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The Evolution of Legislative Tenure in the United States Congress: 1789-2004

Abstract – How has tenure evolved over the history of the United States Congress? A rudimentary analysis of both Senator and Representative tenure rates finds average legislative tenure to be constant for nearly ninety years, only to rise significantly in the late 1800s. An empirical breakpoint analysis isolates the most probable breakpoint in both time series. Possible causes of this shift are explored.

Keywords – Legislative tenure, legislature, political economy, breakpoint analysis, Congressional history

JEL Classification Code – H00

1. – *Introduction*

The United States Congress, in its current state, is undeniably distinct from its original form. Made up of career politicians and legislative professionals, today's Congress stands in stark contrast to the legislatures of the late eighteenth and early nineteenth century when political amateurs served in Congress for smaller numbers of terms. From these facts two questions emerge: 1) If Congress is different, when did such a change occur? and 2) What caused this shift?

These two inquiries will be the focus of this analysis. To be certain, these issues have been previously investigated – and not in short order. As such, the goal of this analysis is not to displace the extant literature on the topic, but rather to supplement what has been written with a new empirical technique to address the first question and a previously unexplored influence for the second question.

2. – *Previous studies*

Existing studies point to a range of possible times when the fundamental nature of the US Congress changed, and utilize a range of analytic techniques

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to arrive at their conclusions. Swain *et al.* [2000], Brookshire – Duncan [1983], Kernell [1977], and Fiorina – Rohde and Wissel [1975] all place the critical date sometime in the middle of the nineteenth century. Brady – Buckley and Rivers [1999] identify that careerism in the US Congress began 'well before' the turn of the nineteenth century and continued into the twentieth; their measures, in fact, could be construed as to imply the change beginning as early as the 1860s. Polsby [1968] shows a distinct rise in average tenure rates within the US House of Representatives occurring sometime during the second half of the nineteenth century, whereby Price [1975] notes that while the stability of the Senate increased after Reconstruction, the U.S. House of Representatives did not experience a similar settling until after the election of 1896. This particular election, and its impact upon the nature of holding a position within the legislature, has received a large amount of attention from political scholars as a crucial date [see SCHATTSCHNEIDER, 1956, CLUBB *et al.*, 1980, BRADY, 1985, and BRADY, 1988, among others] in the history of the US Congress.

3. – *A critical analisys of data*

In isolating a critical date by which the nature of Congress changed, a host of metrics have emerged. Turnover rates are a popular measure, which provide the percentage of freshman legislators in any given Congress [see, for example, SWAIN *et al.*, 2000, STRUBLE, 1979, as well as POLSBY, 1968]. Other research has used the average number of terms served by in-office legislators [POLSBY, 1968], and more creative metrics such as 'percent replacement' [Fiorina *et al.*, 1975] and 'career coefficient' [Brookshire – Duncan, 1983].

This analysis utilizes the average amount of years of service accrued by legislators in each chamber of Congress – average accrued tenure, or AAT. While none of the measures above are flawless (note that the average number of terms served is effectively equal to the number of years served), there are a couple of reasons to believe that this particular dataset allows for a best analysis of the issues at hand. First, whatever the ultimate cause(s) of the shift in the nature of Congress, this effect generates a fundamental change in the way that congressmen behave. While turnover rates, career coefficients and percent replacement calculations are all indirectly related to the behavior of legislators, the average amount of a legislator's accrued tenure is a more direct measure of that legislator's individual behavior. Furthermore, assuming that turnover rates, career coefficients and percent replacement apply to all legislators in a uniform manner at all times can lead to faulty conclusions. Consider turnover rate as an example. Conclusions based upon a rising or falling rate of turnover can be misleading, as the legislators leaving office may not always come from the same location in the

distribution of experience within the legislature. Should the least-experienced members always receive the 'turning over', the aggregate experience of the legislative body will continue rise (independent of age constraints, changing turnover rates and the like); should the most experienced legislators consistently leave office, the aggregate experience of the group will reach an equilibrium level (again, *ceteris paribus*). The same general principle holds for percent replacement and career coefficient; at issue is the nature by which these broad figures apply across the distribution of legislators in any particular Congress.

A similar argument applies to using average accrued tenure – that the figure misses the particular subtleties, or dispersion, of the group [BROOKSHIRE – DUNCAN, 1983]. To be certain, a legislative body with a membership of individuals that all have five years of experience is different in actuality, but not statistically, than a legislative body that has one half of its membership holding ten years of experience and the other half of its membership holding no experience at all. What rectifies this problem is a measure of dispersion; describing changes in average accrued tenure while considering the dispersion of tenure helps assuage concerns about similar average tenure rates masking vastly different underlying distributions. However, this analysis provides exactly that metric – a Gini coefficient of accrued legislative tenure throughout the history of the US Congress – by which to verify the nature of what the average accrued tenure figure actually implies.

Figure 1a – *Average accrued tenure, 1789-2004*

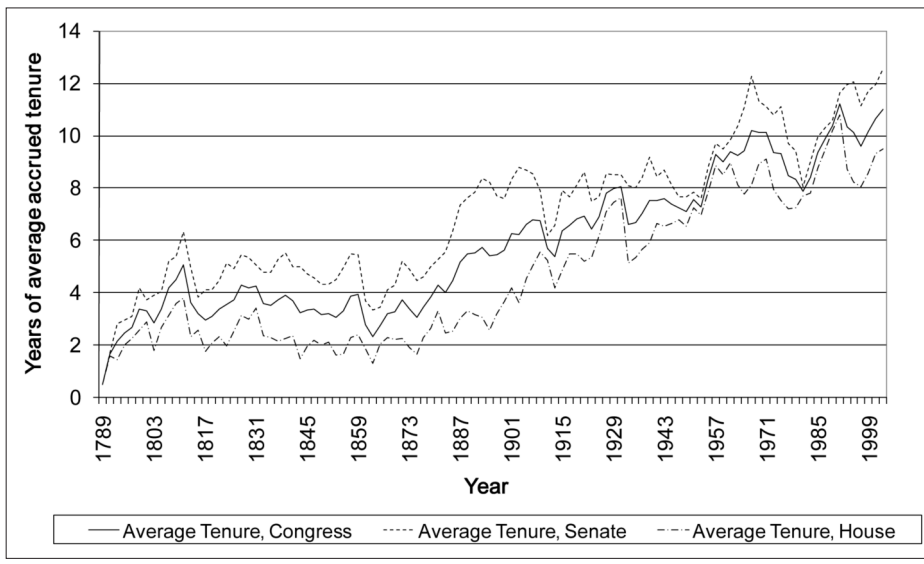


Figure 1a displays the average tenure rates for United States Representatives and Senators from the inception of Congress until 2004[1]. In order to calculate the average tenure rates of United States Representatives and Senators, total years of accrued tenure for every Representative and Senator from every state for every year for the entire history of the United States was gathered from the Biographical Directory of the United States Congress. 'Accrued tenure' is the total number of years previously served within the chamber of the United States Congress in which the legislator serves in year *t*. The analysis utilizes 68,244 annual Representative-level accrued tenure values, and 16,542 annual Senator-level accrued tenure values, to derive the average amount of accrued tenure across Representatives and Senators for each year throughout the history of the United States Congress.

Legislators serving discontinuous terms retained their previous experience; for example, a Senator serving exactly one full term, leaving office and then resuming Senatorial service began the second term with six years of accrued tenure. Representatives or Senators holding different seats within the same chamber retained their accrued tenure as well; for example, a Senator alternating between the two allotted seats within a state, or a Representative serving two or more districts within the same state.

Visual analysis of Figure 1a show that tenure rates have evolved within the United States Congress over two distinct periods throughout American history. The first period, from the inception of Congress in 1789 through the 1870s, exhibited fairly constant average tenure rates amongst both Representatives and Senators; average Representative tenure over the first eighty years of Congress hovered around two years, and average Senator tenure remained at approximately five years. However, during the 1870s, the second period of Congressional tenure emerges, characterized by steadily increasing rates of average tenure for both Representatives and Senators. From a stationary average tenure rate of roughly two years, average Representative tenure increased to an all-time high in 1992 of over eleven years, and was at ten years in 2004. Similarly, average Senator tenure increased from a stationary value of five years to thirteen years by 2004.

[1] Note that the first value in Figure 1a occurs in 1793; the 1st Congress assembled in 1789. Each year value is a five-year running average; therefore, the value at 1793 is a five-year average of the average tenure rates from 1789-1793. The adjustment is for visual purposes only and does not distort the time trends presented in any substantive manner. Subsequent econometric analysis utilizes the original, un-smoothed time series.

Figure 1b – *Gini coefficient of accrued tenure for U.S. Congress, 1789-2004*

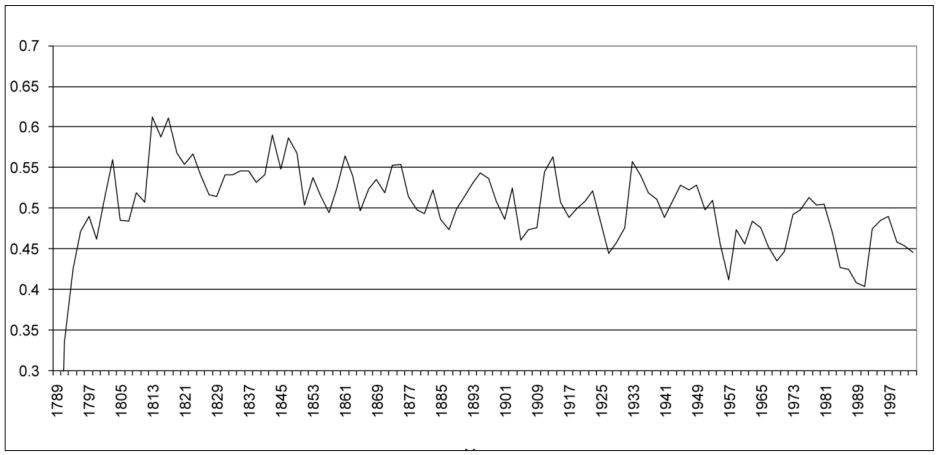


Figure 1b shows the dispersion of tenure, by year, throughout the history of the U.S. Congress[2]. Recall from above that a simple average measure of accrued tenure may overlook the nuances of the underlying distribution of seniority within any given Congress. This series provides exactly that information. Interestingly, the dispersion of tenure within Congress, after reaching a peak in the late 1810s, seems to avoid any significant trend over any time period – a remarkable fact considering increases in average amounts (*i.e.*, countries with increasing per capita GDP) also tend to have increases in dispersion (*i.e.*, increasing Gini coefficients of income). If anything, dispersion in Congress has trended slightly downwards over the last two centuries. The rise in tenure amongst legislators beginning in the late 1870s is not an artifact of misleading statistical measures, such as the repeated electoral success of a few members pulling up the overall average. Instead, the rise in average tenure reflects more upon the increase in average tenure of the legislative body as a whole. The previously argued shortcomings in using average accrued tenure are ill-founded.

4. – *Breakpoint analysis*

Given the nature of the first half of this analysis – when did the change occur? – incorporating an empirical process by which to statistically isolate

[2] For an explanation of the Gini coefficient, see Gini [1912] – Lorenz [1905].

the most likely break in a time series is appropriate. A visual analysis of the time series in Figure 1a is useful as a starting point; however, the objectivity of breakpoint analysis is attractive in selecting a year *prior* to investigating possible causes as compared to first finding potential influences and then massaging Figure 1a to fit the explanation. As such, I estimate the following model in order to isolate a single breakpoint for the time series of average U.S. Congressman tenure rates:

$$Tenure_{it} = \alpha + \beta_1\tau_t + \beta_2 Senate_i + \beta_3 [year_t \cdot \tau_t] + \beta_4[Senate_i \cdot year_t \cdot \tau_t] + \varepsilon_{it} \quad [1]$$

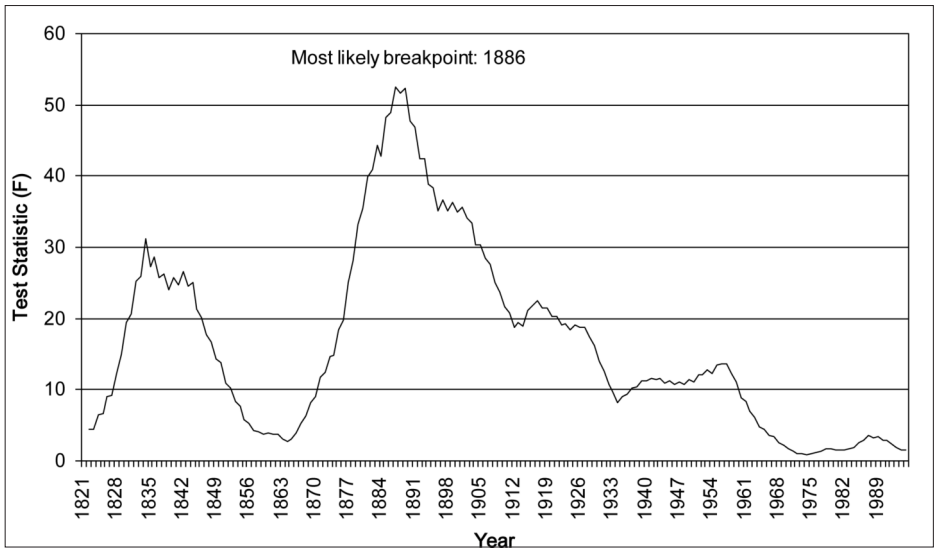
where *Tenure* represents the average years of accrued tenure in Congressional chamber *i* across all United States Congressmen in year *t*. Since the analysis focuses on shocks to legislative activity in general, the empirical model effectively combines both Senator and Representative tenure measures into a single time series. *Senate* allows for separate levels of tenure, as Figure 1a proves necessary, while imposing the same breakpoint upon both time series. τ is a time trend. *year* is a dummy variable having value 0 for every year prior to year *t* and having value 1 for year *t* and every year after year *t*. For example, in the regression estimating 1860 as the most likely year in which the break in the series occurs, the dummy variable takes the value 0 for every year prior to and including 1859, and takes the value 1 for every year after and including 1860. *year* represents the hypothesized year that the structural break in *Tenure* occurs; the model is then estimated over a range of all potential years to find the most likely year in which the break took place. By visual analysis of Figure 1a, the range of interest for possible breakpoint years appears to fall between 1850 and 1890, though the test still takes every year from 1821 to 1994 into consideration[3].

5. – *Breakpoint results*

Figure 2 displays the results for the single breakpoint analysis on the United States Representatives and Senators tenure time series, comparing the hypothesized year with the corresponding F-statistic of the test of $\beta_3 = \beta_4 = 0$. Per Andrews [2003], the iteration with the highest F-statistic is the most likely single breakpoint in both time series. In estimating the above breakpoint regression, the most likely breakpoint in the time series for United States Representatives and United States Senators is 1886. Again,

[3] General convention for breakpoint analysis is to perform the test on data that has already reached a steady state prior to a theoretical break; as such, data prior to 1821 are dropped. The results herein are not dependent on the exact position of this inclusion date.

Figure 2 – *Breakpoint significance, 1821-1994*



per Andrews [2003], the significance of the breakpoint is well beyond the critical value for 99% ($p < 0.01$).

6. – *Possible explanations for the changes*

Previous explanations for the changes in legislator behavior fall across a number of possible influences. While not specifically Congressional, a number of studies have isolated increases in salary in state legislatures as inducing longer careers [SQUIRE, 1988; ROSENTHAL, 1974; STONECASH, 1993; CALVERT, 1979 and OXENDALE, 1979]. Incumbency advantage could also play a role in increasing the time spent by legislators in office, though this particular explanation appears to be a twentieth century phenomena [ROSENTHAL, 1989; JACOBSEN, 1987, and MAYHEW 1974]. Ansolabehere, Snyder and Stewart [2000] investigate incumbency advantage from the late nineteenth century to the late twentieth century and find incumbency advantage to largely be a function of the 'personal vote', while Carson, Engstrom – Roberts [2007] and Cox – Katz [1996] attribute incumbency advantage to candidate quality. Redistricting also plays an important role in determining legislative tenure [CARSON *et al.*, 2006], as does the declining incidence of retirement [GILMOUR – ROTHSTEIN, 1996]. Increasing the stability of a legislature will correspondingly increase the value of holding

office [PRICE, 1975 – POLSBY, 1968], thereby creating a feedback cycle by encouraging legislator to pursue additional terms of service; the emergence of the seniority system in determining committee chairmanships contributes to the stability theory as well [PRICE, 1975; HOLCOMBE – PARKER, 1991]. The expanding role of the federal government through American history could also play an important role [HUMMEL, 1996 – DONALD, 1978].

While the list of possibilities is lengthy and not mutually exclusive – and the discussion of their merits is longer still – this analysis looks to present a heretofore overlooked influence on the sudden and marked rise in legislative tenure in the U.S. Congress. Squire [1988] notes that legislators' propensity to remain in office are a function of advancement opportunities and financial incentives. More fundamentally, the decision to pursue additional terms is a decision based in rational economic calculation, or weighing costs and benefits. In other words, as the benefits of holding office rise, legislators will choose to pursue additional terms in office; conversely, as the costs rise, legislators will choose to pursue fewer terms.

This general model of legislator behavior applies to a vast range of potential influences on the costs and benefits of holding office. From above, an enhanced incumbency advantage increases the expected benefits of pursuing additional terms of service; thus, the expected effect is a rise in the pursuit of additional terms in office. The same effect occurs with increased stability of the legislature as a whole or the increased use of redistricting.

Concerning the legislator's individual cost/benefit calculus, one advantage of holding office comes from a legislator's ability to direct benefits to his constituents. This action can come in two broad forms: taxing and spending (*i.e.*, direct fiscal benefits to his constituency), and through regulation (*i.e.*, non-monetary favors to his constituency). The legislator, in turn, benefits directly through the rent-seeking activity of interested constituents, and indirectly by holding office for longer periods of time through serving these entrenched special interests. Ultimately, by serving interests, the legislator serves himself.

The ability of the legislator to serve interested parties changed drastically in the latter part of the nineteenth century. Anderson – Hill [1980] investigate the impact of the Supreme Court throughout its first two centuries and its role in encouraging either a) productive economic activity, by solidifying property rights and aligning the self-interest of the individual with the welfare of society as a whole, or b) promoting transfer activity, whereby individuals can benefit through takings that generate individual gains at the expense of others, which ultimately results in a reduction of society-wide welfare. The authors identify a fundamental shift in constitutional interpretation beginning in 1877 with *Munn v. Illinois*, a case concerning the ability of the Illinois legislature to set grain storage rates. Munn & Scott, grain

warehouse operators, sought to charge rates of their own choosing for the storage of grain. In turn, the state of Illinois argued that the warehousemen were 'engaged in public employment', and as such, their services were subject to regulation by law [MUNN V. ILLINOIS, 1887].

The agreement of the Supreme Court with the state of Illinois' interpretation of private property in light of public use was crucial towards modifying the Constitution's stance on property as a whole. Property is used for market transactions, either itself (*i.e*., a bushel of grain) or as a means of providing other goods and services (*i.e*. a warehouse by which to store grain for future transactions). Market transactions involve voluntary participation between agents; insofar that property involved in exchange involves more than one individual – either a transfer of ownership or a venue for transactions – nearly all property can be viewed as 'public' in nature, by the arguments of the state of Illinois (see also Justice Field's dissent in *Munn v. Illinois* below). Previous to *Munn*, owners of private property decided how to allocate their assets; property may be accessible by and privy to transactions between a large portion of a community, but ownership was never mistaken for frequency of use.

The majority opinion in *Munn v. Illinois* highlights this new understanding of private property. Chief Justice Morrison Waite wrote:

«When, therefore, one devotes his property to a use in which the public has an interest, he, in effect, grants to the public an interest in that use, and must submit to be controlled by the public for the common good, to the extent of the interest he has thus created. He may withdraw his grant by discontinuing the use; but, so long as he maintains the use, he must submit to the control».

The submission of property owners to the will of the legislature is the lasting precedent of *Munn v. Illinois*. Anticipating the impact of establishing property to this perception of 'public use', Justice Stephen Johnson Field highlights the exact implications of the Court's decision in his dissent:

«If this be sound law, if there be no protection […] all property and all business in the State are held at the mercy of a majority of its legislature. The public has no greater interest in the use of buildings for the storage of grain than it has in the use of buildings for the residences of families. […] The public is interested in the manufacture of cotton, woolen, and silken fabrics, in the construction of machinery, in the printing and publication of books and periodicals, and in the making of utensils of every variety, useful and ornamental; indeed, there is hardly an enterprise or business engaging the attention and labor of any considerable portion of the community, in which the public has not an interest in the sense in which that term is used by the court in its opinion […]».

Munn v. Illinois legitimized the regulation of any private property that could be classified as 'in the public interest', and, in doing so, provided legislatures – both state *and* national – the ability to intervene into markets much further than previously allowed. As such, the foundations for regulation were established.

The *Munn* decision headlines a group of lawsuits known as the Granger cases, a series of eight lawsuits that dealt with the ability of states to regulate the railroad industry in addition to grain storage. Building upon this regulatory momentum, Congress established the Interstate Commerce Commission through the Interstate Commerce Act of 1887, which became the blueprint by which future regulatory agencies were modeled after.

The timing of *Munn*, as it pertains to the rise in legislative tenure, is striking. Recall that the most likely breakpoint in the tenure series occurs in 1886, but a few election cycles following the Munn decision in 1877. Similarly, the subsequent steady rise in tenure rates is buttressed by the ensuing Granger cases and the larger regulatory climate inherent in the 'private property for public use' belief system. *Munn v. Illinois* and its place in allowing for the regulation of the economy must be considered as a probable cause for the initial rise in legislative tenure that began in the 1880s.

7. – *Conclusion*

This analysis explores two broad questions concerning the United States Congress. First, given that Congress is fundamentally different today when compared to its original membership, when did such a striking change most likely begin to occur? Second, what caused such a change? Building on an extensive previous literature addressing both of these issues, a new empirical method of analyzing time series data places the most likely breakpoint in the average accrued tenure series at 1886. The emerging role of regulation in the last quarter of the nineteenth century appears to be a previously overlooked influence on the behavior of legislators.

While it is unlikely that the debate concerning the evolving nature of the U.S. Congress will ever be conclusively settled, new insights on an important topic are essential. As such, this exploration adds a new wrinkle – empirically and theoretically – to an oft-debated subject.

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