The Incumbency Advantage in U.S. Primary Elections[1]

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September, 2005

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Abstract

Using a new data set, we estimate the magnitude of the incumbency advantage in primary elections between 1910 to 2000. We find that an incumbency advantage, as estimated by the sophomore surge, of above 5 percentage points existed in primary elections even in the first decades of the twentieth century. The incumbency advantage in the primaries grew to approximately 15 percentage points by the end of 1990s. The growth of the incumbency advantage in the primaries occurred at least a decade prior to the growth of the incumbency advantage in the general elections. Among the southern and border states, the evidence suggests that the incumbency advantage grew primarily in the states which have been identified as intra-party factions.

1. Introduction

The incumbency advantage is a prominent feature of U.S. elections.[1] While the existence and growth of the incumbency advantage has been well documents for general elections for all levels of U.S. government, little is known about the incumbency advantage in primary elections. Even basic facts, such as whether an incumbency advantage exists in the primaries has not been well documented. The asymmetry in our understanding of incumbency advantage in primary versus general elections is somewhat surprising given that primary elections have existed for almost all state and federal offices below the presidency since the early decades of the twentieth century. Thus, in this paper we address basic questions about the primary incumbency advantage such does it even exist? If the incumbency advantage does exist in primary elections, then what is its magnitude in the primaries and did it grow at same time in the primaries as in the general elections?

Documenting the existence and patterns of the primary incumbency advantage may potentially provide insight into why the incumbency advantage is so prominent in U.S. electoral politics. Several explanations for the causes of an incumbency advantage can be tested using the primary election data. For example, claims that general election incumbency advantage was caused by factors such as the rise of casework (Fiorina, 1986; Cain, Ferejohn and Fiorina, 1987; King, 1991) or the growth of television (Prior, 2005) would suggest that the growth of the incumbency advantage in primary elections should occur at the same time as it did in the general elections.

Furthermore, the growth of the incumbency advantage in primary elections may help explain why competition has declined in primary elections over the course of the twentieth century. Direct primaries were originally thought to increase electoral competition in the U.S. by introducing competition in highly partisan areas (Key, 1949). Ansolabehere, et. al. (2005) provide evidence that primary elections may have served as an alternative to general election competition in the early part of the twentieth century, but that this is no longer the case. Furthermore, as Figure 1 illustrates, the overall decline in primary

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[1]The literature on the incumbency advantage is too large to cite fully here. See Gelman and King (1990), Cox and Katz (1996), and Ansolabehere and Snyder (2002) for reviews.

electoral competition is largely determined by the decline in competition in elections with an incumbent. The pattern in Figure 1 suggests that some type of incumbency advantage exists and has grown over time. In this paper we provide estimates of the magnitude of the incumbent electoral advantage.

This paper presents the first estimates of the magnitude of incumbency advantages in primary elections in statewide and federal elections from 1910 through 2000. We are able to do this by take advantage of a new data set of statewide and federal primary election results from 1910 to 2000. Previous studies of primary elections have focused on specific offices in narrow periods of time. With this new dataset we can trace the growth of the incumbency advantage for primary elections throughout the twentieth century.

We find robust evidence of that a primary incumbency advantage existed as far back as the 1910s. This result alone provides evidence counter to the claims that the incumbency advantage exists because of factors such as T.V. advertising or casework. Explanations of the incumbency advantage that rely on factors that emerged in the second half of the twentieth century cannot explain the primary election incumbency advantage, since these factors were not salient features of the political context when the incumbency advantage first appeared in the primary elections.

We also find evidence that the incumbency advantage in primary elections may have grown during the 1940s and 1950s, roughly 10 years before the growth of the incumbency advantage in the general elections. The difference in the timing of the growth of the incumbency advantages in the primary and general elections suggests either that the forces underlying the growth in the incumbency advantage differed between the primary and general elections or possibly that the incumbency advantage in the primaries helped facilitate the growth of the incumbency advantage in the general elections. The second case is briefly discussed in the conclusion. However, in either case, the growth of the incumbency advantage in the primary elections has remained a puzzle.

In a second set of analyses, we explore whether the increase in the primary election incumbency advantage may in part be explained by a decline in intra-party organizations. Strong intra-party organizations could provide information that would help voters to coordinate

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on a particular candidate independent of the candidate's incumbency status. Furthermore, strong intra-party organization would provide strong incentives for primary candidates to cater the various intra-party elites rather than exerting effort to cultivate personal votes. Thus, we would expect the magnitude of the primary incumbency advantage to negatively correlated with the strength of the intra-party organizations. In this version of the paper we identify states with strong party and/or factional organizations using Mayhew (1986) and Key (1949). Eventually we will use county level electoral data to identify the states with strong intra-party organizations and how the strength of these intra-party organizations varied over time.

There are a number of methodological and data availability issues with measuring the magnitude and changes in magnitude of the primary election incumbency advantage. Because of the variation in the number candidates competing in any given election and the absense of partisan cues, we cannot use the standard regression methods for estimating the primary incumbency advangate. Thus we estimate the primary election incumbency advantage using the sophomore surge. We also briefly discuss some alternative estimation methods that we are exploring. These methods tend to impose more structure on the estimations in order to identify the incumbency advantage.

The remainder of this paper will be divided into four sections. The next section will discuss the data and methods. Section 3 presents and discusses our estimates of the incumbency advantage in the primary elections using the sophomore surge. Section 4 presents some preliminary findings regarding how the changes in the incumbency advantage differed across states depending upon the strength of the intra-party organizations. The last section concludes with a discussion about how these results suggest that some link may exist between the incumbency advantage in the primary elections and the growth of the incumbency advantage in the general elections.

2. Data and Methods

American state and federal primary elections have been rarely studied owing to the elusiveness of the data. Most of the data available in state reports have until now not been gathered in a single database. In some states, especially before the 1950s, primary election

returns are available only from newspaper reports, as the state primaries were treated as private clubs and, thus, were not part of the official state election process.

Several projects over the years have assembled primary electoral returns for particular periods of time, offices, and regions of the country. Scammon and Wattenberg's *America Votes* provides primary election returns for governor, U.S. House, U.S. Senate and President from 1956 to the present. Several studies have examined trends in primary election competition for just one of these offices. On the U.S. House see Alford and Arceneaux (2000) and Gerber and Morton (1998); on the U.S. Senate see Westlye (1991); on governors see Berry and Cannon (1993); on state representatives see Grau (1981).

We have compiled the primary and general election returns for all statewide offices and for the U.S. House and Senate from 1900 to 2004 using official state election reports, state manuals, newspapers, and almanacs. This is the first data set to gather primary election data all of these offices for the entire twentieth century period. Ansolabehere et. al. (2005) provides a more detailed discussion of this primary election data set.

With our dataset of primary elections results aggregated by electoral race, we are able to estimate the incumbency advantage using the sophomore surge. The sophomore surge equals the change in the vote share from the election when a candidate won as a non-incumbent to the election when a candidate won as an incumbent. The sophomore surge for candidate i is simply:

$$S_i = V_{i1} - V_{i0} \tag{1}$$

where V_{i1} is the i's vote share in the first election after winning office and V_{i0} is i's vote share in the previous election where i was a challenger.[2]

The sophomore surge has the advantages of holding constant the quality of at least one candidate, the officeholder. Although this measure has been objected to by a number of scholars, in analyses of the general election incumbency advantage, this measure extremely highly correlated with other incumbency advantage measures. The sophomore surge is conjectured to be a conservative measure: Gelman and King (1990) criticize it for underestimating the

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[2]There is a difference between elections where the challenger faces an incumbent versus an open seat prior to becoming an incumbent. We include a covariate to account for this difference, which will be discussed below.

incumbency effect. A sizable sophomore surge in primary elections would then indicate the existence of a significant incumbency advantage.

Estimating the sophomore surge for primary elections has the additional complication that the number of candidates vary across elections and a large number of elections are uncontested, especially in the latter part of the twentieth century (see Figure 1).

To at least partially address the issue that the number of candidates vary across elections for the same districts, we include an additional covariate for which measures the change in the number of candidates. The assumption is that the sophomore surge will decline linearly in the number of candidates and the change in the number of candidates. To test whether the decline in primary vote shares is not linearly related to the number of candidates we also included a series of dummy variables for the number of candidates in each election. In fact, the relationship does appear to be roughly linear, and the estimated sophomore surge is essentially the same as in the more parsimonious model.[3]

A second data issue is that the incumbent is often not challenged, even in the incumbent's sophomore year. To address this problem we use a simple Heckman selection model for whether an incumbent faces a challenger or not. The variable that we use to help identify the selection model is the average number of primary candidates for various statewide offices during the ten years prior to the election of interest. The idea is that states with lots of primary competition in the elections prior to year t are more likely to have contested primaries in year t – these are states with easy ballot access laws, no strong party organizations discouraging entry, and so on – but, the primary competition for statewide offices in the years prior to t is not likely to be correlated with the electoral outcome for any particular election in year t.

Alternative Estimation Methods

We are also currently exploring alternative method for estimating the incumbency advantage that require several specification assumptions. For example we can assume that candidate i's vote share is purely a function of her quality, q_i, and whether or not she is an

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[3]We also include a covariate for the absolute number of candidates competing in the primary. The results presented below do not change when this additional covariate is included.

incumbent, I, then we can write her vote share in district r as:

$$V_{ir} = \frac{e^{(q_i + \theta I_{ir} + \epsilon_i)}}{\sum_k e^{(q_k + \theta I_{kr} + \epsilon_k)}} \tag{2}$$

The quantity of interest is θ which is our estimate of the incumbency advantage. Using the above specification, it would not be possible to identify θ without a measure of each candidates' quality. However, with the logistic functional form we can identify the θ using the log of the ratio of two candidates' vote shares. The log of candidate i's vote share can be expressed as follows:

$$log(V_{ir}) = q_i + \theta I_{ir} + log(\sum_k e^{(q_k + \theta * I_{kr} + \epsilon_k)}) + \epsilon_i \tag{3}$$

Since $log \sum_k e^{(q_k + \theta * I_{kr} + \epsilon_k)}$ is the same across districts, we can include race and individual fixed effects to identify the incumbency advantage, θ.

This estimation relies heavily on the functional form assumptions. In particular the functional form imposes a the strong independence of irrelevant alternatives (IIA) assumption. Nonetheless the logistic functional form is relatively standard in the political science literature on multi-party competition. (Of course, there are strong assumptions implicit in the sophomore surge as well.)

3. The Incumbency Advantage in U.S. Primary Elections

The estimates the incumbency advantage using the sophomore surge confirm that the incumbency advantage existed in the primaries long before it existed in the general elections. Table 1 presents the sophomore surge estimates aggregating by decade.

In the 1910s and 1920s, the estimated incumbency advantage hovered between 5 and 10 percentage points. This estimate is as large as the estimate of the incumbency advantage in general elections at the time that David Mayhew wrote *Congress: The Electoral Connection* in the mid-1970s. The incumbency advantage in general elections is estimated to be approximately 1 or 2 percentage points in the first two decades of the 20th Century (Gelman and King, 1990; Ansolabehere and Snyder, 2002). Again, note that the sophomore surge is likely

to underestimate the magnitude of the incumbency advantage, so the actual incumbency advantage in primary elections is likely to be larger than 5 to 7 percentage points.[4]

In any given decade, our estimate of the incumbency advantage in primary elections using the sophomore surge is larger than the standard estimates of the incumbency advantage in general elections. For example, at its peak in the 1980s and 1990s, the incumbency advantage for the general elections is estimated to be approximately 10 percentage points. Our estimates of the sophomore surge in the primary elections during this same period, which as noted above is likely to underestimate the incumbency advantage, is approximately fifty to one hundred percent larger than the incumbency advantage estimate for the general elections.

Furthermore, the sophomore surge did in fact grow at approximately the same time as the decline in primary election competition. Between the 1910s and the 1990s the sophomore surge increased from around 5 percentage points to approximately 15 percentage points. What is most striking about the growth of the sophomore surge in the primary elections is that the trend appears several decades before the growth of the incumbency advantage in the general elections. This trend in the primary election sophomore surge matches the decline in primary electoral competition illustrated in Figure 1.

The results are robust to whether we use candidates' vote shares as percentage of all the candidates or only the candidates that receive the top two vote shares.[5]

The sophomore surge estimates including the the uncontested primaries and using a Heckman selection model are presented in columns 3 and 4 in table 1.[6] The lagged number of contested primaries for all statewide offices in the previous ten year period, which is used in the selection equation, is a highly significant predictor of whether a primary election will be contested in the current period. The estimates of the sophomore surge using the

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[4]We also include a covariate for whether the candidate had an open-seat or faced an incumbent in the election prior to becoming an incumbent. The coefficient on this variable was negative, statistically significant at the 5% level and roughly 3 percentage points in magnitude. Thus not surprisingly, if an incumbent faced another incumbent inorder to win office then her sophomore surge would be smaller than the incumbents who won office through an open seat.

[5]We also included the lagged vote share of the incumbent in the analysis. The estimates of the sophomore surge were slightly larger, but the overall pattern and the substantively findings did not change.

[6]Some observations are dropped because the lag for the number of primaries contested in the previous period is not available.

Heckman selection model are similar to those excluding the uncontested races. The two main substantive points are still apparent in these estimates: (1) the sophomore surge is large in the early period; and (2) the sophomore surge grew prior to the 1960s.

The existence of an incumbency advantage in the primaries raises a number questions about why the general election incumbency advantage did not grown until the 1960s. The evidence of an incumbency advantage in the primaries which existed prior to the growth of the incumbency advantage in the general elections is consistent with the claims that the introduction of direct primary may have facilitated the growth of the general election incumbency advantage. The connection between the incumbency advantage in the general and primary elections is discussed in the conclusion.

Even if the incumbency advantage in the general elections is in some way connected to the primary elections, there is still the puzzle of why we observe a growth in the sophomore surge in the primary elections and why this growth was prior to the growth of the incumbency advantage in the general elections?

One potential explanation for the pattern of growth in the primary election sophomore surge is the decline of intra-party organizations. In an era of strong party organizations and machines, the party leadership may have been able to control the primary election process. Factions and local machines might have created "parties" within the parties, leaving little room for personal politics. As the local machines faded their factional voters lost important intra-party voting cues and candidates could no longer rely on the intra-party organizations for providing electoral support. (See, for example, Sorauf's (1964) account of the decline of the Pennsylvania machines in the 1950s and Mayhew's (2001) account of traditional party organizations). Thus, as party machines and factions weakened, competition within parties may have become less factional and more personal. The next section will address the possibility that the decline in party organizations can account for the rise in the incumbency advantage in primary elections.

4. Intra-Party Organization and the Incumbency Advantage

Again the basic intuition for how the strength of intra-party organizations may have contributed to rise in the primary incumbency advantage is that intra-party organizations

may have reduced the incentives for voters to focus on candidates personal characteristics and for candidates to cultivate personal votes. Strong intra-party organizations may have helped instruct party loyalists on how to vote in the primaries. Since incumbents could rely on the intra-party organizations for electoral support they did not have strong incentives to campaign on their personal characteristics, rather incumbents' electoral incentives were to please the intra-party elites.

To examine whether the decline of intra-party organizations may explain the rise of the incumbency advantage in primary elections, we first need to identify states and periods when state intra-party organizations were particularly strong. Since we currently do not have a direct measure of the strength of intra-party organizations over time, we utilize the classifications of state party organizations provided in Mayhew (1986) and Key (1949). At the end of this section, we briefly discuss a potential alternative measure of intra-party organization that we are developing.

We classify states with Mayhew TPO scores of 4 or 5 as having strong party organization states. With this indicator variable we can divide the sample between those with and without strong party organizations and examine whether the pattern of change in the sophomore surge differs between these two sub-samples. If strong party organizations reduced the salience of incumbency status in elections, then we should observe a larger sophomore surge for the states with low TPO scores as compared to states with the high TPO scores. We focus on the period between 1948 and 1970, as this was the period in which the Mayhew (1986) description of the party organizations is most applicable.

To test whether a decline in intra-party factions contributed to the rise of the incumbency advantage, we classified the factional states using the classification given in Key (1949) and other sources. However, since most sources only discuss factions in the southern and border states, we also only compare the sophomore surge between states in the South and that border the South.[7]

Table 2 presents the estimates of the sophomore surge in the states identified as having or not having strong party organizations. The results show that for period 1948 to 1970

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[7]The states identified as factional states include Georgia, Louisiana, North Carolina, Tennessee, Virginia, and Kentucky.

there is no difference between the sophomore surge in the states with strong versus weak party organizations. The coefficient on the variable measuring the strength of the state party organization is not significant. This evidence suggest that the decline in party organizations is not likely to explain the growth of incumbency advantage in the primaries.

Table 3 present the estimates of the sophomore surge for the factional and non-factional southern and border states. We estimate the change in the sophomore surge between the period 1930 to 1961 and the period 1962 to 2004. The results suggests that the pattern of change in the incumbency advantage differed between these two types of states. The sophomore surge is significantly larger in factional as compared to the non-factional states. In period 1930 to 1961 the sophomore surge in the factional and non-factional states was approximately 4 and 14 percentage points, respectively. In the period from 1962 to 2004, the sophomore surge in the factional states grew to 14 percentage points while the sophomore surge in the non-factional states remained relatively constant.[8] These results are consistent with the claim that the decline of intra-party factions may have influenced the growth of the incumbency advantage in the primaries. Factions may have provided a strong cue for voters and reduced the incentives for incumbents to cultivate their personal votes. These results are only suggestive. Further research is needed in this area.

Alternative Measure of Intra-Party Factions

Although we rely on Mayhew (1986) and Key (1949) to identify states with strong intra-party organizations, we are also currently constructing a measure of intra-party organization using data aggregated at the county level. Some of this data is available in ICPSR study 0071, *Southern Primary and General Election Data, 1920-1949*, which has country level electoral returns for southern primary elections between 1920 and 1949. We are also constructing a data set of county level primary election returns for other states and years.

If intra-party organizations were in fact influencing voters decisions in the primaries then we would expect to observe a strong correlation between the vote shares of particular candidates across the elections. If factions are very salient in a particular election, then the

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[8]The difference between in the sophomore surge within the factional states between the two time periods is statistically significant.

vote shares of candidates from the same faction should highly correlated. Similarly if party organizations are highly salient, then the vote shares of the candidates favored by the party organization should be highly correlated.

Using the correlation between candidates we should be able to identify not only those states with strong intra-party organizations but also the period in which the intra-party organizations are most influential in the primaries.

5. Conclusion

The incumbency advantage appears to be an even more prominent feature of the U.S. electoral landscape than previous studies would suggest. The incumbency advantage existed even further back in U.S. electoral history than is indicated by the analyses of the general elections alone. The difference in the date the incumbency advantage emerged in the primary versus the general elections only deepens the puzzle of why the incumbency did not appear in the general elections until the latter part of the twentieth century.

A number of scholars have suggested that existence and growth of the general election incumbency advantage may be linked to the introduction of the direct primaries (Mayhew xxx, pages xxx, Erikson xxxx, Fiorina 1975 xxx). The argument is that the primaries have made candidates' personal characteristics a salient component of elections. Since voters cannot use party labels or large ideological differences in primary elections, as they do in the general elections, primary election voters will evaluate candidates' based upon personal characteristics, such as their experience, their advertising, and their fame. Incumbents will learn to cultivate their personal reputations among their primary constituents. This skill will then be carried into the general election competition. If this logic is correct, then we would expect the primary election incumbency advantage to preceed the growth of the general election incumbency advantage, which is what we find in our analysis.

The timing of the growth of the incumbency advantage in the primary elections suggests that we can discount claims that the general election incumbency advantage led to the primary election incumbency advantage. The idea is that political parties acting as teams will want the incumbent not to be challenged in the primaries because the incumbent has an

advantage in the general election. If this were true, then the incumbency advantage should appear in the general elections either before or at the same time as the primary elections.

If the growth of the general election incumbency advantage is in some way a result of the forces underlying primary electoral competition permeating the general elections, then this still leaves open the question of why the primary incumbency grew in the 1940s and 1950s. Our preliminary evidence suggests that the decline of intra-party factions may have contributed to the growth of the primary election incumbency advantage but more research needs to be done on this and the other questions raised in this paper.

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	OLS		Heckman	
	(1)	(2)	(3)	(4)
$\Delta\#$ Candidates	-0.076	-0.010	-0.074	-0.011
	(0.003)	(0.002)	(0.003)	(0.003)
1910s	0.050	0.048		
	(0.015)	(0.014)		
1920s	0.062	0.047	0.066	0.075
	(0.011)	(0.010)	(0.020)	(0,022)
1930s	0.063	0.064	0.065	0.087
	(0.009)	(0.009)	(0.016)	(0.018)
1940s	0.084	0.080	0.087	0.105
	(0.010)	(0.010)	(0.018)	(0.020)
1950s	0.118	0.113	0.121	0.148
	(0.013)	(0.012)	(0.025)	(0.027)
1960s	0.100	0.092	0.102	0.127
	(0.013)	(0.013)	(0.027)	(0.030)
1970s	0.140	0.138	0.143	0.172
	(0.012)	(0.012)	(0.025)	(0.027)
1980s	0.140	0.130	0.150	0.169
	(0.014)	(0.013)	(0.028)	(0.030)
1990s	0.150	0.134	0.155	0.177
	(0.013)	(0.012)	(0.030)	(0.032)
Adj R^2	0.384	0.059		
Obs	1615	1583	4395	4395

Table 1: Sophomore Surge in Primary Elections Statewide and U. S. House, 1910 to 2000

The dependent variable in Model 1 and 3 is the change in vote-share between the freshman and sophomore elections. The dependent variable in Model 2 and 4 is the change in vote-share between the freshman and sophomore elections for the top two challengers.

	All	Top 2
Table 2: Sophomore Surge in Statewide and U. S. House Primary Elections in States With Strong Party Organizations		
Δ# Candidates	-0.074 (0.005)	-0.007 (0.005)
Strong Party Organizations	0.015 (0.018)	0.008 (0.017)
1940s	0.114 (0.015)	0.110 (0.015)
1950s	0.116 (0.013)	0.114 (0.013)
1960s	0.097 (0.014)	0.093 (0.014)
Adjusted R^2	0.348	-0.001
Observations	398	394

	All	Top 2
Table 3: Sophomore Surge in Statewide and U. S. House Primary Elections in Factional vs. Non-Factional States		
$\Delta\#$ Candidates	-0.076 (0.006)	-0.011 (0.007)
Factional State 1930 to 1961	0.038 (0.017)	0.037 (0.018)
Factional State 1962 to 2004	0.149 (0.021)	0.143 (0.021)
Non-Factional State 1930 to 1961	0.140 (0.020)	0.137 (0.020)
Non-Factional State 1962 to 2004	0.137 (0.019)	0.121 (0.019)
Adjusted R^2	0.399	0.082
Observations	288	285

Figure 1