	(0.042)	(0.051)	(0.076)
Num High	-0.437***	-0.367***	-0.617***
	(0.049)	(0.060)	(0.089)
Northeast	-0.449***	-0.548***	-0.221**
	(0.053)	(0.064)	(0.093)
Midwest	-0.445***	-0.465***	-0.435***
	(0.053)	(0.065)	(0.092)
South	-0.300***	-0.381***	-0.116
	(0.050)	(0.061)	(0.090)
Some College	0.368***	0.083	1.034***
	(0.077)	(0.092)	(0.139)
College	-0.169**	-0.503***	0.611***
	(0.073)	(0.088)	(0.131)
50k < Income < 100k	-0.377***	-0.390***	-0.359***
	(0.045)	(0.054)	(0.080)
Income over 100k	-0.786***	-0.800***	-0.756***
	(0.045)	(0.055)	(0.078)
Year 2014	-0.153**	-0.159**	
	(0.066)	(0.066)	
Year 2015	-0.864***	-0.871***	
	(0.064)	(0.064)	
Year 2016	-0.927***	-0.929***	
	(0.064)	(0.064)	
Year 2017	-0.955***		
	(0.063)		
Year 2018	-0.774***		0.191***
	(0.072)		(0.064)
Constant	4.8285***	5.000***	3.500***
	(0.107)	(0.123)	(0.168)
Observations	78174	54858	23316

Standard errors in parentheses.
*** indicates significance at the 1% level
** indicates significance at the 5% level
* indicates significance at the 10% level

Table A3: Robustness Check Blinder-Oaxaca decomposition, threshold 52%

	2013–2018	2013–2016	2017–2018
Total difference	0.160***	0.249***	-0.041
	(0.043)	(0.050)	(0.079)
Individual characteristics	0.100***	0.089**	0.126**
	(0.030)	(0.034)	(0.055)
Coefficients: political ideology	0.060**	0.160***	-0.167***
	(0.030)	(0.034)	(0.050)
Observations	54829	38314	16515

Bootstrapped standard errors in parentheses.
*** indicates significance at the 1% level
** indicates significance at the 5% level
* indicates significance at the 10% level

Table A4: Robustness Check Blinder-Oaxaca decomposition, threshold 58%

	2013–2018	2013–2016	2017–2018
Total difference	0.374***	0.587***	-0.099
	(0.075)	(0.091)	(0.122)
Individual characteristics	0.276***	0.283***	0.239**
	(0.052)	(0.059)	(0.098)
Coefficients: political ideology	0.098**	0.304***	-0.338***
	(0.048)	(0.060)	(0.081)
Observations	22368	15765	6603

Bootstrapped standard errors in parentheses.
*** indicates significance at the 1% level
** indicates significance at the 5% level
* indicates significance at the 10% level

Table A5: OLS regression results with difference of expected and realized inflation

	Model 16 2013–2018	Model 17 2013–2016	Model 18 2017–2018
Blue	0.043	-0.067	0.272***
	(0.044)	(0.052)	(0.082)
Red	0.280***	0.389***	0.003
	(0.049)	(0.060)	(0.084)
Age 40 to 60	0.653***	0.777***	0.355***
	(0.042)	(0.051)	(0.074)
Age over 60	0.559***	0.744***	0.131*
	(0.042)	(0.051)	(0.076)
Num High	-0.438***	-0.369***	-0.607***
	(0.049)	(0.060)	(0.088)
Northeast	-0.459***	-0.540***	-0.280***
	(0.054)	(0.066)	(0.095)
Midwest	-0.435***	-0.467***	-0.393***
	(0.051)	(0.062)	(0.087)
South	-0.370***	-0.502***	-0.053
	(0.052)	(0.062)	(0.093)
Some College	0.364***	0.079	1.025***
	(0.077)	(0.092)	(0.139)
College	-0.169**	-0.501***	0.598***
	(0.073)	(0.088)	(0.131)
50k < Income < 100k	-0.381***	-0.392***	-0.368***
	(0.045)	(0.054)	(0.080)
Income over 100k	-0.792***	-0.799***	-0.784***
	(0.045)	(0.055)	(0.079)
Year 2014	-0.230**	-0.236**	
	(0.066)	(0.066)	
Year 2015	-1.307***	-1.315***	
	(0.064)	(0.064)	
Year 2016	-1.023***	-1.027***	
	(0.064)	(0.064)	
Year 2017	-1.341***		
	(0.063)		
Year 2018	-1.114***		0.244
	(0.072)		(0.064)
Constant	3.048***	3.253***	1.276***
	(0.106)	(0.123)	(0.165)
Observations	78174	54858	23316

Standard errors in parentheses.
*** indicates significance at the 1% level
** indicates significance at the 5% level
* indicates significance at the 10% level