The 2018 Pennsylvania Midterm Election

No Escaping Trump

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This article uses pre-election survey, post-election survey, voter registration, and election data to interpret the outcomes of the 2018 midterm elections for governor, U.S. Senate, and U.S. House of Representatives in Pennsylvania. This analysis shows that the results of the 2018 midterm races in Pennsylvania were nationalized. Feelings about the president's performance drove voter interest and turnout, and also factored into the choices that voters made in the gubernatorial, U.S. Senate, and U.S. House races. Voter preferences in each race followed the same pattern: even after accounting for partisanship and ideology, those who were dissatisfied with President Trump's performance were more likely to vote for a Democratic candidate. The results suggest that the 2018 midterm results were a repudiation of the Trump presidency, but not a return to the state's pre-2016 politics.

Context

Voter interest in the 2018 midterm elections was incredibly high and that enthusiasm translated into the highest midterm voter turnout (49.4% of eligible adults) in the state since before the voting age was lowered to 18 in 1971.[1] Franklin & Marshall College polls conducted in October 2018 found that 70% of registered voters were "very interested" in the election, which was much

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higher than voter interest in the prior three midterms. The proportion of registered voters who were "very interested" in the midterm election was 56% in October 2006, 42% in October 2010, and 47% in October 2014. Experts expected between 35% and 40% of eligible adults to participate in the 2018 midterm (Campbell 2018), but Pennsylvania voter turnout exceeded that estimate.

Voter interest was largely driven by voters' feelings about President Trump. Backlash against the sitting president is the norm in midterm elections—the president's party has lost seats in the U.S. House in all but three midterm elections since 1900, with an average loss of 24 seats since 1950 (Campbell 2018). Feelings about the sitting president are strongly associated with the outcomes in House races, although they are weakly associated with Senate races.

Despite the fact that many Pennsylvania voters were largely happy with their personal finances and the direction of the state, large numbers were dissatisfied with the president's performance and the direction of the nation. Four in five (89%) registered Pennsylvania voters felt they were financially better off or the same as the prior year, and half (51%) thought the state was headed in the right direction, but only one in three (35%) Pennsylvania voters believed the *nation* was headed in the right direction.

President Trump's job approval rating was very similar to President Obama's prior to his first midterm in 2010 (Figure 1), an election that saw the president's party lose 63 Congressional seats nationally and 5 in Pennsylvania. The major difference between 2010 and 2018 was that voters were far less concerned about economic issues in 2018 than in 2010—nearly three in five (57%) voters in October 2010 cited an economic concern as the state's most important problem (Yost et al. 2010) compared to fewer than one in five (17%) in 2018. The decoupling of positive economic indicators and assessments of presidential performance seemed a unique feature of the 2018 election even if voters' ability to assess longer-term economic performance is discounted (Achen and Bartels 2016). The president's efforts to repeal the Affordable Care Act, the ongoing special counsel's investigation into Russian interference in the 2016 election, the president's provocative policy announcements on immigration, and his norm-battering behaviors motivated many voters and may have distracted them from considering the country's relative economic strength or may have encouraged them to prioritize these other non-economic factors.[2]

The Governor's Race

Pennsylvania Governor Tom Wolf was well known to the state's voters and was personally popular, with a net favorability rating of +26 and a job approval
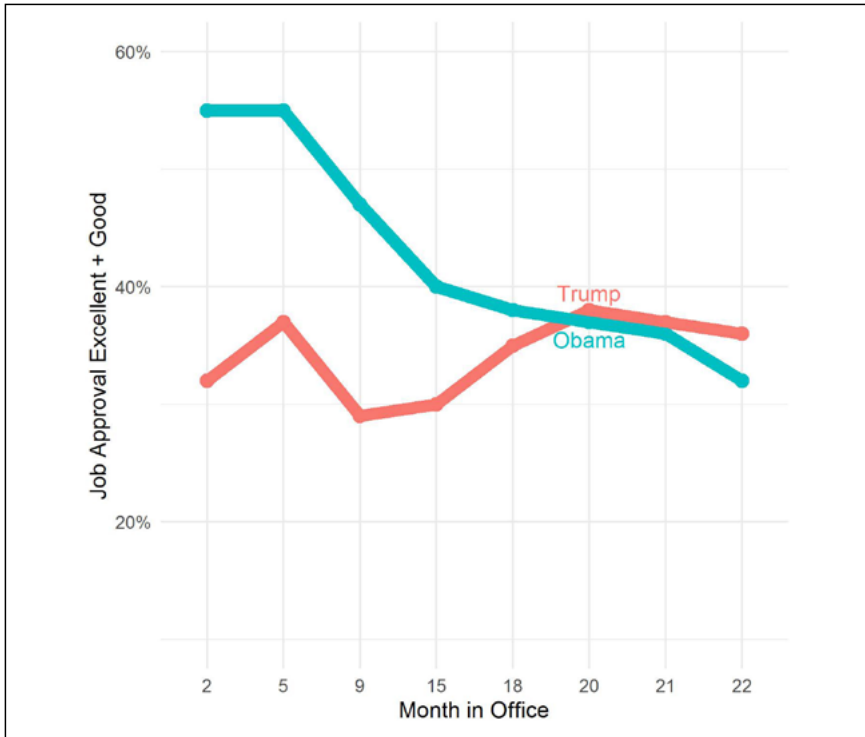
Figure 1. Presidential Approval Ratings for Obama and Trump by Month in Office, Pennsylvania Registered Voters. (*Source: Franklin and Marshall College Polls.*)

rating of 54% in late October 2018. Wolf was able to improve both his job approval ratings and his personal favorability ratings during the campaign. His positive job approval ratings improved from 45% to 54% from June to October. Wolf's challenger, Republican Scott Wagner, was neither well known nor personally popular with voters; Wagner had a net favorability rating of –20% and was recognizable to only about four in five voters. Table 1 shows the changes in the personal popularity of the candidates during the campaign. Seven percent of voters had an unfavorable opinion of both candidates.

Wagner entered the general election after the May 15 primary, having survived a brutal primary campaign against western Pennsylvania businessman Paul Mango. Wagner was the Republican Party's endorsed candidate, but Mango's main argument was that he was the more conservative candidate, and he spent nearly $8 million expressing that point in a series of television advertisements (Esack 2018b). Mango's advertisements were deeply

Table 1. Favorability Ratings of Gubernatorial Candidates, Pennsylvania 2018					
Candidate	Month	Favorable	Unfavorable	Aware	Net Favorable
Wolf	October	0.58	0.32	0.93	0.26
	September	0.54	0.33	0.91	0.21
	August	0.48	0.36	0.87	0.12
	June	0.49	0.33	0.87	0.16
Wagner	October	0.27	0.47	0.79	−0.20
	September	0.22	0.31	0.60	−0.09
	August	0.21	0.30	0.58	−0.09
	June	0.17	0.30	0.53	−0.13
Source: June, August, September, and October 2018 Franklin & Marshall College Polls.					

personal, accusing Wagner of being a slumlord and a polluter. The primary left Wagner heading into the fall with relatively poor favorability ratings that he was unable to reverse, in part because of the money he had spent defending himself in the primary. Governor Wolf's campaign was disciplined in its criticisms and approach toward Wagner and did little to get in the way of Wagner's disjointed campaign efforts. The Wolf team rarely engaged with any of Wagner's missteps as Wagner struggled to develop a clear campaign theme. The Wolf team was so determined not to lend Wagner's candidacy any legitimacy that it agreed to participate in only one debate instead of the traditional three (Esack 2018a). Wolf's strategy clearly frustrated the naturally combative Wagner. His desperation to raise his profile ultimately led him to produce a bizarre social media post in which he promised to "stomp all over" the governor's face (*Washington Post* 2018). The Wolf campaign had a decided financial advantage, raising $19.2 million during 2018 compared to only $10.3 million raised by Wagner, of which $2.9 million was the candidate's own money.[3]

Governor Wolf had a large and consistent lead throughout the summer and fall of 2018. The RealClear Politics (n.d.a) polling average showed him entering Election Day with a 20-point advantage; the smallest polling advantage Wolf ever had was 12 points. The prediction of an easy Wolf victory came true on Election Day; Wolf beat Wagner 57.8% to 40.7%. The Franklin & Marshall College post-election survey found that few voters changed their minds about their preferences during the campaign and that undecided voters broke similarly for both candidates, although voters expressing a pre-election preference for a third-party candidate were a bit more likely to choose Wagner than Wolf on Election Day. More Wagner voters (19%) than Wolf voters (9%)

reported making a final decision about their vote choice during the last week of the election. Four in five (80%) Wolf voters said they had made up their minds to vote for the governor *prior* to October.

Governor Wolf won reelection with strong support from liberals and Democrats and from those who had a positive view of his job performance. Those who were dissatisfied with President Trump's performance were more likely to vote for the governor after accounting for ideology, party, and the governor's job approval ratings.[4] Figure 2 presents the adjusted effects of party, Wolf's approval, and Trump's approval on the likelihood of voting for Governor Wolf.

Compared to 2016, Wolf outperformed Clinton by an average of 11% at the county level (min = 4.8%, Q1 = 8.8%, Q3 = 12.5%), although he performed about 2% lower at the county level compared to his 2014 election (min = –12.1%, Q1 = –8.3%, Q3 = 1.7%). Twenty-three of the state's 67 counties gave the governor a smaller share of the vote than in his prior campaign, with
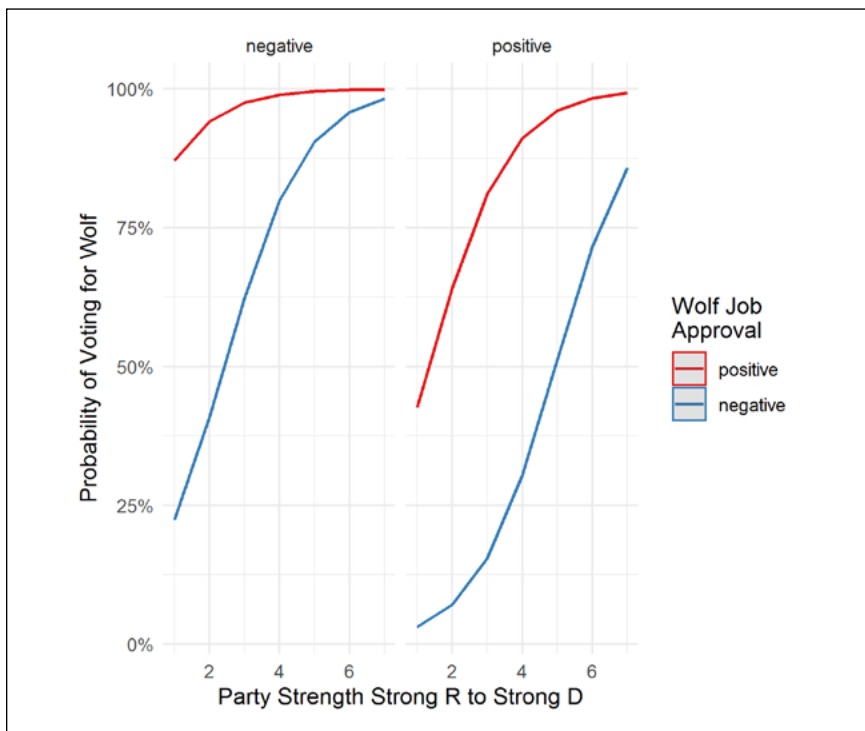

Figure 2. Adjusted Probability of Voting for Wolf by Party, Wolf Job Approval, and Trump Job Approval. The left panel shows those who rate President Trump's job performance negatively and the right panel are those who rate President Trump's job performance positively. (*Source: 2018 Franklin & Marshall College Post-Election Survey.*)
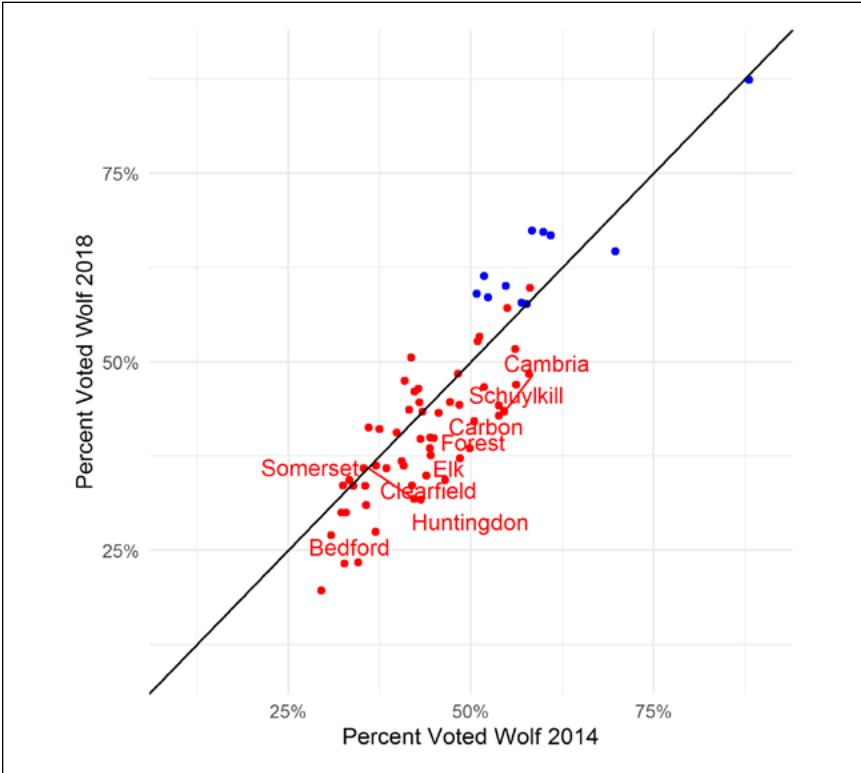
Figure 3. Wolf's County-level Vote Shares, 2018 and 2014. The labelled counties are those where Governor Wolf performed 10 points lower in 2018 than in 2014. Blue dots are counties won by Hillary Clinton in 2016. (*Source: Compiled and created by the authors using data downloaded from the Pennsylvania Department of State.*)

double-digit declines apparent in a collection of rural counties. His strongest proportional gains were evident in about a half dozen suburban counties. Figure 3 shows Wolf's share of each county's vote in 2014 and 2018.

U.S. Senate Race

Senator Casey, like Governor Wolf, had a large and consistent lead throughout 2018. The RealClear Politics (n.d.b) polling average showed Casey entering Election Day with a 14-point advantage. The smallest polling advantage Casey had was 13 points. Senator Casey was unable to improve his job approval ratings during the campaign and, in fact, his negative job approval ratings increased from June to the end of the campaign when his job approval ratings stood at 43% positive and 48% negative. But Senator Casey's personal favorability ratings were more positive by campaign's end than his job approval,

with a 48% favorable and 30% unfavorable rating. Republican challenger Lou Barletta was relatively unknown to the state's voters, even on Election Day. He was viewed favorably by about one in four (26%) voters and unfavorably by one in three (32%) in late October, but more than one in three (36%) voters said they did not know enough about him to offer an opinion. Table 2 shows the changes in candidate favorability ratings during the campaign.

Casey spent nearly $22 million during 2018 compared to $7.5 million for Barletta, a sizable resource limitation that prevented Barletta from becoming better known to voters (Federal Election Commission n.d.). Campaign spending reports also show that Barletta had less support from outside groups than Casey. Casey emphasized his differences with President Trump's policies throughout the campaign, notably portraying Trump's tax cut as a giveaway to the rich, expressing his opposition to the president's immigration policies, and characterizing the president as a threat to Medicare, Medicaid, and Social Security (Levy 2018). Barletta campaigned as a Trump ally and closely aligned his campaign with the president and his policies, notably on immigration. President Trump held two rallies on behalf of Barletta, but the polling suggests that these did little to help Barletta's campaign raise his profile or improve his standing among the state's voters.

The prediction of a comfortable Casey victory was realized, as Casey beat Barletta 55.7% to 42.6%. The Franklin & Marshall College post-election survey found that few voters changed their minds about their preferences during the campaign, although a few more of those who were undecided or had expressed a preference for a third-party candidate chose Barletta rather than Casey on Election Day. More Barletta (17%) than Casey (8%) voters reported making the final decision about their vote choice during the last week of the

Table 2. Favorability Ratings of U.S. Senate Candidates, Pennsylvania 2018					
Candidate	Month	Favorable	Unfavorable	Aware	Net Favorable
Casey	October	0.48	0.30	0.83	0.18
	September	0.40	0.28	0.74	0.12
	August	0.42	0.29	0.75	0.13
	June	0.44	0.23	0.71	0.21
Barletta	October	0.26	0.32	0.64	–0.06
	September	0.20	0.24	0.49	–0.04
	August	0.20	0.22	0.47	–0.02
	June	0.14	0.17	0.44	–0.03
Source: June, August, September, and October 2018 Franklin & Marshall College Polls.					

election.[5] Four in five (81%) Casey voters said they had made up their mind to vote for the senator prior to October.

Senator Casey won reelection with strong support from liberals and Democrats and from those who had a positive view of his job performance. Those who were dissatisfied with President Trump's performance were more likely to vote for the senator after accounting for ideology, party, and the senator's job approval ratings. Voter perception of the Tax Cuts and Jobs Act of 2017 also seemed to affect preference in this race, with those who said they saw no change as a result of the passage of the tax law being more likely to vote for Senator Casey.[6] Figure 4 presents the adjusted effects of party, ratings of Casey's job performance, and ratings of Trump's job performance on the likelihood of voting for Senator Casey. Respondents who held a negative view of the president's performance were more likely to vote for Senator Casey than
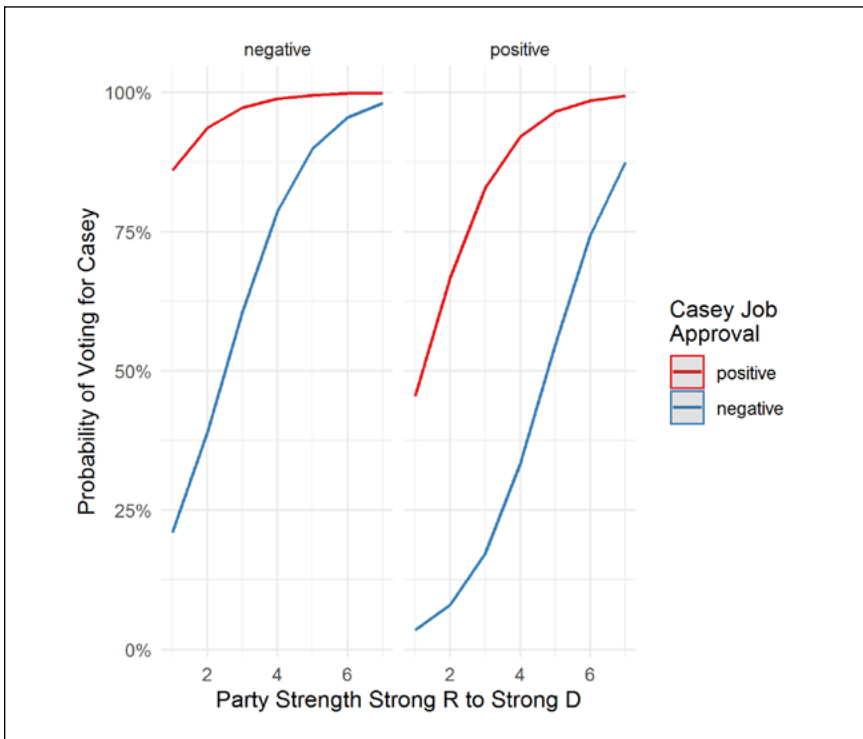

Figure 4. Adjusted Probability of Voting for Casey by Party, Casey Job Approval, and Trump Job Approval. The left panel shows those respondents who rate President Trump's job performance negatively and the right panel shows those who rate President Trump's job performance positively. (*Source: 2018 Franklin & Marshall College Post-Election Survey.*)

were those with a positive view of his performance. The odds of voting for Senator Casey among weak partisan identifiers who rate the president unfavorably were high.[7]

Compared to 2016, Casey improved on Democratic Senate challenger Katie McGinty's performance by an average of 7% at the county level (min = 2.5%, Q1 = 6.1%, Q3 = 9.1%). Senator Casey's county-level vote share was about the same in 2018 as it was in his prior election in 2012 (min = −9.1%, Q1 = −2.6%, Q3 = 1.8%). The proportion of county-level votes that Casey won in 2018 compared to 2012 declined by more than five points in seven counties, most of which are located in northeastern Pennsylvania. Casey, like Governor Wolf, improved his county-level vote share in suburban counties. Figure 5 shows Casey's share of each county's vote in 2012 and 2018.
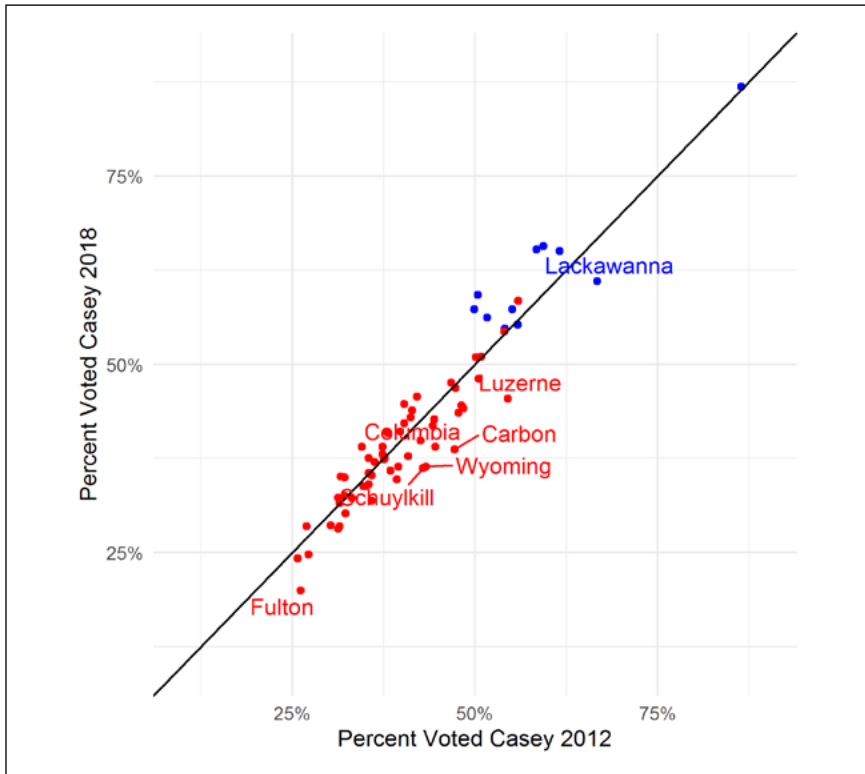

Figure 5. Casey's County-level Vote Shares, 2018 and 2012. The labelled counties are those where Senator Casey performed 5 points lower in 2018 than in 2012. Blue dots are counties won by Hillary Clinton in 2016. (*Source: Compiled and created by the authors using data downloaded from the Pennsylvania Department of State.*)

U.S. House

The 2018 election for U.S. House in Pennsylvania was the first held under the court-ordered boundaries created by the Pennsylvania Supreme Court's ruling that the state's 2011 redistricting "clearly, plainly, and palpably" violated the Pennsylvania Constitution.[8] The 2011 map was "aimed at achieving unfair partisan gain," wrote the court, and "undermines voters' ability to exercise their right to vote in free and 'equal' elections, if the term is to be interpreted in any credible way."[9] The court ordered the state legislature to draw a new map that emphasized district compactness and respect for political boundaries. When the legislature failed to produce an acceptable map, the court imposed a "Remedial Plan."

The court's decision radically transformed the competitiveness of most of the state's 18 House districts. Under the prior map, Democrats routinely won half the votes cast in House races, but they held an average of just 5 of the state's seats. In 2018, Republicans controlled 13 of the state's 18 seats. The new map offered Democrats the opportunity to compete in as many as 11 of the newly drawn districts. The map, as Cook Political Report analyst Dave Wasserman (2018) tweeted, "doesn't just undo the GOP's gerrymander. It goes further, actively helping Dems compensate for their natural geographic disadvantage in Pennsylvania."

A second and perhaps equally important part of the electoral context was that 6 of the 13 Republican incumbents did not seek reelection.[10] The electoral benefits of incumbency are well recognized and were clearly demonstrated by the outcome of the race for the First Congressional District, where a vulnerable Republican incumbent was able to hold his seat despite representing a district won by Hillary Clinton in 2016 (Medvic and Yost 2020). Heading into the midterms, there were 25 Republican Congresspersons representing seats won by Hillary Clinton, and Pennsylvania Congressman Brian Fitzpatrick was 1 of only 3 of these Republicans to survive (*Roll Call* 2018).[11] This more competitive electoral environment produced relatively high voter turnout in all of the state's House districts, as Figure 6 shows.

Pre-election polls found an increasing advantage in the generic ballot for Democrats as Election Day grew nearer. Franklin & Marshall College polls showed a 46% to 43% Democratic advantage on the generic ballot question in August, a 49% to 38% advantage in September, and a 52% to 39% advantage in October. These estimates captured the final vote well: Democrats won the congressional races in the state by 10 percentage points, 55% to 45%, carrying 9 of the 18 districts.[12] Adjusting the vote to account for the unopposed Democratic seat in PA-18 produces a 54% to 46% advantage for the Democrats.[13]
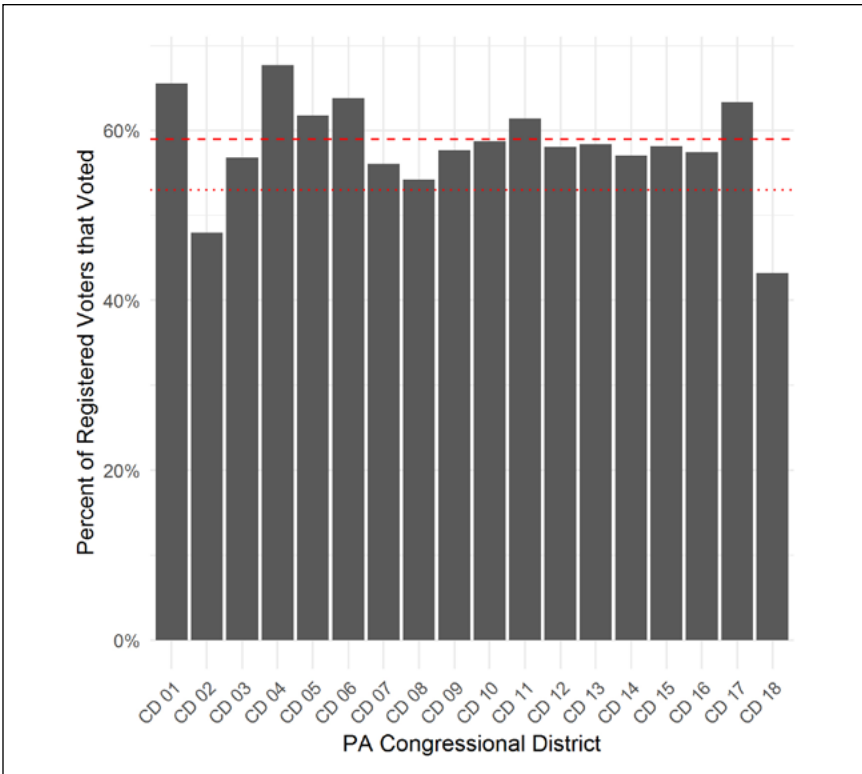
Figure 6. Turnout among Registered Voters by Pennsylvania Congressional District, 2018. The dashed line is statewide turnout of registered voters in 2018. Dotted line is average statewide turnout of registered voters for midterm elections in Pennsylvania between 1974 and 2018, inclusive. (*Source: Compiled and created by the authors using data downloaded from the Pennsylvania Department of State.*)

This advantage is about the same that Democratic candidates carried nationally, approximately 7 points (Arrington 2019).

The Franklin & Marshall College post-election survey found that voter preferences remained stable throughout the course of the campaign, although slightly more of those who were undecided prior to Election Day voted for a Democratic House candidate. As in the gubernatorial and Senate races, those who were planning to vote for a Democratic candidate made up their minds early in the race; nearly three in four (73%) of those who planned to vote for a Democratic House candidate had made up their minds prior to October. One in five (20%) of those who supported a Republican congressional candidate made up their minds in the last week of the campaign.

The redrawn U.S. House map, the sizable number of open seats, President Trump's unpopularity, and the lack of Republican star power in the statewide contests for Senate and governor undoubtedly created a healthy advantage for the Democratic House candidates.

Preferences for the U.S. House candidates in Pennsylvania were driven by the same issues, concerns, and motivations as were preferences in Pennsylvania's U.S. Senate race. Partisan affiliation and political ideology were the primary drivers, but attitudes toward President Trump and perceptions of the effects of the Tax Cuts and Jobs Act were also consequential.[14] Figure 7 displays the probability of voting for a Democratic House candidate in relation to partisan affiliation, ratings of President Trump, and perceived effects of the Jobs Act. Respondents who held a negative view of the president's performance
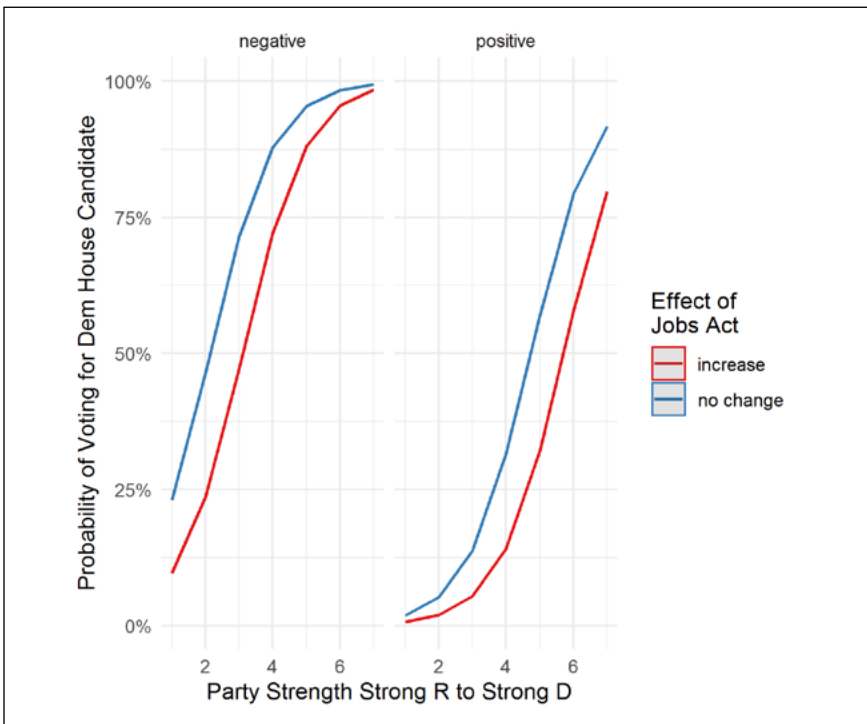

Figure 7. Probability of Voting for Democratic House Candidate by Party, Perceived Effect of Jobs Act on Personal Finances, and Trump Job Approval. The left panel shows respondents who rate President Trump's job performance negatively and the right panel shows those who rate President Trump's job performance positively. (*Source: 2018 Franklin & Marshall College Post-Election Survey.*)

were more likely to vote for a Democratic House candidate than were those with a positive view of his performance, although the range of probabilities among those expressing a negative view of the president is wider for the House races than the range shown in Figure 4 for the Senate race. What is notable is the difference in weakly affiliated partisans; the weak identifiers' preferences are significantly different depending on their views of the president's job performance (Figure 7).

Behaviors across Campaigns

The 2018 election is remarkable for the relatively high voter turnout and interest, as noted earlier, but also because that interest seems to have extended down ballot. There were only 3,155 fewer votes cast in the U.S. Senate race than in the gubernatorial race and only 82,680 fewer votes cast in the U.S. House races than in the gubernatorial race making the roll-off in the 2018 House races 1.6%. The roll-off in the U.S. House races in the 2014 general election, for example, was 4.9%.[15]

Split-ticket voting among those who cast votes in the gubernatorial, Senate, and House elections was about 10%, which is similar to the amount of split-ticket voting that took place in Pennsylvania in 2016 (Yost, Redman, and Thompson 2017). Ticket splitting was more common among those who voted Democratic for governor; only about 4% of Wagner voters voted for a Democratic House candidate, while 9% of Wolf voters chose a Republican House candidate.

A defining feature of the 2016 presidential election in Pennsylvania was the way voter turnout and the expected performance of the major party candidates changed compared to prior elections. As Yost, Redman, and Thompson (2017) found, "counties with more working-class voters turned out in greater numbers and gave less support to Democratic candidates than in previous elections, while areas that should have been supportive of Democrats had lower turnout and offered little change in support." The counties that President Trump won in 2016 represented about 47% of voters; Hillary Clinton won only one-third of the vote in those counties. In 2018, Trump counties gave a larger share of their votes to Wolf (45%) and Casey (43%) while accounting for about the same proportion of those who cast a ballot (46%). Voters in Trump counties seemed equally motivated to vote in 2018 in comparison to 2016, but they were less monolithic in support of Republican candidates. The change in this election shows up in the behavior of voters residing in the counties that Hillary Clinton won in 2016. Voters in the counties that Clinton won voted more monolithically for Democrats: both Wolf
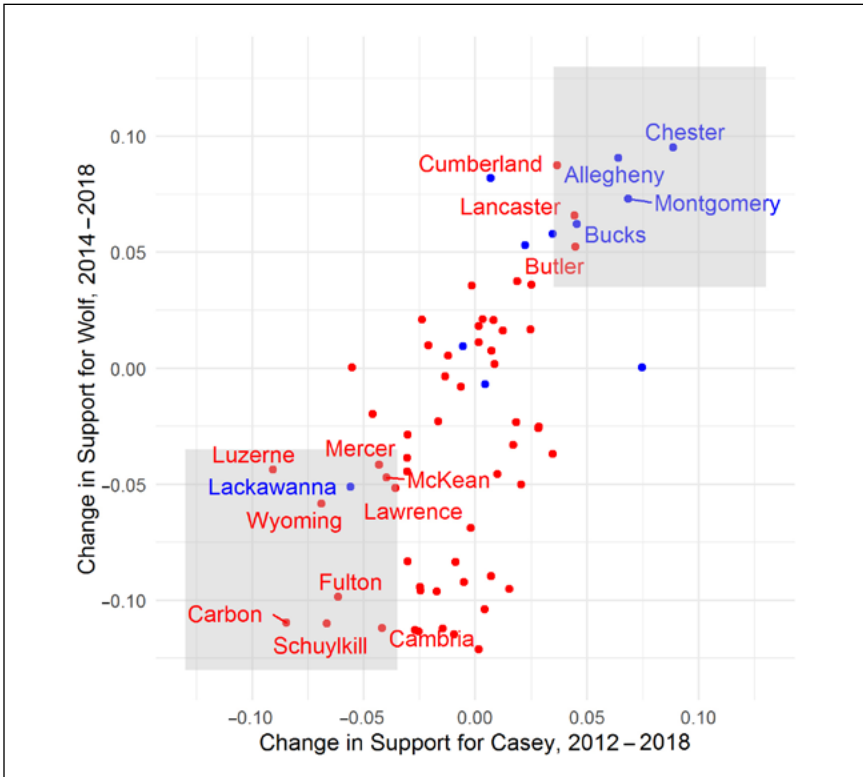
Figure 8. Changes in Wolf and Casey County-Level Vote Shares. Blue dots are counties won by Hillary Clinton in 2016. The gray boxes show counties where vote shares increased or declined by more than 3.5 points for both candidates. (*Source: Compiled and created by the authors using data downloaded from the Pennsylvania Department of State.*)

(69%) and Casey (67%) won a larger portion of the vote in Clinton counties than did Clinton herself (61%).

Comparing changes in the returns for Wolf and Casey in their past two elections helps clarify how voting patterns may be changing at the county level. As noted earlier, a third of the state's counties gave Governor Wolf a smaller share of the vote than in his 2014 campaign, with double-digit declines in rural counties and strong gains in a half dozen suburban counties. Casey's largest declines were in counties located in northeastern Pennsylvania, and like Governor Wolf, his greatest gains were in suburban counties. The changes in these two races show how the state is reorganizing itself in the Trump era (Figure 8): the northeast seems to be moving away from Democrats and the southeast seems to be moving toward them.

Discussion

This analysis shows that the results of the 2018 midterm races in Pennsylvania were nationalized, as they were in races throughout the country (Abramowitz 2019). Voter interest in the 2018 midterm elections was incredibly high and translated into the highest midterm voter turnout in the state since before the voting age was lowered to 18 in 1971. Voter interest was largely driven by voters' feelings about President Trump. Despite the fact that many Pennsylvania voters were happy with their personal finances and the direction of the state, large numbers were dissatisfied with the president's performance and the direction of the nation as a whole.

Feelings about the president's performance drove voter interest and turnout and also factored into the choices that voters made in the gubernatorial and U.S. Senate and House races. Voter preferences in each race followed the same pattern: even after accounting for partisanship and ideology, those who were dissatisfied with President Trump's performance were more likely to vote for a Democratic candidate. Perceptions of the president's main policy victory, the Tax Cut and Jobs Act, also made an independent contribution to the preferences of voters in the Senate and Congressional races.

Democrats also had an advantage in 2018 by having well-known and generally well-regarded candidates for governor and U.S. Senate. These candidates were able to raise significantly more money than their Republican opponents, who both attempted to campaign on policies that comported with the president's. A redrawn U.S. House map, the sizable number of open seats, President Trump's unpopularity, and the lack of Republican star power in the statewide contests for Senate and governor undoubtedly created a healthy advantage for the state's Democratic House candidates. The returns in Pennsylvania's House districts were largely comparable in size to the advantages held by Democrats nationally, reinforcing the view of a nationalized election.

The results suggest that the 2018 midterm results were a repudiation of the Trump presidency, but do they signal a return to the state's pre-2016 politics? Trump's victory in Pennsylvania in 2016 appeared to change the state's electoral habits and raised questions about the durability of Trump's electoral coalition and the ability of other Republican candidates to emulate his style and policies (Yost, Redman, and Thompson 2017). The counties that President Trump won in 2016 represented about 47% of voters and Hillary Clinton won only one-third of the vote in those counties. In 2018, Trump counties gave a larger share of their votes to Wolf and Casey while accounting for about the same proportion of those who cast a ballot. Voters in Trump counties

seemed equally motivated to vote in 2018 in comparison to 2016, but they were less monolithic in support of Republican candidates. The largest change in the 2018 midterm was in the behavior of voters residing in the counties that Hillary Clinton won in 2016. Clinton counties voted more monolithically for Democrats: both Wolf and Casey won a larger portion of the vote in these counties than did Clinton herself.

Comparing changes in the returns for Wolf and Casey in their past two elections clarifies how the state's voting patterns are changing at the county level. These changes in support for Wolf and Casey demonstrate how the state is reorganizing itself in the Trump era: The northeast has moved away from Democrats and the southeast has moved toward them.[16]

The midterm results show that the county-level changes to state politics evident in 2016 persisted into 2018. Democrats can be successful if their voters maintain the high levels of interest and cohesion they displayed in 2018, but President Trump is *sui generis*. Neither Barletta nor Wagner could emulate Trump's message or style, which gave their Democratic opponents an opportunity to attract more support in Trump counties. Clear evidence of this is that neither Republican benefitted from a pronounced advantage among working-class voters, the cornerstone of the Trump electoral coalition.

Appendix A

Table 3. Logistic Regression Model for Vote Preference			
	Probability of Voting for Democratic Candidate		
	Voted Wolf (1)	**Voted Casey (2)**	**Voted for House Dem (3)**
Ideology, higher score more conservative	−0.666** (−1.201, −0.131)	−0.737** (−1.344, −0.131)	−0.798*** (−1.347, −0.249)
Party, higher score more Democrat	0.874*** (0.589, 1.159)	0.877*** (0.596, 1.158)	1.060*** (0.824, 1.296)
Born Again Christian	0.342 (−0.586, 1.270)	0.062 (−0.964, 1.088)	−0.050 (−1.017, 0.917)
Male	0.652* (−0.122, 1.426)	0.652 (−0.176, 1.481)	0.271 (−0.453, 0.995)
Over 55 years of age	−0.050 (−1.145, 1.044)	−0.679 (−1.765, 0.407)	0.366 (−0.569, 1.300)
Under 35 years of age	−0.789 (−2.508, 0.930)	−0.544 (−2.338, 1.249)	0.970 (−0.739, 2.679)
Resident of Urban Area	0.391 (−0.502, 1.284)	−0.146 (−1.076, 0.784)	−0.235 (−1.115, 0.645)
No College Degree	0.721* (−0.066, 1.508)	−0.052 (−0.862, 0.758)	−0.430 (−1.161, 0.300)
Single	−0.146 (−1.021, 0.729)	−0.106 (−1.036, 0.824)	0.020 (−0.779, 0.818)
Wolf Positive Job Approval	3.156*** (2.240, 4.071)		
Casey Positive Job Approval		3.142*** (2.177, 4.107)	
Trump Positive Job Approval	−2.206*** (−3.063, −1.349)	−1.998*** (−2.898, −1.097)	−2.751*** (−3.667, −1.836)
No Change from Jobs Act	0.694 (−0.158, 1.546)	1.132** (0.228, 2.035)	1.030** (0.218, 1.841)
PA on Wrong Track	0.025 (−0.765, 0.815)	−0.344 (−1.163, 0.475)	0.094 (−0.647, 0.835)
No Change on Health Care	−0.099 (−0.939, 0.741)	−0.500 (−1.363, 0.363)	−0.405 (−1.181, 0.371)
Constant	−1.707 (−4.506, 1.092)	−0.451 (−3.450, 2.548)	−0.896 (−3.483, 1.692)
Observations	852	837	865
Log Likelihood	−105.019	−95.469	−117.852
Akaike Inf. Crit.	240.038	220.939	263.705
Note: *p < .10; **p < .05; ***p < .01			
Source: Franklin & Marshall College Post-Election Survey			

Appendix B

Table 4. Logistic Regression Model for Split-Ticket Voters	
	Probability of Splitting Ticket (Split Ticket)
Ideology, higher score more conservative	−0.455** (−0.817, −0.093)
Party, higher score more Democrat	−0.431*** (−0.629, −0.232)
Born Again Christian	0.017 (−0.665, 0.700)
Male	0.783*** (0.193, 1.373)
Over 55 years of age	0.183 (−0.655, 1.021)
Under 35 years of age	0.064 (−1.376, 1.504)
Resident of Urban Area	0.359 (−0.320, 1.037)
No College Degree	0.625** (0.045, 1.205)
Single	−0.145 (−0.765, 0.474)
Trump Positive Job Approval	0.268 (−0.535, 1.072)
No Change from Jobs Act	0.180 (−0.457, 0.818)
PA on Wrong Track	−0.687** (−1.306, −0.067)
No Change on Health Care	1.507*** (0.817, 2.198)
Constant	−1.686 (−3.790, 0.417)
Observations	847
Log Likelihood	−189.865
Akaike Inf. Crit.	407.730
Note: *$p < .10$; **$p < .05$; ***$p < .01$	
Source: Franklin & Marshall College Post-Election Survey	

NOTES

1. This article uses data from three primary sources. The pre-election polling data come primarily from Franklin & Marshall College polls conducted during June, August, September, and October 2018. The reports for the Franklin & Marshall College polls are all available at https://www.fandm.edu/fandmpoll/survey-releases. The polling dates and sample sizes are as follows: June 4–10 (n = 472); August 20–27 (n = 511); September 17–23 (n = 545); and October 22–28 (n = 537). Each poll included interviews with registered voters randomly selected from a list of registered voters provided by L2. The post-election polling data come from re-interviews with respondents from these polls. Post-election interviews were completed with 1,049 of the 2,065 voters (51%) interviewed during June, August, September, and October. Post-election estimates were weighted to reflect the final vote shares for the gubernatorial, U.S. Senate, and U.S. House races in the state. The final weighted sample included 442 registered Republicans, 496 registered Democrats, and 113 registrants from other parties. County-level election and registration data come from the Pennsylvania Department of State at https://www.electionreturns.pa.gov/ReportCenter/Reports.

2. The October 2018 Franklin & Marshall College poll found that the issues mentioned were motivating factors for a sizable group of voters.

3. The fundraising data was downloaded from the Pennsylvania Department of State's campaign finance portal at https://www.dos.pa.gov/VotingElections and all calculations were made by the authors. This data shows that Wolf received 14,052 donations (12,601 in-state) and Wagner received 4,019 donations (3,843 in-state) during 2018.

4. The full logistic regression model and accompanying regression coefficients is included as Appendix A. The model correctly classified 95% of cases. Model specificity was 96% and model sensitivity was 93%.

5. Put another way, Barletta had a clear advantage among voters who made their decision for the U.S. Senate race during the campaign's final week; these voters broke for him 58% to 34% for Casey.

6. The full logistic regression model and accompanying regression coefficients is included as Appendix B. The model correctly classified 96% of cases. Model specificity was 97% and model sensitivity was 95%.

7. Weak partisan identifiers are those who rated their partisanship as "leaning" to one party or as Independent. These individuals would be a 3, 4, or 5 on the partisanship scale.

8. The court's *per curiam* order can be viewed at http://www.pacourts.us/assets/files/setting-6015/file-6740.pdf?cb=b74d61 .

9. The majority opinion in *League of Women Voters et al. v. the Commonwealth of Pennsylvania et al.* can be viewed at https://www.pubintlaw.org/wp-content/uploads/2017/06/2018-02-07-Majority-Opinion.pdf, 130.

10. The Republican incumbents not running for their House seats were Patrick Meehan, Charlie Dent, Tim Murphy, Ryan Costello, Bill Shuster, and Lou Barletta. Democrat Bob Brady did not run for reelection either.

11. Democratic challenger Scott Wallace received 160,745 votes and Fitzpatrick received 169,053 votes according to the official returns posted on the Pennsylvania Department of State website, https://electionreturns.pa.gov/. Fitzpatrick had an 8,308 vote margin out of 329,798 votes cast.

12. Pennsylvania CD-18 was the state's only unopposed district in the 2018 cycle. Removing this race from the vote total gives a Democratic advantage of 53% to 47%.

13. The procedures for conducting this adjustment are described in Arrington (2010).

14. The full logistic regression model and accompanying regression coefficients is included as Appendix A. The model correctly classified 95% of cases. Model specificity was 97% and model sensitivity was 93%.

15. There were 3,323,533 votes cast in Pennsylvania congressional races in 2014 compared to 3,495,866 votes cast in that year's governor's race.

16. These two regions represent growing shares of the state's registered voters; the northeast increased from 11.6% of the state's registered voters in 1998 to 12.4% in 2018 and the southeast increased from 20.0% to 20.7% in that same time period. The only other area of the state with an increasing share of registered voters is central Pennsylvania, rising from 24.0% to 26.1%.

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