# The Electoral Value of Seniority:

## Does Incumbent Tenure Affect the Attitudes of Voters?

Stephen Ansolabehere

Stephen Pettigrew

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### Abstract

Legislatures commonly use seniority systems to distribute positions within the chamber. One theory of why seniority systems exist holds that it is a product of electoral strategies of officeholders. Legislators implement seniority systems to advance reelection goals, and voters support their incumbents because longer tenure yields greater influence over legislation (Mayhew, 1974; McKelvey and Reizmann 1992). This paper tests key tenets of this argument, namely that voters know the seniority of their representatives and support incumbents in order to increase their representatives' power within the chamber. Using cross-sectional and experimental data, we find little support for these claims with respect to the U.S. House of Representatives. Most respondents do not know the seniority of their member, and tend to underestimate it, and there is little correlation between incumbent tenure and constituent evaluations of the incumbent. Results from two survey experiments show that informing people of the actual tenure of their representative does not affect electoral support.

# 1 Introduction

In *Congress: The Electoral Connection*, David Mayhew (1974) argues that representatives in a legislature will work together to structure the rules of the body in a way that advances their own electoral goals. One important way in which Congress has done this is by tying a representative's legislative efficacy to amount of time they have served in the legislature. Senior members of Congress are more likely to hold prestigious committee chairs and leadership positions, have preference in the committee assignment process, and control most of the power within the party organization. This insight provides a possible rationale for the existence and persistence of seniority systems within legislatures as a means of distributing important political positions, such as committee and subcommittee chairs.

Much of the political science theorizing about seniority has sought to explain simultaneously the existence of seniority systems and the presence of unusually high reelection rates of incumbent members of Congress. The most basic version of the argument, described by McKelvey and Riezman (1992), is that as an incumbent's seniority increases, she becomes more effective at representing her constituents. Each time she faces reelection, her constituents are given a choice between a tenured incumbent and a challenger who would fall to the bottom of the seniority totem pole. Voters rationally reelect the incumbent because her power in the legislature allows her to better pursue the goals of her constituents.

This paper tests this model directly by examining how well voters understand the seniority rank of their incumbents and by measuring the weight of seniority in voters' electoral behavior. Specifically, we use cross-sectional and experimental data to answer the question of whether voters actually think about seniority in the way predicted by by the McKelvey and Riezman's model. In particular we show that while incumbent tenure is correlated with constituent attitudes about their incumbents, the relationship is not driven by constituent perceptions of how long their incumbent has served. We test this apparent inconsistency

in two survey experiments. They show that correcting the inaccurate perceptions of their incumbent's tenure in Congress does not change the respondents' affinity for their representative.

The paper proceeds as follows. We first discuss the game theoretic models tested by our analyses and expand on the empirically testable hypotheses they generate. We then explain how the findings of this paper fits in with the rest of the empirical literature about the relationship between electoral outcomes and seniority in Congress. Next we detail the setup of our analysis, as well as the design of the survey experiments. After that we show the constituent attitudes are correlated with incumbent tenure, but not with constituent beliefs about their tenure. Then using our experimental results, we demonstrate that even when we correct respondents' inaccurate beliefs they still do not respond to tenure in the way predicted by the formal models. We conclude with a discussion of how our findings fit into our understanding of seniority and the incumbency advantage.

## 2 Seniority and the Incumbency Advantage

Congressional rules that privilege senior incumbents over junior ones have long been thought to be a key contributor to the electoral advantage that incumbents have over challengers. Seniority can be thought of as a valence characteristic in an election. Experienced members of Congress can use their knowledge of the inner workings of Congress to help pass legislation favored by their constituents. They have experience dealing with executive agencies and are able to perform constituent services more effectively than would a newly elected replacement. They also are closer to becoming a committee chair or ranking member than would be a challenger candidate. If voters recognize the value of seniority, these advantages should provide a electoral cushion for the incumbent, since there is no way that an inexperienced challenger candidate could ever capture this valence attribute in an election.

This dynamic between tenure and electoral fortune was first described by Randall Holcombe 1989 and by John Hibbing 19891. His treatment of the topic was brief and informal, but provided a framework upon which McKelvey and Riezman (1992) built their formal model of seniority in a legislature. They construct a three-stage stochastic game to explain why legislatures put into place rules which privilege seniority and why voters reelect their incumbent. In the first stage of the game the legislative body decides on whether or not it will adopt a seniority-based recognition rule, which will structure the game in stage two. They model seniority as a dichotomy, wherein "senior" members of the legislature are ones who participated in the previous iteration of the game and "junior" members are the ones who were newly elected at the end of the prior iteration. After deciding whether or not to use a seniority rule, the legislators play a divide-the-dollar game, which repeats until a proposal is accepted. In this stage of the game, a member's recognition probability is an increasing function of her seniority. Step two repeats until a proposal is approved by a majority of the legislature. The game then moves to stage three, in which voters in each district simultaneously decide whether to reelect their representative or replace them. The game then returns to stage one and repeats infinitely.

The authors show that there is a Markov subgame perfect equilibrium outcome in which, along the equilibrium path, voters reelect their incumbent representative unanimously, because not doing so would drop their representative to the bottom rung of the seniority ladder and cause disutility for the voters. And because all incumbents are reelected in every iteration of this game, a seniority system will always be approved in stage one. In this formulation of the legislative game, seniority is not just a factor which helps incumbents have an advantage over challengers; seniority is *the* reason that incumbents defeat their challengers. This point, that seniority is a critical aspect of the incumbency advantage, has been made by other authors (Shepsle and Nalebuff, 1990). Experience in the legislature is a trait that is shared by every single incumbent and lacking among all electoral challengers.

Since the publication of the original model, several scholars have refined and extended it. A key one of these refinements was made by Muthoo and Shepsle (2010). Their model generalizes the original one by formulating a three-stage game which is very similar to McKelvey and Riezmans'. The key difference, however, is that the cutpoint for what constitutes a senior versus junior member, $s^*$, endogenously selected by the legislature in the first stage of the game. In Muthoo and Shepsles' version of the game, the first stage is not a yes or no vote on whether or not to implement a seniority system, but rather a decision on where the cutpoint for such a system should be.[1] Seniority is still operationalized as a dichotomy, the only difference is that the threshold endogenously varies, whereas in McKelvey and Riezman restrict the cutpoint to equal 1. In the latter model, the deciding vote on where $s^*$ should be is left to the member of the legislature who is at the median point on the tenure ranking.

In the Markov subgame perfect equilibrium of this model, a seniority rule is put into place at $s^* = tenure_{median}$. Like the original model, on the equilibrium path constituents also always vote to reelect their incumbents. This may seem a bit counter-intuitive, since $\frac{n}{2} - 1$ junior incumbents of the legislature would have the same recognition probability in stage two of the game as a challenger candidate. The reason that voters still vote for junior incumbents, however, is that seniority is still ordinal, in the sense that $s^*$ can lie anywhere, even when the recognition probabilities are determined by making seniority dichotomous. Voters in all districts with a junior incumbent still prefer voting for somebody whose tenure is greater than zero over a challenger whose tenure is zero. Muthoo and Shepsle also introduce the idea of legislator death or retirement, which is thought to be imposed exogenously. In this extension of the game, the reason for why all incumbents (including junior ones) get reelected is more obvious. There is a non-zero probability that your incumbent's tenure could be at or above the median in the next stage of the game. With this as a possibility, voters in all

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[1]Keep in mind that not implementing a seniority system remains in the strategy set. To achieve this outcome, the legislature would just have to set $s^*$ to be zero, thereby making every representative equally senior.

districts want to keep their incumbents in office.

The aspect of these models which we test in this paper is stage three. In McKelvey and Riezman's game, voters in stage three have a full understanding of their representatives' levels of seniority, as well as the legislative value of that tenure. The large opportunity cost borne from voting out an incumbent prevents voters in their game from casting a ballot for a challenger candidate. The question remains, though, as to whether voters in the real world actually think about incumbency and seniority in this way. Scholars of American elections have long understood that voters have difficulty recalling things as simple as their representative's name. Why should we think that the incumbent's tenure in the House is any different? On the other hand, and perhaps more optimistically, we also know that voters are good at responding to cues, such as party. It could be that seniority has having the expected effect on election outcomes, but the mechanism for this is less explicit. Instead of voters directly thinking through the ramifications of a vote choice between a tenured member of Congress and a novice, they could be responding to signals sent through the campaign or the media. This may generate perceptions of their incumbent's tenure, which then influence voting decisions.

A few researchers have tested the empirical verifiability of the McKelvey/ Riezman model, mostly looking for a correlation between seniority and election returns. It is difficult, however, to study by only using aggregate data. Several other factors, such as age and political power of the legislator, are highly correlated with tenure, but are not part of the incumbency advantage puzzle explained by the game theoretic model. It may very well be that such a correlation exists, but voters are not making these connections in the way that the model suggests.

One of the earliest works about seniority and the incumbency advantage predates the formalization of the relationship by a decade. Johannes and McAdams (1981) seek to explain the origin of the incumbency advantage, particularly in terms of specific actions

taken by representatives to advance their own electoral fortunes. Using data from the 1978 American National Election Study, the authors fail to find a statistically significant effect of logged incumbent tenure on aggregate election returns in any of the specifications of their model. They also show that seniority does not appear to have an effect on voting decisions by individual survey respondents. While the coefficient on logged seniority is in the expected direction, the effect is again not statistically significant.

More recent work has taken a more creative approaches to testing the model. Kellerman and Shepsle (2009) provide evidence that voters are not responding to tenure, at least in terms of seniority on congressional committees. They leverage the Democrats' randomization of seniority rankings for freshman committee members as a natural experiment to test whether differences in assigned seniority within an electoral cohort have an effect on election outcomes. The authors show that seniority does not have a significant effect on the freshman members' probability of winning a second term, nor does it have a significant effect on their probability of remaining in Congress for more than ten years.

Another recent article has added nuance to our understanding of the effect that seniority may have on the incumbency advantage. Hall and Shepsle (2012) argue that in a conditional party government era of strong-party governance the value of seniority for members of the majority party is muted. They show that the electoral payoff for seniority, in terms of vote percentages, is different for the periods before and after congressional reforms in the 1970s, which created a shift from weak to strong conditional party government. During an era of a weak majority party, which is defined as 1948-1976 in their data, senior members of the majority party receive a large payoff electorally from their incumbency status than do junior majority party and minority party members. They further argue that in the strong party era, 1976-2008, the payoffs for longer tenure in the House were the same for majority and minority senior members, since party strength lowered the salience of seniority for the party in control. Later in the paper, we return to Hall and Shepsle's argument to test its

validity.

# 3  Empirical Strategy

Overall, the empirical literature has largely suggested that the connection between seniority and incumbency is substantially smaller than is predicted by the formal models. With the exception of Johannes and McAdams' very early work, we know of no studies of this relationship which rigorously account for electoral preferences on the level of the individual voter. Thus our analysis differs from the established body of work because, to our knowledge, it is the first study of how seniority affects the decision making of *individual voters*, not just aggregated district vote proportions. The primary hypothesis that we will test is that voters will have more positive perceptions of their incumbent when they know or believe that their incumbent has been in the US House for a longer period of time.

To test the hypothesis, we rely survey responses from the 2006 through 2013 Cooperative Congressional Election Study.[2] The 2006 through 2011 studies allow us to study the relationship between incumbents' true tenure in Congress and individual-level constituent opinions.[3] The 2009 and 2013 studies also included separate sub-samples of respondents who were asked additional questions related to seniority. In 2009, 3000 out of 13,800 respondents participated in a survey experiment. In 2013, 1500 of 16,400 participated in a slightly modified version of the 2009 experiment. All respondents in the experiment subsamples were asked, "Approximately how long has your member of Congress been in the House of Representatives?". In 2009 they were given six response options;[4] in 2013 they were given

[2]In all years we dropped non-citizen respondents and respondents from the District of Columbia. In 2009 and 2013 we dropped respondents from districts that had an on-going special election or a vacant House seat. In 2009 these districts were CA-10 and FL-19. In 2013 these districts were AL-1, FL-13, LA-5, and MA-5.

[3]We did not use the 2012 and 2013 data in this analysis to avoid complications arising from redistricting.

[4]1-2 years; 3-4 years; 5-10 years; 11-20 years; 21-30 years; more than 30 years

five.[5]

After answering the pre-treatment questions, the respondents were randomly assigned into treatment and control groups. The 2009 treatment group, which consisted of 2015 respondents, received several factual pieces of information about their member of Congress. Each of these treated units randomly received three facts about their incumbent, out of a possible five. This pool of facts was comprised of the incumbent's party affiliation, age, number of terms served, religious denomination, and race.[6] The 2013 treatment group, which consisted of 748 respondents, were told,

> Your member of Congress has been in the House of Representatives for [N] years.
> He/she has [among the most/above average/about average/below average/among
> the last] seniority of [Republicans/Democrats].

All remaining respondents in both years received no factual information about their incumbent and made up the control group.

After the treated group was presented with the facts about their incumbents, everybody was asked questions about their opinion toward their representative. These questions allow us to test the hypothesis that learning the tenure of your House incumbent should affect your feelings toward the incumbent, depending on the difference between reality and your perception of your incumbent's tenure.

In both years respondents were asked who they are most likely to support in the following year's congressional elections.[7] The 2009 respondents were also asked, "Do you think your Representative does a good job representing the district?" and given the response

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[5] 1-2 years; 3-8 years; 9-14 years; 15-23 years; 24+ years. These categories roughly correspond with the actual quintiles of incumbent tenure.

[6] The treated units also received two out of four random facts about the roll call voting history of their incumbent. The four possible facts were the incumbent's votes on the renewal of the State Children's Health Insurance Program, the economic stimulus bill (ARRA), the American Clean Energy and Security Act (the climate bill), and the Affordable Care Act (healthcare reform).

[7] The response options for this question were: "Your member of the House of Representatives"; "Someone else, but of the same party"; and "Someone new, of a different party." The second and third categories were combined together in the analysis.

options "very good", "good", "fair", and "poor". The 2013 respondents were asked "Do you approve of the job your member of the House of Representatives is doing" and given the response options "approve strongly," "approve somewhat," "disapprove somewhat," and "disapprove strongly."

The remainder of the paper is structured as follows. We first examine the relationship between the the actual tenure of incumbents and constituent approval and vote preferences related to the incumbent. We demonstrate that although there is a statistically significant relationship between tenure and attitudes, the size of the effect is tiny when compared to the effect of party.

Next, we describe the accuracy of respondents' perceptions of their incumbents' tenure. We then replicate the previous regressions, this time using perceived tenure instead of actual incumbent tenure. We find no noticeable impact of perceived tenure on attitudes. Finally we analyze our two survey experiments which show that there is not a strong relationship between seniority and constituent approval.

# 4    Evidence from the Cross-Sectional Data

## 4.1    True level of incumbent tenure

Despite the predictions generated by the formal models, incumbent seniority is not strongly correlated with voter preference or incumbent approval for US House members. Table 1 provides the estimates from four models which use data from the 2006, 2008, and 2010 CCES studies.[8] The dependent variable in models 1 and 2 is job approval of the House incumbent on a four-point scale.[9] In both models, the relationship between incumbent tenure (measured

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[8]Each of these models contains control variables for party, respondent age, gender, race, education, political knowledge, turnout, and year.

[9]These models were estimated using OLS. Using ordered logit to estimate the coefficients does not change the substantive takeaways. The OLS results are presented for ease of interpretability.

Table 1: Effect of tenure on attitudes toward House incumbent

| | Dependent variable: | | | |
|---|---|---|---|---|
| | Approval | | Vote for incumbent | |
| | OLS | | logistic | |
| | (1) | (2) | (3) | (4) |
| Terms | 0.003*** | 0.009*** | 0.008** | 0.038*** |
| | (0.001) | (0.002) | (0.003) | (0.007) |
| Terms$^2$ | | −0.0003*** | | −0.002*** |
| | | (0.0001) | | (0.0004) |
| Open seat | | | −0.398*** | −0.415*** |
| | | | (0.036) | (0.036) |
| Same party | 1.274*** | 1.273*** | 4.103*** | 4.103*** |
| | (0.006) | (0.006) | (0.025) | (0.025) |
| Constant | 1.981*** | 1.963*** | 0.226 | 0.141 |
| | (0.027) | (0.027) | (0.257) | (0.258) |
| Additional controls? | ✓ | ✓ | ✓ | ✓ |
| Observations | 81,547 | 81,547 | 77,646 | 77,646 |
| R$^2$ | 0.360 | 0.360 | | |
| Adjusted R$^2$ | 0.360 | 0.360 | | |
| Akaike Inf. Crit. | | | 56,116.720 | 56,098.080 |

Note: Full results found in appendix                    *p<0.05; **p<0.01; ***p<0.001

as terms of service) and approval ratings is statistically significant in the expected direction.

The substantive significance of these coefficients, however, is questionable. The left side of figure 4.1 shows the predicted approval rating, conditional on incumbent tenure and whether or not the constituent and incumbent are in the same party. As the graph makes clear, the statistically significant effect of tenure is minuscule when compared with the effect of party. For constituents of the same party as the incumbent, having an incumbent with 12 years of experience (the peak of the quadratic curve) only translates into a 0.04 point increase on the approval scale from an incumbent in their first term. The effect size for non-copartisans is also about 0.04.

Models 3 and 4 from Table 1 use House vote choice as an outcome variable, where 1
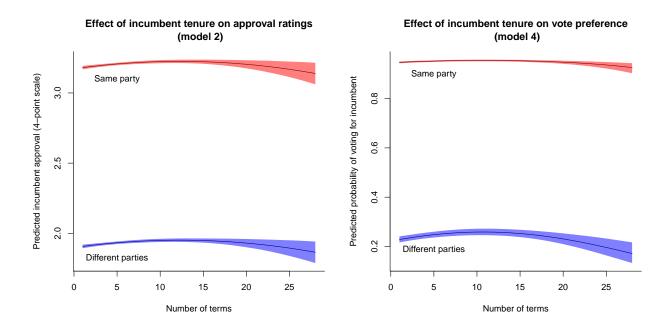
Figure 1: Relationship between incumbent tenure and constituent attitudes



indicates a vote for the incumbent (or the incumbent's party) and 0 indicates a vote against the incumbent. Just like when approval was the outcome, the linear and quadratic coefficients for incumbent tenure are statistically significant although substantially smaller than the coefficient for copartisanship. The right side of Figure 4.1 shows how incumbent tenure and partisanship changes in predicted probability of voting for the incumbent. Copartisans vote for the incumbent over 90% of the time and non-copartisans vote for the incumbent less than 25% of the time, regardless of their incumbent's seniority.

The results from these models suggest that there is a statistically distinguishable relationship the true magnitude of incumbent tenure and constituent attitudes toward the incumbent, although the relationship is substantively tiny. This result alone does not let us let us fully evaluate the empirical validity of McKelvey and Reizman's model. It could be the case that inaccurate knowledge about the tenure of their incumbent has attenuated the effect size. We show in the next section, however, that accounting for perceptions of tenure

actually weakens the relationship.

## 4.2 Perceived level of incumbent tenure

Table 2: Accuracy of Tenure Perceptions

| True tenure | Underestimated | Correct | Overestimated | Total |
|---|---|---|---|---|
| **2009** | | | | |
| 1-2 yrs | - | 273 | 138 | 411 |
| | - | 66.4% | 33.6% | 14.7% |
| 3-4 yrs | 118 | 165 | 109 | 392 |
| | 30.1% | 42.1% | 27.8% | 14% |
| 5-10 yrs | 237 | 402 | 105 | 744 |
| | 31.9% | 54% | 14.1% | 26.5% |
| 11-20 yrs | 527 | 248 | 41 | 816 |
| | 64.6% | 30.4% | 5% | 29.1% |
| 21-30 yrs | 262 | 37 | 5 | 304 |
| | 86.2% | 12.2% | 1.6% | 10.8% |
| 30+ years | 114 | 22 | - | 136 |
| | 83.8% | 16.2% | - | 4.9% |
| Total | 1258 | 1147 | 398 | 2803 |
| | 44.9% | 40.9% | 14.2% | 100% |
| **2013** | | | | |
| 1-2 yrs | - | 85 | 49 | 134 |
| | - | 63.4% | 36.6% | 19% |
| 3-8 yrs | 49 | 135 | 29 | 213 |
| | 23% | 63.4% | 13.6% | 30.1% |
| 9-14 yrs | 65 | 12 | 9 | 86 |
| | 75.6% | 14% | 10.5% | 12.2% |
| 15-23 yrs | 137 | 29 | 7 | 173 |
| | 79.2% | 16.8% | 4% | 24.5% |
| 24+ years | 66 | 35 | - | 101 |
| | 65.3% | 34.7% | - | 14.3% |
| Total | 317 | 296 | 94 | 707 |
| | 44.8% | 41.9% | 13.3% | 100% |

Recall that in 2009 and 2013 we asked a subsample of respondents to tell us how long they think their member of Congress has served. Table 4.2 shows the breakdown in

accuracy of these responses.[10] Overall just over 40% of respondents correctly categorized their incumbent's length of time in Washington, in both 2009 and 2013. Among those who answered incorrectly, respondents were substantially more likely to underestimate tenure than overestimate it. Almost three times as many respondents underestimated how long their incumbent had been in the House (about 45%) than respondents who overestimated this value (about 13%).

This asymmetry is itself interesting. Let us assume for a moment that McKelvey and Riezman are correct in stating that voters value higher levels of seniority in their members of Congress. Table 4.2 tells us that more than two out of every five voters thinks that their incumbent has been in Washington for shorter than they actually have. The implication of this is that 45% of voters deprive their incumbent a seniority boost in electoral support, based on inaccurate beliefs. Even when we take into account the 14% of people who overestimate their incumbent's tenure, who would be undeserving boost in electoral support to the incumbent, we still find that incumbents receive less of a seniority vote bump than the models suggest they should receive.

The table also suggest that the assumption of perfect information about incumbent tenure in the McKelvey/Riezman model is flawed. This does not necessarily make their equilibrium unrealistic. It could be that while voters are wrong in their assessments of incumbent tenure, they vote based on their own personal perceptions of representative tenure. To test this, we will now estimate models similar to those in Table 1, this time using perceived incumbent tenure as the explanatory variable of interest.

The results from these estimations of vote preference can be found in Table 3.[11] The first thing to note is that the statistically significant relationship between tenure and constituent attitudes disappears when we replace true tenure with perceived tenure. Increases

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[10]Note that in 2013 respondents were given the option of answering "Don't know" to this item. About half of respondents chose this option.

[11]The reference category for perceived tenure factor variable is 1-2 years of tenure

Table 3: Effect of perceived tenure on attitudes toward House incumbent

| | Dependent variable: | | | |
|---|---|---|---|---|
| | Approval | | Vote for incumbent | |
| | *OLS* | | *logistic* | |
| | 2009 | 2013 | 2009 | 2013 |
| 3-4 yrs (2009); 3-8 yrs (2013) | 0.102 | 0.046 | −0.082 | 0.147 |
| | (0.056) | (0.087) | (0.147) | (0.224) |
| 5-10 yrs (2009); 9-14 yrs (2013) | 0.116* | 0.034 | −0.116 | −0.015 |
| | (0.049) | (0.110) | (0.130) | (0.281) |
| 11-20 yrs (2009); 15-23 yrs (2013) | 0.042 | −0.067 | −0.201 | −0.373 |
| | (0.056) | (0.120) | (0.149) | (0.315) |
| 21-30 yrs (2009); 23+ yrs (2013) | 0.025 | 0.060 | −0.270 | −0.377 |
| | (0.091) | (0.141) | (0.239) | (0.370) |
| 30+ yrs (2009) | 0.090 | | −0.377 | |
| | (0.138) | | (0.369) | |
| Same party | 1.068*** | 1.036*** | 2.171*** | 1.854*** |
| | (0.035) | (0.067) | (0.092) | (0.175) |
| Additional controls? | ✓ | ✓ | ✓ | ✓ |
| Observations | 2,694 | 697 | 2,672 | 695 |
| $R^2$ | 0.272 | 0.285 | | |
| Adjusted $R^2$ | 0.267 | 0.268 | | |
| Log Likelihood | | | −1,484.974 | −406.119 |
| Akaike Inf. Crit. | | | 3,007.947 | 848.238 |

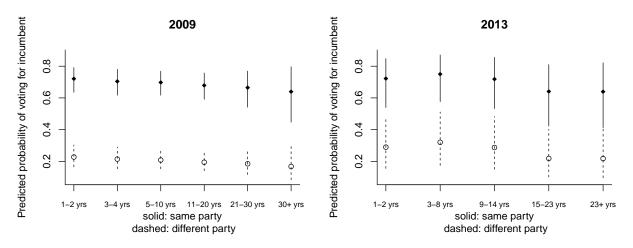*Note: Full results found in appendix*     *p<0.05; **p<0.01; ***p<0.001

Figure 2: Predicted probabilities for voting for incumbent, based on perceived tenure



in perceived tenure away from being a freshman has a statistically significant effect for only one of the coefficients across our four models.[12]

The formal model suggests that we should see increasing electoral returns to seniority. Figure 2 shows the predicted probability of voting for the incumbent, conditional on the respondent's partisanship and perception of the incumbent's tenure (models 3 and 4 in Table 3). In both 2009 and 2013 there is no evidence of perceived tenure being related to vote preference in any important way. The relationship appears to be flat in both years. It's also clear that any possible relationship is dwarfed by the impact of partisanship on vote choice. While the difference in predicted probability with a freshman incumbent versus a 15 term incumbent is at most in the single digits, the gap between copartisans and non-copartisans is nearly fifty percentage points.

The formal model suggests that we should see an increase in incumbent support as perceived tenure increases, or at least a big upward jump in the early years. The regression results do not appear to support this hypothesis. What we can take away is that the marginal effect of partisanship trumps any possible effect that seniority may be having on

[12]Given that we are testing the significant of 18 different coefficients, it's not surprising that one of them is statistically significant at the $p = .05$ level.

voter opinions toward their incumbents. As a final test of the hypothesis, we used survey experiments to test whether correcting constituents' incorrect perceptions of incumbent tenure yields a result that is consistent with the McKelvey/Riezman model.

# 5    Experimental Results

In the survey experiments we conducted, the treatment and control were whether the respondent was told amount of time that their incumbent had been serving in the US House. In the analysis in this section we use this treatment in conjunction with the pre-treatment survey item on the respondent's perception of incumbent tenure to study the effect of new information about seniority. In all subsequent analyses, data respondents who correctly identified the tenure of their incumbent are dropped. This is because there is no clear set of counterfactuals which arise from giving these individuals the treatment.[13]

The analysis of the remaining incorrect respondents is split based on whether the respondent underestimated or overestimated their incumbent's tenure. Our hypothesis would suggest that individuals who underestimate incumbent tenure should like their incumbent more when they are treated. Likewise, individuals who overestimated tenure should like their incumbent less when they find out the incumbent has less seniority. As before, we use respondent evaluations of job approval and vote preference to assess the effect of the treatment.

If the seniority hypothesis is true, we should see that being told the true tenure of one's incumbent should increase support among those who underestimated the level of tenure. Table 4 makes provides little evidence of that relationship. In the surveys in both years the treatment effect is not statistically distinguishable from zero for both the approval

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[13]It might be the case that some of these respondents simply guessed correctly, and being treated would decrease their uncertainty about incumbent tenure. There's not a testable hypothesis that arises from the McKelvey/Riezman model about this possibility.

Table 4: Average treatment effect for respondents who underestimated incumbent tenure

| | Dependent variable: | | | |
| | Approval | | Vote for incumbent | |
| | 2009 | 2013 | 2009 | 2013 |
|---|---|---|---|---|
| Treated | 0.051 | −0.001 | 0.028 | 0.005 |
| | (0.058) | (0.112) | (0.029) | (0.056) |
| Constant | 2.497*** | 2.545*** | 0.428*** | 0.445*** |
| | (0.045) | (0.080) | (0.022) | (0.040) |
| Observations | 1,252 | 316 | 1,241 | 315 |
| $R^2$ | 0.001 | 0.00000 | 0.001 | 0.00002 |

*Note: OLS; no control variables*          *p<0.05; **p<0.01; ***p<0.001

and vote preference outcome variables. Three of the four estimates of the treatment effect are in the predicted direction, but all four coefficients have standard errors which are bigger in magnitude than the point estimate.

Because the treatment is randomized, we do not need to control for covariates to get an unbiased estimate of the treatment effect. Doing so, however, can improve efficiency in the estimation. Estimates of the treatment effect, controlling for other covariates, can be found in the appendix. When other factors are controlled for, the coefficients for the treatment effect are not much different and remain non-significant. The size of the treatment effect is tiny compared to that of the party coefficient. In both years, being of the same party as the incumbent yields a bump of about 1 full point on the 4-point approval scale. The size of the treatment effect is barely larger than zero. Similarly, partisanship can yield a 40 to 50 percentage point jump in the probability of voting for the incumbent, while the point estimate for the treatment is only about one percentage point.

Analyzing the treatment effect for people who overestimated incumbent tenure yields similarly weak evidence in support of the hypothesis. We should see negative treatment effects in Table 9 if the hypothesis holds. Instead all four estimates are positive and indistinguishable from zero. The results remain insignificant when you control for covariates

Table 5: Average treatment effect for respondents who overestimated incumbent tenure

| | Dependent variable: | | | |
| --- | --- | --- | --- | --- |
| | Approval | | Vote for incumbent | |
| | 2009 | 2013 | 2009 | 2013 |
| Treated | 0.015 | 0.069 | 0.056 | 0.090 |
| | (0.105) | (0.200) | (0.052) | (0.106) |
| Constant | 2.424*** | 2.610*** | 0.357*** | 0.439*** |
| | (0.084) | (0.150) | (0.041) | (0.079) |
| Observations | 397 | 94 | 387 | 92 |
| $R^2$ | 0.0001 | 0.001 | 0.003 | 0.008 |

*Note: OLS; no control variables*      *p<0.05; **p<0.01; ***p<0.001

(see appendix). And just like with the underestimating respondents, partisanship dominates the treatment coefficient by orders of magnitude in all four regressions. The takeaway from the experiments is that they confirm what we have found throughout this analysis: that seniority and incumbent tenure does not have the strong electoral effect that McKelvey and Riezman's model suggests it should.

# 6   Conclusion

Seniority systems arise commonly in legislatures as a means of distributing important positions within the legislature. At least since Mayhew's *Congress: The Electoral Connection* a key explanation for such systems has been the external, electoral advantages that such systems offer to incumbents. Voters can maintain their place in the queue to a powerful committee position by retaining their member of Congress. This paper has tested the voters' side of this story for the U. S. House of Representatives, the chamber for which the argument was developed.

The results call into question whether sufficient numbers of voters know their legislators' seniority rank and whether the electorate values seniority as an attribute of their

representatives. We have shown, using cross-sectional and experimental survey data from two separate years, that voters are not highly responsive to tenure. Although tenure correlates with vote preference, the size of this correlation is minuscule. In addition, because the formal model suggests a certain set of behaviors for constituents, it makes sense to account for their perceptions about incumbent tenure. When we do this, the correlation between tenure and constituent preference collapse. Regardless of how long they believe their members of Congress has served, voters do not think differently about incumbent job approval or vote preference. Even had we found statistically significant effects, their substantive meaning is swamped by the enormous predictive power of party.

The experimental results in this paper further indicate that people do not consider their incumbent's length of tenure or status in the seniority system when they make vote decisions. These results show that people in the United States do not vote to retain their member of Congress so that legislator can accumulate more seniority and, thus, more power.

This is not the end of the story. Our findings show that there is no direct link between seniority and pro-incumbent voting, but indirect links may still exist. People may not be aware of or key off of seniority in the way formal models suggest, but people may still reward legislators who brought public expenditures and projects back to the district, which is the ultimate outcome variable of interest. Seniority may matter, but only indirectly and in ways that voters need not be aware of. If that were the case we would still expect to see a clear relationship between tenure and support, and one does not readily emerge. Further, such a model lies outside of the existing theoretical analyses, as it is always assumed that the voters know how reelection of their incumbent translates into future public bounty. This, then, is the challenge for theorists wishing to understand more deeply the link between electoral behavior and legislative institutions: to show that seniority systems and incumbency advantages can produce one another even in the absence of voter knowledge of seniority or explicit reward to more senior members. Taking on their face, our findings suggest that the rationale for the

seniority system is more likely the result of internal politics rather than an external electoral advantage or connection.

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# Appendix

Table 6: Effect of tenure on attitudes toward House incumbent

| | Dependent variable: | | | |
|---|---|---|---|---|
| | Approval | | Vote for incumbent | |
| | OLS | | logistic | |
| | (1) | (2) | (3) | (4) |
| Terms | 0.003*** | 0.009*** | 0.008** | 0.038*** |
| | (0.001) | (0.002) | (0.003) | (0.007) |
| Terms$^2$ | | −0.0003*** | | −0.002*** |
| | | (0.0001) | | (0.0004) |
| Open seat | | | −0.398*** | −0.415*** |
| | | | (0.036) | (0.036) |
| Same party | 1.274*** | 1.273*** | 4.103*** | 4.103*** |
| | (0.006) | (0.006) | (0.025) | (0.025) |
| Age | 0.002*** | 0.002*** | −0.001 | −0.001 |
| | (0.0002) | (0.0002) | (0.001) | (0.001) |
| Female | 0.062*** | 0.062*** | 0.011 | 0.011 |
| | (0.006) | (0.006) | (0.022) | (0.022) |
| Black | 0.043*** | 0.043*** | 0.257*** | 0.253*** |
| | (0.011) | (0.011) | (0.043) | (0.043) |
| Hispanic | −0.014 | −0.015 | 0.067 | 0.060 |
| | (0.013) | (0.013) | (0.047) | (0.048) |
| Other race | 0.005 | 0.005 | 0.125** | 0.126** |
| | (0.013) | (0.013) | (0.048) | (0.048) |
| HS grad | 0.025 | 0.025 | −0.044 | −0.043 |
| | (0.022) | (0.022) | (0.083) | (0.083) |
| Some college | 0.002 | 0.002 | −0.120 | −0.119 |
| | (0.022) | (0.022) | (0.082) | (0.082) |
| 2-yr degree | 0.010 | 0.009 | −0.082 | −0.082 |
| | (0.024) | (0.024) | (0.087) | (0.087) |
| 4-yr degree | 0.003 | 0.003 | −0.125 | −0.125 |
| | (0.022) | (0.022) | (0.083) | (0.083) |
| Grad degree | 0.014 | 0.013 | −0.161 | −0.162 |
| | (0.023) | (0.023) | (0.086) | (0.086) |
| Knows House maj. party | −0.119*** | −0.119*** | −0.500*** | −0.499*** |
| | (0.010) | (0.010) | (0.037) | (0.037) |
| Recent turnout | −0.051*** | −0.050*** | −0.754** | −0.755** |
| | (0.012) | (0.012) | (0.241) | (0.241) |
| Year 2008 | −0.027** | −0.027** | −0.208*** | −0.203*** |
| | (0.009) | (0.009) | (0.031) | (0.031) |
| Year 2010 | −0.143*** | −0.141*** | −0.423*** | −0.413*** |
| | (0.007) | (0.007) | (0.027) | (0.027) |
| Constant | 1.981*** | 1.963*** | 0.226 | 0.141 |
| | (0.027) | (0.027) | (0.257) | (0.258) |
| Observations | 81,547 | 81,547 | 77,646 | 77,646 |
| R$^2$ | 0.360 | 0.360 | | |
| Adjusted R$^2$ | 0.360 | 0.360 | | |
| Akaike Inf. Crit. | | | 56,116.720 | 56,098.080 |

| Note: | $^*$p<0.05; $^{**}$p<0.01; $^{***}$p<0.001 |
|---|---|

Table 7: Effect of perceived tenure on attitudes toward House incumbent

| | _Dependent variable:_ | | | |
| --- | --- | --- | --- | --- |
| | Approval | | Vote for incumbent | |
| | _OLS_ | | _logistic_ | |
| | 2009 | 2013 | 2009 | 2013 |
| 3-4 yrs (2009); 3-8 yrs (2013) | 0.102 | 0.046 | −0.082 | 0.147 |
| | (0.056) | (0.087) | (0.147) | (0.224) |
| 5-10 yrs (2009); 9-14 yrs (2013) | 0.116* | 0.034 | −0.116 | −0.015 |
| | (0.049) | (0.110) | (0.130) | (0.281) |
| 11-20 yrs (2009); 15-23 yrs (2013) | 0.042 | −0.067 | −0.201 | −0.373 |
| | (0.056) | (0.120) | (0.149) | (0.315) |
| 21-30 yrs (2009); 23+ yrs (2013) | 0.025 | 0.060 | −0.270 | −0.377 |
| | (0.091) | (0.141) | (0.239) | (0.370) |
| 30+ yrs (2009) | 0.090 | | −0.377 | |
| | (0.138) | | (0.369) | |
| Same party | 1.068*** | 1.036*** | 2.171*** | 1.854*** |
| | (0.035) | (0.067) | (0.092) | (0.175) |
| Age | −0.0002 | −0.004 | −0.006 | 0.001 |
| | (0.001) | (0.002) | (0.003) | (0.006) |
| Female | 0.033 | 0.063 | 0.072 | 0.178 |
| | (0.036) | (0.068) | (0.094) | (0.175) |
| Black | 0.032 | 0.098 | 0.357* | 0.150 |
| | (0.058) | (0.111) | (0.153) | (0.284) |
| Hispanic | 0.015 | 0.130 | 0.223 | 0.074 |
| | (0.059) | (0.150) | (0.155) | (0.390) |
| Other race | 0.005 | −0.123 | 0.207 | −0.021 |
| | (0.079) | (0.131) | (0.206) | (0.337) |
| HS grad | −0.150 | −0.033 | −0.012 | 0.372 |
| | (0.103) | (0.247) | (0.271) | (0.651) |
| Some college | −0.174 | −0.058 | −0.176 | 0.627 |
| | (0.106) | (0.246) | (0.280) | (0.651) |
| 2-yr degree | −0.067 | −0.337 | 0.123 | 0.116 |
| | (0.123) | (0.264) | (0.324) | (0.696) |
| 4-yr degree | −0.136 | −0.284 | −0.074 | −0.007 |
| | (0.109) | (0.245) | (0.286) | (0.647) |
| Grad degree | −0.143 | −0.169 | −0.043 | 0.396 |
| | (0.116) | (0.252) | (0.304) | (0.666) |
| Knows House maj. party | −0.048 | −0.110 | −0.004 | 0.073 |
| | (0.045) | (0.102) | (0.120) | (0.264) |
| Recent turnout | −0.037 | −0.153 | −0.278 | −0.688 |
| | (0.064) | (0.166) | (0.168) | (0.425) |
| Constant | 2.130*** | 2.566*** | −0.726* | −0.937 |
| | (0.132) | (0.316) | (0.346) | (0.820) |
| Observations | 2,694 | 697 | 2,672 | 695 |
| $R^2$ | 0.272 | 0.285 | | |
| Adjusted $R^2$ | 0.267 | 0.268 | | |
| Log Likelihood | | | −1,484.974 | −406.119 |
| Akaike Inf. Crit. | | | 3,007.947 | 848.238 |

_Note:_ *p<0.05; **p<0.01; ***p<0.001

Table 8: Average treatment effect for respondents who underestimated incumbent tenure

| | Dependent variable: | | | |
| | Approval | | Vote for incumbent | |
| | 2009 | 2013 | 2009 | 2013 |
|---|---|---|---|---|
| Treated | 0.013 | −0.002 | 0.009 | 0.013 |
| | (0.051) | (0.099) | (0.026) | (0.053) |
| Same party | 1.020*** | 1.006*** | 0.480*** | 0.395*** |
| | (0.051) | (0.100) | (0.026) | (0.053) |
| Age | 0.0004 | −0.004 | −0.001 | −0.001 |
| | (0.002) | (0.003) | (0.001) | (0.002) |
| Female | 0.054 | 0.146 | 0.009 | 0.096 |
| | (0.053) | (0.100) | (0.026) | (0.053) |
| Black | 0.010 | 0.153 | 0.088* | 0.052 |
| | (0.081) | (0.144) | (0.041) | (0.077) |
| Hispanic | 0.021 | −0.039 | 0.071 | −0.214 |
| | (0.081) | (0.254) | (0.041) | (0.135) |
| Other race | −0.042 | −0.031 | 0.021 | −0.023 |
| | (0.108) | (0.197) | (0.054) | (0.105) |
| HS grad | −0.119 | −0.416 | −0.004 | −0.225 |
| | (0.151) | (0.365) | (0.075) | (0.194) |
| Some college | −0.089 | −0.349 | −0.043 | −0.101 |
| | (0.155) | (0.367) | (0.078) | (0.195) |
| 2-yr degree | −0.038 | −0.760 | −0.008 | −0.190 |
| | (0.181) | (0.397) | (0.091) | (0.212) |
| 4-yr degree | −0.079 | −0.471 | −0.026 | −0.245 |
| | (0.160) | (0.365) | (0.080) | (0.193) |
| Grad degree | −0.058 | −0.297 | 0.022 | −0.104 |
| | (0.173) | (0.376) | (0.087) | (0.199) |
| Knows House maj. party | 0.006 | −0.150 | 0.029 | −0.022 |
| | (0.064) | (0.159) | (0.032) | (0.085) |
| Recent turnout | 0.057 | −0.152 | 0.010 | −0.224 |
| | (0.091) | (0.271) | (0.046) | (0.144) |
| Constant | 2.003*** | 2.829*** | 0.227* | 0.670** |
| | (0.183) | (0.457) | (0.092) | (0.242) |
| Observations | 1,200 | 312 | 1,189 | 311 |
| $R^2$ | 0.264 | 0.303 | 0.248 | 0.218 |

| Note: | *p<0.05; **p<0.01; ***p<0.001 |

Table 9: Average treatment effect for respondents who overestimated incumbent tenure

| | Dependent variable: | | | |
|---|---|---|---|---|
| | Approval | | Vote for incumbent | |
| | 2009 | 2013 | 2009 | 2013 |
| Treated | −0.066 | 0.053 | 0.028 | 0.055 |
| | (0.096) | (0.193) | (0.049) | (0.106) |
| Same party | 0.946*** | 0.761*** | 0.387*** | 0.338** |
| | (0.097) | (0.199) | (0.050) | (0.110) |
| Age | 0.003 | −0.004 | 0.001 | 0.003 |
| | (0.003) | (0.006) | (0.002) | (0.003) |
| Female | −0.061 | −0.296 | −0.013 | −0.088 |
| | (0.098) | (0.198) | (0.050) | (0.109) |
| Black | 0.253 | 0.247 | 0.142 | −0.113 |
| | (0.162) | (0.311) | (0.082) | (0.173) |
| Hispanic | −0.087 | 0.567 | 0.019 | 0.132 |
| | (0.180) | (0.314) | (0.094) | (0.173) |
| Other race | 0.211 | −0.637 | 0.160 | −0.292 |
| | (0.217) | (0.328) | (0.110) | (0.181) |
| HS grad | 0.368 | 0.035 | 0.129 | 0.427 |
| | (0.268) | (0.684) | (0.135) | (0.373) |
| Some college | 0.346 | 0.172 | 0.117 | 0.473 |
| | (0.277) | (0.662) | (0.140) | (0.362) |
| 2-yr degree | 0.286 | −0.387 | 0.106 | 0.078 |
| | (0.334) | (0.709) | (0.170) | (0.388) |
| 4-yr degree | 0.439 | −0.067 | 0.172 | 0.343 |
| | (0.294) | (0.675) | (0.148) | (0.369) |
| Grad degree | 0.488 | −0.556 | 0.089 | 0.237 |
| | (0.338) | (0.746) | (0.173) | (0.407) |
| Knows House maj. party | 0.027 | 0.011 | 0.053 | 0.009 |
| | (0.106) | (0.217) | (0.054) | (0.121) |
| Recent turnout | −0.222 | −0.428 | −0.068 | −0.394 |
| | (0.138) | (0.384) | (0.070) | (0.218) |
| Constant | 1.703*** | 2.980*** | 0.047 | 0.242 |
| | (0.318) | (0.785) | (0.161) | (0.437) |
| Observations | 381 | 94 | 372 | 92 |
| $R^2$ | 0.246 | 0.292 | 0.190 | 0.235 |

*Note:* $^{*}$p<0.05; $^{**}$p<0.01; $^{***}$p<0.001