

Only 34% of the 382 incumbents who ran in 1974 were opposed in the primaries, and only 85% in the general election. Only 40 of these incumbents were defeated in the general election.

The probability of reelection for an incumbent has remained high in recent years, and the downturn in percent reelected in the 1970's (Appendix table 1) is due primarily to the decline in the fraction of congressmen who run.¹

The influence of compensation on tenure is not easy to establish. The comparison of annual salaries of congressmen with average earnings of lawyers is partly congruent with the trend of tenure: congressional salaries ran at about double lawyers' earnings from 1930 to the late 1950's, and then fell persistently to a

¹The summary figures for the House are as follows

	Percent Who Ran in Primary or General <u>Election</u>	Percent Reelected of Those Who Ran ^a
1958	91.0%	89.6%
1960	93.3	92.1
1962	94.3	90.0
1964	90.6	87.3
1966	94.9	87.7
1968	92.9	98.0
1970	91.5	95.2
1972	90.3	93.4
1974	89.7	87.7
1976	88.3	95.8
1978	87.8	93.7
1980	91.4	90.9

a) in primary or general elections.

Source: Statistical Abstracts.

low ratio (about 1.4) in the late 1970's. The average tenure of congressmen lagged this pattern by more than a decade, for it peaked in 1970, or about 14 years after their salaries began to decline persistently relative to lawyers' earnings (see Figure 2). The direct comparison of average tenure and relative earnings is dominated by the trends in both series.¹ The data are presented in Appendix Table 4.

We have accordingly examined several components of congressional choice. The percent of congressmen who run for reelection, as we have noted, has been falling: it was 92.8% in 1954-58 inclusive and 88.6 in 1974-78 inclusive. Over this short period (the data are not easily compiled for earlier years), the association of percent who ran for reelection and relative salary is mildly positive ($r = .400$). In addition special attention was devoted to the members who have served 2-4 terms, on the assumption that long term congressmen would be unresponsive to changes in relative earnings. We accordingly examined the number of congressmen who, having served 2-4 terms, remained in office for the next three terms, as a function of salaries relative to lawyer's earnings; but the correlation between relative salaries and time in the period 1934-1974 is so high ($r = -.93$) that the effect of relative salaries on tenure of these "younger" congressmen cannot be isolated.

¹The relationship between the two series when we use first differences in tenure is, for 1932 through 1976:

$$\begin{aligned} \text{Change in Average Tenure} &= -48.3 + 1.800 \text{ centered 3-term relative salary} \\ &\quad (\text{terms}) \qquad \qquad \qquad (t=2.24) \\ &\qquad \qquad \qquad + .0237 \text{ time (election year)} \\ &\qquad \qquad \qquad \qquad \qquad \qquad (t=1.99) \end{aligned}$$

$$R^2 = .202; N=23$$

The influence of salaries (relative to lawyers' earnings) on tenure can also be examined in the state data.¹ Here we find a strong influence of salaries, for example

Average Percent of
Legislators Reelected, = 63.1 + 6.34 Average Salary, 1970-76; $R^2=.294$
1968-76 (excl. 1972) (t=4.19)

Similar results hold for the 1964-70 period and (more weakly) for 1950.

We can explore one other element of the lawyer-legislator comparison. There is some evidence that the relative earnings of lawyers at age (say) 55 to earnings at age 40 has fallen substantially over time the age-earnings profile has become flatter.² Hence relative to lawyers the compensation of legislators has risen with tenure. It is doubtful that the difference in profiles is sufficient to contribute much to the explanation of recent changes in legislative tenure.

The effect of relative salaries on tenure is not one that is intuitively obvious in its direction. Lower legislative salaries should decrease the quality of candidates who seek these posts, if we measure this quality by what potential candidates can earn elsewhere, but why should it shorten the tenure of those already in the legislature? One obvious hypothesis to explain the effect on tenure is that the first one or two terms provide a higher rate of return in future years after

¹Percentages of total legislators reelected, by state, were supplied by Alan Rosenthal, Director, Eagleton Institute of Politics, Rutgers University.

²In 1936, the estimated ratio of earnings of independent lawyers of ages 45-64 to those of lawyers aged 35-44 was 1.27; in 1954 the ratio had fallen to 1.16, and in 1959 to 1.09 (based on U.S. Department of Commerce Survey of Current Business, April 1938, p. 16 and Dec. 1956, p. 36, and U.S. Bureau of the Census, Census of Population, Final Report, PC(2)-7E, "Characteristics of Professional Workers," table 10).

leaving the legislature--the first years provided the basic knowledge on governmental procedures and personnel or the primary political prominence, whichever is being sought. We are not able to test this hypothesis.

We are left with the central puzzle in any event: why did the public demand more experienced representatives over the last century, and why has this demand weakened in recent years and, as a special instance of this puzzle, why does it differ among states?

2. The Demand for Experienced Representatives

A natural hypothesis to explain the rise in tenure of legislators is that it is associated with the growing importance of government in the lives of citizens. One version would have us seeking more experienced representatives to devise and control the vast programs of government. Another, and perhaps more persuasive version associates the need for experience in legislatures with the vast increase in the dealings of individual constituents with the federal government. Citizens have dealings with welfare programs, social security, the veteran bureau, public health programs, educational programs, tax issues, and so on. Even small businesses now have dealings with the Small Business Administration, OSHA, environmental protection, equal opportunity laws, tariffs, energy programs, etc. The experienced representative becomes an efficient means of getting action, and often favorable action, from a vast, impersonal, remote government.¹

One indication of this agency-ombudsman role is the vast increase in the staffs of congressmen. In 1979 the budget of a typical congressman, excluding his salary, was about \$520,000, including provision for office and staff in his home constituency. His permissible

¹Morris P. Fiorina has been a leader in urging this position; see Congress - Keystone of the Washington Establishment (New Haven: Yale Un. Press, 1977), and with B.E. Cain and J.A. Ferejohn, "The Roots of Legislator Popularity in Great Britain and the United States," Soc. Science Working Paper 288, Oct., 1979, Cal. Inst. of Techn.

staff had grown from 1 in 1893 to 2 in 1919 to 3 in 1939 to 18 at present. The servicing of the needs of constituents has become a major task of legislators. Of course these staffs also allow the legislator to maintain closer supervision of the administration.

Although the increases in legislative tenure and the relative size of government have been broadly similar in the past century, that is hardly a proof of causality, or, what is much more important, a guide to which governmental activities have generated the demand for experienced representatives. We have made two investigations of this problem.

The first goes back to an earlier period when recourse to the national state by economic interest groups was much less extensive. In the opening decade of this century, the federal government was already moderately active in a variety of regulatory matters (transportation, public lands, agriculture, banking, food and drug inspection, for example), but the largest and oldest form of economic regulation was the protective tariff. The tariffs of the period covered manufacturing generally (usually excluding food manufacturing) and a few agricultural products (sugar, wool, cotton).¹

We have calculated the fraction of the labor force in each state which was in these protected areas in 1900,² and compared it with

¹The tariff revenues by individual product and two-digit class are reported in U.S. Census Office, Abstract of the Twelfth Census, 1900.

²The relevant agricultural labor force is crudely estimated by the proportion of value of protected products to all agricultural products.

the average tenure of congressmen. The relationship for 44 states is as follows:

$$\begin{array}{l} \text{Av. Tenure,} = 2.654 + .03145 \text{ Percent of Labor Force in} \\ \text{1900-1910} \qquad \qquad \qquad (\text{t}=3.27) \qquad \qquad \qquad \text{Protected Fields; } R^2=.203 \end{array}$$

This loose test is fairly favorable to the hypothesis: the longer tenure congressmen were on average in states with large manufacturing and tariff interests.¹

Our second, and more elaborate, study is directed to the differences across states in their legislative tenures and the sizes of their governmental activities. The measurement of the role of government in our lives is a difficult, indeed an unsolved, problem. Students of the problem usually take governmental expenditures (including or excluding transfers) as the measure of governmental activity, but expenditures are not even a good measure of direct governmental performance. Putting aside the uneasy question of transfer payments,² expenditures ignore or understate activities such as ownership of land and conscription of soldiers, and equate dollars spent on activities which greatly alter private activities (such as EPA) and those which are essentially a direct substitute for private expenditures (maintenance of airports). Moreover, expenditures virtually ignore the vast regulatory programs which hardly affect the federal budget -- such as the activities of the ICC, the SEC, and the like.

¹The relationship by state between the average tenure of congressmen and senators was appreciably positive in this period, and lower in recent times. This raises an interesting question of the differences in their constituencies.

²Aid to Dependent Children is a transfer, but if the mothers were hired as public employees to care for their children, the expenditure would be exhaustive.

These difficulties in measuring regulatory activity by states cannot be overcome as an incident to testing the tenure hypothesis. As a pis aller a series of crude measures of regulatory activity has been investigated:

1. State revenue¹, the state pattern of which is fairly stable over time, (1937, 1950, 1967 with and without local governments, 1974) both in absolute per capita dollars and as residuals from an equation on state income and its square.
2. State welfare expenditures per capita (1937, 1950, 1967, 1974).
3. State expenditures per capita on regulation (1967, 1974).
4. Number of occupations licensed (1950, 1967).

The data are reported in Appendix Table 5. The per capita total and regulatory expenditures are moderately correlated (.4 for 1967-74 average); per capita total and welfare expenditures are somewhat correlated ($r = .2$ for 1967-74 average); numbers of licensed occupations are not correlated with the expenditure series.

The only one of these measures that is regularly and significantly correlated with mean terms served by state legislators is welfare expenditure per capita. This finding suggests but not very persuasively

¹Revenues are used rather than expenditures since the latter is highly volatile in the short run.

that so far as the population at large is concerned, only direct spending programs are influential on legislative tenure.¹

3. Tenure of Business Executives

There is a sharp difference in the working life profiles of legislators and business executives. The executives, as we shall see, have usually spent long periods in their companies in lesser roles whereas the legislators usually have little or no previous non-legislative experience with the particular level of government in which they serve. The congressmen usually have had extensive political experience in state or local politics, however.² As a result, the lifetime association of the typical chief executive of a large company is several times the tenure of the average legislator. We have made a modest study of the patterns of experience of business executives partly to provide a comparison with legislative patterns but also because of their intrinsic interest.

We sent a questionnaire to a substantial number of (the appropriate officers of) large corporations, inquiring on the

¹Average percent reelected, 1968 through 1976 (excl. 1972) =

61.1 + .128 per capita welfare expenditure, aver. of '67 & '74;
(t=3.20) $R^2 = .196$, N = 44 (continental) states with data.

²A study of a random sample of 300 congressmen serving between 1966 and 1970 reveals that:

- 103 had served in state legislatures
- 106 had held other state or local government elective or appointive offices
- 32 had held party offices
- 7 had held other federal offices
- 52 had had no previous political experience

tenure of past and present executives, and received a high response.¹ Our requests for information were for 1977, 1960, and 1930 (where available) tenure of the chief executive and of the three officers immediately below the chief executive. The mean period of service and the number of observations are reported for these various categories in Appendix Table 6.

The average tenure of executives in 1930 is much influenced by the ages of the corporations in which they served. If we base the average tenures only on those corporations in existence at least 20 years at the given time, the rate of growth over time of tenure of chief executives becomes more modest before 1960, and disappears thereafter:

<u>Chief Executive</u>	<u>Average Tenure</u>	
	<u>50 Largest Industrial Corporations</u>	<u>All Corporations</u>
1930	27.6	26.7
1960	32.4	29.8
1977	32.0	28.8

The average tenure of executives ranked 2-4 shows no trend at all, once this change is made.

¹The groups included:

- i. The 50 largest industrial companies; 44 responding
- ii. The 50 largest banks; 31 responding
- iii. The 50 largest transportation companies; 22 responding
- iv. The 50 largest public utilities; 33 responding
- v. 50 industrial corporations, ranked 451-500 in 1977; 30 responding

We find a modest positive association between the total tenure in the firm of the chief executive of a corporation and its size measured by employment.¹ This association offers a modicum of support for the view that long congressional tenure is more essential to the maintenance of popular control over the governmental machinery than it is to the ombudsman-special pleader role for constituents.²

¹For all (160) corporations, the correlation coefficient of tenure and logarithm of employment was .228 in 1977 for the chief executive and .268 for executives 2-4. The relationship is strong only for large industrial corporations.

²Some details and analyses of the business executive tenures are given in a separate appendix.

Appendix Table 1
 Average Terms of Service, Congress
 and Six State Legislatures, and
 Percent Reelected, Congress

<u>Election Year</u>	<u>U.S. CONGRESS, HOUSE</u>			<u>U.S. Congress, Senate</u>	<u>6-State Weighted Average</u>
	<u>Average Terms of Service¹</u>	<u>Percent reelected of all Members²</u>	<u>Percent reelected of those who ran³</u>	<u>Average Years of Service⁴</u>	<u>Average Terms of Service⁵</u>
1980*	4.90	83.1%	90.9%	7.7	n.a.
1978	5.00	82.3	93.7	8.6	-
1976	5.09	84.6	95.8	9.7	3.42 ^a
1974	5.31	78.6	87.7	10.4	-
1972	5.65	84.4	93.4	9.9	3.36 ^b
1970	5.94	87.1	95.2	10.5	-
1968	5.78	91.0	98.0	10.3	3.40
1966	5.45	83.2	87.7	10.7	-
1964	5.31	79.1	87.3	10.2	3.28 ^c
1962	5.65	84.8	90.0	8.8	-
1960	5.65	86.0	92.1	8.7	3.37
1958	5.37	81.6	89.6	8.2	-
1956	5.58	89.4	94.9	8.6	3.31
1954	5.19	87.1	93.6	7.5	-
1952	4.69	80.5	-	7.0	3.21
1950	4.73	85.1	-	7.0	-
1948	4.42	77.7	-	7.1	2.87
1946	4.34	75.9	-	6.6	-
1944	4.50	84.2	-	8.1	2.99
1942	4.22	77.1	-	8.2	-
1940	4.24	83.0	-	8.0	2.54
1938	3.91	74.5	-	8.3	-
1936	3.84	77.3	-	7.8	2.22
1934	3.71	76.6	-	7.7	-
1932	3.67	62.8	-	7.7	2.00
1930	4.48	81.0	-	7.5	-
1928	4.49	82.3	-	7.7	2.29
1926	4.26	86.7	-	7.0	-
1924	3.93	83.7	-	6.5	1.85
1922	3.57	72.9	-	6.6	-
1920	3.69	76.4	-	7.1	1.72
1918	3.74	77.3	-	6.8	-
1916	3.83	84.0	-	6.5	1.60
1914	3.44	72.8	-	6.1	-
1912	3.14	65.6	-	5.0	1.49
1910	3.62	69.5	-	5.4	-
1908	3.84	80.1	-	6.9	1.48
1906	3.61	77.5	-	7.7	-
1904	3.48	79.0	-	7.9	1.49
1902	3.10	68.7	-	7.8	-
1900	3.11	75.6	-	7.6	1.41

Appendix Table 1 (continued)

<u>Election year, by decades</u>	<u>U.S. CONGRESS, HOUSE</u>		<u>U.S. Congress, Senate Average Years of Service⁴</u>
	<u>Average Terms of Service¹</u>	<u>Percent re-elected of all Members²</u>	
1890	2.44	56.2	7.2
1880	2.56	68.2	4.6
1870	2.11	53.5	3.9
1860	1.83	46.1	5.0
1850	1.84	46.7	3.8
1840	2.30	62.3	4.0
1830	2.59	62.0	4.2
1820	2.23	54.8	2.6
1810	2.83	61.5	3.4

Footnotes to Appendix Table 1

¹ Average terms of service, including current term, whether served continuously or interrupted.

Sources: 1810 through 1962, Polsby, Nelson W., "The Institutionalization of the U.S. House of Representatives," The American Political Science Review, Vol. LXII, No. 1, March, 1968; Congressional Directory in other years.

² Estimated through 1952 from 100 less percent serving first-term ever. Prior to 1914, percent reelected is understated to the extent that first-termers are serving in newly-added seats. This is especially true in the elections immediately after the Civil War, and after those post-Census reapportionments involving large increases in the total number of seats: for the elections of 1902 and 1912, for example, percentages reelected from the previously existing seats were 74.3 and 73.2 respectively. On the other hand, prior to 1954, percentages reelected are overstated as a result of the inclusion of some returning members whose prior service was not in the immediately previous congress. Discontinuous service was more common in the earlier years of our series; thus our rough estimates indicate that the latter bias approximately cancels the former in most years, leaving a negligible increase in the steepness of the trend in percent reelected prior to 1954. Source: 1810 through 1952, same as note 1. 1954 and after, Statistical Abstract, 1979.

³ Percent reelected in the general election of those who ran in the primary or general election. Source: Statistical Abstracts.

⁴ Average years of service, not including current term (for which, add an average of approximately four years) whether served continuously or interrupted. Source: Randall B. Ripley, exc. 1970 & '78, Congress. Dir.

⁵ Mean terms estimated quadrennially for lower houses of state legislatures: Cal., Conn., Mich., N.Y., S.C., and Wisc., weighted by their respective numbers of members. Mean terms defined as average number of two-year terms, whether served continuously or interrupted, including the current term. For N.Y. prior to 1938, when legislators served one-year terms, data have been adjusted to two-year term equivalents, i.e. each one-year term has been counted as a half-term.

Sources: 1892 through 1968 for Conn. Mich. and Wisc.: Ray, David, "Membership Stability in Three State Legislatures: 1893-1969", American Political Science Review, March, 1974; figures adjusted to include current term.

All other figures are from manuals for the state indicated.

*1980 figures are based on information from The Chicago Tribune, Nov. 6, 1980, and the Congressional Research Service

Footnotes to Appendix Table 1 (continued)

- a) 1976 is not available for S.C.; figure shown here is an average for Cal. (1974) and Conn., N.Y., Mich. and Wisc. (1976).
- b) Legislature elected in 1970 for Cal., S.C. and Mich.; the average tenure for the five states (excluding S.C.) available in 1976 (see "a" above) is 3.37.
- c) Legislature elected 1962 for Conn.

Appendix Table 2

Reelection of Legislators and Reapportionment

	<u>U.S. Congress, House</u>		<u>Equally Weighted Average of State Legislatures*</u>	
	<u>Seats Redistricted</u>	<u>Seats Not Redistricted</u>	<u>States Redistricted</u>	<u>States Not Redistricted</u>
1964 % reelected	72.5%	82.4%	52.9%	65.0%
Number of Cases	205	230	22	23
1966 % reelected	84.3	87.8	50.3	63.9
Number of Cases	69	366	33	13
1968 % reelected	90.6	92.5	64.8	68.8
Number of Cases	197	238	9	37
1970 % reelected	88.7	88.9	69.5	67.2
Number of Cases	203	232	2	44
1972	a	a	a	a
1974 % reelected	82.6	79.7	62.1	66.9
Number of Cases	62	373	13	33
1976 % reelected	b	b	64.4	71.9
			5	41

*46 states with information available.

a - Post-Census year; omitted as redistricting was almost universal.

b - Omitted as only 3 redistricted congressional seats.

Note: It is apparent that redistricting had a strong effect upon legislative tenure in the early 1960's but by the end of the decade the dominant parties had mastered the reapportionment process. Incumbents were again being reelected as often with changed district lines.

¹See American Enterprise Institute, Reapportionment, by Terry B. O'Rourke, 1972, p. 57ff.

Appendix Table 3

Comparison of Average Prior Service
and Percent of All Members
Reelected, U.S. and U.K.

<u>Election Year</u>		<u>Average Prior Service (Years)</u>		<u>Percent of All Members Reelected</u>	
<u>U.S.</u>	<u>U.K.</u>	<u>U.S.</u>	<u>U.K.</u>	<u>U.S.</u>	<u>U.K.</u>
1978	1979	8.00	9.7	82.3%	78%
1974	1974 (Oct.)	8.62	9.0	78.6	93
	1974 (Feb.)	-	-	-	80
1970	1970	9.88	9.4	87.1	75
1966	1966	8.90	9.4	83.2	86
1964	1964	8.62	9.7	79.1	77
1958	1959	8.74	9.3	81.6	84
1954	1955	8.38	9.2	87.1	88
1952	1951	7.38	8.08	80.5	88
1950	1950	7.46	7.33	85.1	67
1944	1945	7.00	5.33	84.2	26
1934	1935	5.42	8.08	76.6	65
1930	1931	6.96	5.96	81.0	56
1928	1929	6.98	6.17	82.3	65
1924	1924	5.86	4.92	83.7	64
	1923	-	4.96	-	67
1922	1922	5.14	5.08	72.9	47
1918	1918	5.48	6.25	77.3	35
1910	1910 (Dec.)	5.24	6.6	69.5	90
	1910 (Jan.)	-	-	-	57

Notes to Appendix Table 3

Sources:

Average prior service: U.S. - figures in Appendix Table 1, average tenure, in terms, for U.S. House of Representatives; converted to average years of prior service for comparability with U.K. figures.

U.K. - 1918 through 1951: J. F. S. Ross, Elections and Electors, Eyre & Spottiswoode (London: 1955), p. 400ff. Dec. 1910: biographical information in Debrett's House of Commons, Dean & Son (London: 1912). 1966 and 1970: biographical information in Andrew Roth, The M.P.'s Chart, Parliamentary Profile Services Ltd. (London: 1967 and 1971 resp.). 1955, 1959, 1974 (Oct.) and 1979: biographical information in Charles Dod, Dod's Parliamentary Companion, Business Dictionaries Ltd., (London) appropriate volumes. 1964: biographical information in Andrew Roth, The Business Background of M.P.'s, Parliamentary Profile Services Ltd. (London: 1965).

Percent reelected: U.S. - Appendix Table 1.

U.K. - 1910 (Jan.), 1918 through 1924, 1935 through 1951: Michael Rush, "The Members of Parliament" in S. A. Walkland, The House of Commons in the Twentieth Century, Clarendon Press (Oxford: 1979). 1929, 1931, 1959, 1966, 1970, 1974 (Feb. and Oct.): The Times, House of Commons (London) appropriate volumes. 1910 (Dec.), 1955, 1964, 1979: biographical information in sources for average prior service, above.

*15th Century: 3.6 prior years. Based on History of Parliament: Biographies of the Members of the Commons House 1439-1509 compiled by Josiah C. Wedgewood, 1936, London, H.M.S.O.

Appendix Table 4

Average Salary of Congressmen,
1855-1979 and Average Earnings
of Lawyers, 1929-1976

Year	Salary of Congressmen			Estimated Law Partners' Earnings** Current Dollars
	Annual Salary	Salary per day in Session*		
	Current Dollars	Current Dollars	Constant Dollars	
1979	\$62,660 ^a	-	-	n.a.
1978	57,500	\$179.5	\$ 91.3	\$51,622
1977	57,500	-	-	49,642
1976	46,800	170.1	99.8	46,704
1975	44,600	-	-	44,910
1974	42,500	132.0	89.3	41,095
1973	42,500	-	-	38,354
1972	42,500	123.5	98.6	36,842
1971	42,500	-	-	33,601
1970	42,500	140.3	120.6	31,320
1969	42,500	-	-	28,990
1968	30,000	120.7	115.9	27,820
1967	30,000	-	-	26,850
1966	30,000	97.7	100.5	24,220
1965	30,000	-	-	23,390
1964	22,500	103.6	111.5	21,690
1963	22,500	-	-	20,660
1962	22,500	71.9	79.3	19,000
1961	22,500	-	-	18,500
1960	22,500	82.6	93.1	16,643
1959	22,500	-	-	16,771
1958	22,500	91.5	105.6	15,410
1957	22,500	-	-	15,188
1956	22,500	95.9	117.9	14,252
1955	22,500	-	-	13,334
1954	15,000	107.9	134.1	12,939
1953	15,000	-	-	11,848
1952	15,000	55.1	69.4	11,381
1951	15,000	-	-	11,170
1950	15,000	63.4	88.0	10,533
1949	15,000	-	-	10,055
1948	15,000	45.8	63.5	10,097
1947	15,000	-	-	9,382
1946	12,500	42.1	72.0	8,769
1945	12,500	-	-	8,655
1944	10,000	45.1	85.6	8,205
1943	10,000	-	-	7,500
1942	10,000	28.8	59.0	6,973

Appendix Table 4 (continued)

Year	Salary of Congressmen			Estimated Law Partners' Earnings** Current Dollars
	Annual Salary Current Dollars	Salary per day in Session*		
		Current Dollars	Constant Dollars	
1941	\$10,000	-	-	6,048
1940	10,000	28.1	67.0	5,686
1939	10,000	-	-	5,539
1938	10,000	32.0	75.8	5,391
1937	10,000	-	-	5,655
1936	10,000	46.4	111.8	5,543
1935	10,000	-	-	5,389
1934	9,250 ^b	49.3	122.8	5,321
1933	8,500	-	-	4,879
1932	9,000	63.9	156.3	5,243
1931	10,000	-	-	6,421
1930	10,000	64.1	128.2	6,553
1929	10,000	-	-	6,981
<u>1925-1929</u>	10,000	56.2	107.2	
1915-1925	7,500	40.1	84.5	
1905-1915	7,000 ^b	36.8	132.9	
1895-1905	5,000	32.7	127.6	
1885-1895	5,000	27.3	104.6 ^c	
1875-1885	5,000	29.4		
1865-1875	5,250 ^b	31.2		
1855-1865	3,000	19.5		

(See over for footnotes)

Footnotes to Appendix Table 4

- * Estimated, for the full Congress to which elected in year shown at left, as salary in first session multiplied by (2/total days Congress was in session); constant dollar figures are deflated by Consumer Price Index, 1967 = 100, for year shown at left.
 - ** Average net income plus payments to partners, 1961 and after; estimated from changes in earnings of all lawyers prior to 1961 -- see sources below.
- a. effective Oct. 1979.
 - b. average value.
 - c. 1888-1895.

Sources: Congressional Salary, 1855-1934, Congressional Quarterly, Guide to Congress, 2nd. edition (1976) and Congressional Research Service; 1935-1964, Statistical Abstract of the United States, 1975; 1965 and after, Congressional Research Service.

Law partners' earnings: 1971 through 1977, Internal Revenue Service, average partners' net income plus payments to partners; 1961 through 1970, B. Peter Pashigian, The Market for Lawyers: The Determinants of the Demand for and Supply of Lawyers, The Journal of Law and Economics, Vol. XX(1), April 1977, appendix table B1 (based on IRS); 1960 and earlier, B. Peter Pashigian, combined earnings of proprietors and partners (based on IRS and Department of Commerce figures) linked to partners' earnings in 1961. 1978 estimated from average rate of change for previous two years. Prof. Pashigian warns that lawyers' earnings are probably biased upward in the pre-WW II period.

Appendix Table 5

Basic Data on State Revenue and Regulatory Activity

	State Government Revenue (per capita) ¹			Welfare Expenditure (per capita) ²		Regulatory Expenditure (per capita) ³	Number of Occupations Licensed ⁴
	1937	1950	aver. of '67&'74	1967	1974	aver. of '67&'74	1967
Ala	\$20	\$62	\$378	\$36	\$69	\$1.96	28
Ariz	52	94	431	23	37	3.49	37
Ark	16	67	369	42	78	2.12	39
Cal	47	113	484	76	170	5.00	55
Colo	38	104	445	50	94	2.58	38
Conn	34	74	403	35	95	3.19	50
Dela	46	106	616	31	83	2.65	35
Fla	30	82	354	21	47	3.32	42
Ga	14	58	378	30	85	1.58	36
Ida	37	86	438	30	68	5.39	38
Ill	25	63	393	36	141	3.04	50
Ind	29	72	359	11	46	1.24	n.a.
Iowa	33	87	408	27	56	2.79	40
Kans	23	89	376	26	71	2.20	29
Kent	21	57	416	38	74	2.38	41
La	37	135	484	58	84	3.28	45
Me	35	78	417	33	118	3.40	37
Mary	29	75	429	31	101	2.79	n.a.
Mass	33	77	437	50	190	2.99	31
Mich	39	95	463	32	151	2.53	59
Minn	40	88	512	32	90	2.58	47
Miss	20	60	402	36	84	2.93	n.a.
Mo	22	69	322	37	69	2.00	28
Mont	39	96	451	22	65	3.58	36
Neb	22	66	334	26	65	3.75	41
Nev	73	130	525	25	57	7.32	37
N.H.	35	73	298	19	71	3.40	38
N.J.	33	50	346	18	112	4.10	39
N.M.	57	111	586	40	77	3.29	42
N.Y.	38	86	537	47	183	5.78	43
N.C.	27	71	385	20	49	1.81	32
N.D.	28	95	550	34	52	4.05	36
Ohio	36	68	304	34	75	1.91	36
Okla	32	111	432	83	105	2.35	29
Ore	39	107	440	31	85	4.67	43
Pa	35	64	402	28	125	2.34	41
R.I.	32	77	447	53	162	2.58	45
S.C.	19	61	385	14	49	2.70	38
S.D.	33	88	411	29	68	3.25	35
Tenn	17	67	337	25	62	2.09	40
Tex	29	63	335	26	66	1.93	32
Ut	46	99	470	31	64	3.49	40
Ver	32	80	571	39	127	4.19	31
Va	23	66	372	11	67	2.70	46
Wash	44	129	503	44	112	4.61	28
W. Va.	31	71	459	35	63	3.06	n.a.
Wisc.	32	81	486	27	101	3.15	42
Wyo.	58	117	614	19	44	3.05	39

(See over for footnotes)

Footnotes to Appendix Table 5

1. State revenue from all sources including federal aid. Sources: U.S. Department of Commerce, Bureau of the Census, Statistical Abstract, various years; Advisory Commission on Intergovernmental Relations (ACIR), State and Local Government Finances, Nov. 1968; U.S. Department of Commerce, Bureau of the Census, State Government Finances, 1967 and 1974.
2. Direct state public welfare expenditure plus state aid to local governments for welfare. Sources: See Note 1.
3. Expenditures on protective inspection and regulation, n.e.c. Source: U.S. Department of Commerce, Bureau of the Census, State Government Finances, 1967 and 1974.
4. Council of State Governments, Lexington, Ky.: Occupational Licensing Legislation in the States, June, 1952; Occupations and Professions Licensed by the States, Dec., 1968.

Appendix Table 6

Tenure in His Corporation (in Years) of Chief Executive,
and of Executives Ranked Two Through Four, as of
1977, 1960, and 1930* (Number of Corporations
Reporting in Parentheses)

A. Chief Executive

	<u>Industrials</u>					
	<u>50 Largest</u>	<u>Ranks 451-500</u>	<u>Banks</u>	<u>Trans- portation</u>	<u>Utilities</u>	<u>Total</u>
1977	32.0 (44)	25.5 (30)	26.6 (31)	25.2 (22)	27.8 (33)	27.9 (160)
1960	30.6 (43)	24.6 (21)	28.8 (29)	22.9 (19)	31.2 (32)	28.5 (144)
1930	21.8 (39)	22.7 (7)	21.8 (23)	20.8 (11)	22.9 (23)	22.0 (103)

B. Average of Executives Ranked Two Through Four

1977	26.9 (44)	20.2 (30)	23.1 (31)	23.7 (22)	25.3 (33)	24.1 (160)
1960	27.7 (41)	20.4 (18)	25.4 (27)	21.6 (18)	25.6 (32)	25.0 (136)
1930	22.0 (34)	a	14.9 (19)	24.5 (9)	20.9 (19)	19.9 (86)

*Fifty largest corporations unless otherwise indicated.

^aFewer than seven firms reporting.

SOURCE: See text.

Supplement: The Tenure of Business Executives

A substantial number of the largest business corporations in the United States were canvassed by mail for information on the tenure of their leading executives. Fifty companies were solicited in each of the five classes reported in Table A; the number which responded is also indicated. The survey was made in 1977 and 1978, and data were requested for 1977, 1960, and (where available) 1930. The means and standard deviations of the reported tenures are given in Table A for each group for the three dates.¹

The differences between the mean tenures of executives in the various industry groups have been tested, and we find:

- i. The 1977 mean tenures of chief executives in their present jobs do not differ significantly across industries, except that the executives in smaller industrial corporations have substantially longer terms.
- ii. The differences in corresponding means are even less important in 1960 and 1930, when only the small transportation sample differs from some other groups.²

¹In general these data are available publicly (for example, in reports to the SEC), but collection from the firms helped to determine predecessor companies in the frequent case of corporate reorganization. The firms were also better able to indicate the ranking executives.

²The means of tenure of second executives in their current jobs differ on much the same pattern, but even less.

Table A

Mean Tenure and Standard
Deviations for Business Executives,
as of 1930, 1960 and 1977

Category:	1. Chief Executive		
	<u>1930</u>	<u>1960</u>	<u>1977</u>
Largest Industrial Corporations:			
Mean tenure	7.65	7.68	5.84
Standard deviation	7.37	5.69	4.51
Number of executives	34	41	43
Industrial Corporations Ranked 451-500:			
Mean tenure	8.33	7.43	9.70
Standard deviation	8.98	7.59	7.14
Number of executives	6	21	30
Largest Public Utilities:			
Mean tenure	9.91	5.78	6.85
Standard deviation	7.34	5.38	4.98
Number of executives	22	32	33
Largest Transportation Corps:			
Mean tenure	6.12	10.53	6.19
Standard deviation	3.52	7.18	5.02
Number of executives	8	17	21
Largest Banks:			
Mean tenure	9.25	6.44	6.10
Standard deviation	10.41	4.83	3.64
Number of executives	20	27	31

Table A, continued

Category:	2. Executive #2		
	<u>1930</u>	<u>1960</u>	<u>1977</u>
Largest Industrial Corporations:			
Mean tenure	5.37	5.45	4.09
Standard deviation	4.65	4.51	2.72
Number of executives	30	40	43
Industrial Corporations Ranked 451-500:			
Mean tenure	5.00	6.33	6.03
Standard deviation	5.38	4.54	4.65
Number of executives	5	18	30
Largest Public Utilities:			
Mean tenure	8.26	4.97	4.12
Standard deviation	7.62	5.20	3.21
Number of executives	19	32	33
Largest Transportation Corps:			
Mean tenure	5.12	7.50	4.86
Standard deviation	4.64	3.85	3.24
Number of executives	8	16	22
Largest Banks:			
Mean tenure	8.22	5.93	4.77
Standard deviation	9.63	5.20	2.93
Number of executives	18	27	31

Table A, continued

Category:	<u>1. Chief Executive</u>		
	<u>1930</u>	<u>1960</u>	<u>1977</u>
Combined large industrials, public utilities, & banks:			
Mean tenure	8.72	6.74	6.22
Standard deviation	8.21	5.38	4.41
Number of executives	76	100	107
	<u>2. Executive #2</u>		
Combined large industrials, public utilities, & banks:			
Mean tenure	6.96	5.42	4.30
Standard deviation	7.16	4.90	2.93
Number of executives	67	99	107

- iii. The total tenure in all positions of chief executives is appreciably longer in the largest industrial corporations than in all other categories.
- iv. Executives in banks and public utilities never differ significantly in mean tenure.

We conclude that, given the size of our samples, the differences among industries are minor and can be neglected for a first examination.

It is an interesting question whether the companies display well-defined patterns of tenure, either over time or across executives of different rank. Our general findings are that there are not strongly defined patterns:

- i. The correlation between average tenure as chief executives in 1977 and 1960 is zero ($r = -.08$).¹
- ii. The correlation of total tenure in the company of chief executives and second executives is .265 in 1977 and .287 in 1960; the correlation is less for chief executives with executives numbers 3 and 4.²
- iii. Comparisons with 1930 are dominated by the age of a company, to which we now turn.

¹Restricted to companies established prior to 1929.

²Restricted to companies established prior to 1909.

A prototype example of the effect of corporate age on tenure in the company of the chief executive is provided by the regression equation for all large companies pooled (t-values in parentheses):

$$\begin{array}{l} \text{total tenure (1977)} = 7.12 + .506 \text{ Age} - .00270 \text{ Age}^2 \quad R^2 = .104 \\ \qquad \qquad \qquad (2.16) \qquad \qquad (1.53) \qquad \qquad \qquad N = 130 \\ \\ \text{total tenure (1960)} = -2.73 + 1.011 \text{ Age} - .00714 \text{ Age}^2 \quad R^2 = .214 \\ \qquad \qquad \qquad (3.64) \qquad \qquad (2.72) \qquad \qquad \qquad N = 123 \\ \\ \text{total tenure (1930)} = -0.345 + 1.012 \text{ Age} - .00897 \text{ Age}^2 \quad R^2 = .367 \\ \qquad \qquad \qquad (3.60) \qquad \qquad (1.92) \qquad \qquad \qquad N = 96 \end{array}$$

Thus the dependence of total tenure on corporate age has been falling and is now fairly small. The effect of corporate age on tenure on this job for the chief executive is small but significant.

The traditional measure of success of a business executive is profits, so we have examined the relationship of tenure of the chief executive to the fortunes of the stockholders. One measure of these fortunes is the change in the value of the common stock shares plus (reinvested) dividends, taken from the CRSP tape.¹ We have asked a double question of these data: is tenure associated with either the level or changes in the level of returns to the stockholders? In general we separate the industrial corporations because we expect different price-earnings ratios than in (say) public utilities. A sample of the regressions is reproduced in Table B. The results are

¹Center for Research in Security Prices, University of Chicago Graduate School of Business.

almost uniformly negative with respect to stockholder returns: only twice in this list of 21 regressions is the sign of the level of profitability positive and the coefficient mildly significant. The inverse relationship of tenure to size of firm, however, is consistent.

The few cases in which the coefficient of profitability has the right sign (chiefly the pooled data in Table B, part 2 for 1977 and the longer period regressions for large industrials) usually lack statistical significance. Of course one can think of reasons for this lack of association, for example that the primary determinants of corporate profitability are factors other than the abilities of the executives, so their contribution should be measured against a much narrower possible range of performance.

The one result in keeping with our expectations arose when we used completed tenure of chief executives of large industrial corporations. In this case

$$\begin{aligned}
 &\text{Completed tenure} = \text{constant} \\
 &\text{(1960 or later)} \\
 &\quad + .109 \text{ ratio, value of stockholder's} \\
 &\quad \quad \quad \text{equity: } 1965/1950^1 \\
 &\quad \quad \quad (t = 3.10) \\
 &\quad - 1.67 \log_e \text{ employment (1960)} \\
 &\quad \quad \quad (t = 1.75) \\
 &\quad \quad \quad \text{with } N = 36, R^2 = .247
 \end{aligned}$$

The difficulty of discovering completed tenure for all executives prevented us from extending the analysis to other groups.

A full investigation of the intriguing question of why most of the results seem perverse is not undertaken, but we did explore one

¹The coefficient on stockholder returns falls to .082 (t = 1.57) if an outlier, Boeing, is omitted.

direction in which the effects of non-managerial influences could be reduced: by concentrating on one industry. The industry we chose was petroleum refining, because it is an industry with many large firms (28) reported for 1967-76 on the CRSP tape. For example,

Mean tenure,

Chief executive, 1977 = constant

- .260 ratio, value of stockholder's
equity, 1976/1967
(t = .24)

+ .122 \log_e employment (average 1960)
(t = .13) and 1976)
with N = 28, $R^2 = .003$

The main result, a non-significant negative relationship between mean tenure and stockholder experience, holds also for shorter periods of experience.

Table B

Tenure on the Job of Chief Executives
and Stockholder Experience
Part 1. Selected Industry Groups

Dependent Variable	Rate of Return		Size of Company (Log _e of Employ- ment)	R ²	n
	Period	Coefficient (& t-value)			
<u>1960 Tenure:</u>					
Large Industrials	1950-59	.182 (1.82)	-2.59 (2.35)	.173	34
	1955-59	-.465 (0.65)	-.882 (0.88)	.042	37
	(1955-59) less (1950-54)	-.614 (2.49)	-2.22 (2.24)	.238	34
Large Public Utilities	1950-59	.149 (0.24)	-1.46 (0.97)	.050	21
	1955-59	.273 (0.24)	-1.45 (1.09)	.047	27
	(1955-59) less (1950-54)	-.512 (0.25)	-1.20 (0.78)	.051	21

Table B, Part 1, Selected Industry Groups
(continued)

Dependent Variable	Rate of Return		Size of Company (Log _e of Employment)	R ²	n
	Period	Coefficient (& t-value)			
<u>1977 Tenure:</u>					
Large Industrials	1960-76	.426 (2.29)	.817 (1.09)	.119	42
	1967-76	-.302 (0.64)	-.788 (0.99)	.028	43
	1972-76	.068 (0.08)	-.639 (0.77)	.018	43
	(1972-76) less (1967-71)	.204 (0.29)	-.577 (0.70)	.020	43
Large Public Utilities	1960-76	-.663 (1.16)	-1.45 (1.31)	.107	27
	1967-76	-1.02 (0.92)	-2.62 (2.13)	.150	30
	1972-76	-2.35 (1.50)	-2.35 (2.05)	.190	31
	(1972-76) less (1967-71)	-2.21 (2.60)	-1.59 (1.40)	.300	30

Table B, (continued) Part 2, Pooled Industry Groups^a

Dependent Variable	Rate of Return		Size of Company (Log _e of Employment)	R ²	n
	Period	Coefficient (& t-value)			
<u>1960 Tenure:</u>					
Large Industrials, Industrials ranked 451-500, utilities & transportation corps	1950-59	.068 (0.63)	-.632 (0.75)	.093	71
	1955-59	-.570 (0.96)	-.263 (0.36)	.080	81
	(1955-59) less (1950-54)	-.606 (2.00)	-.770 (0.97)	.140	71
<u>1977 Tenure:</u>					
Large Industrials, Industrials ranked 451-500, utilities & transportation corps	1960-76	.144 (1.50)	-.433 (0.70)	.245	94
	1967-76	.101 (0.28)	-1.42 (2.14)	.170	107
	1972-76	.360 (0.85)	-1.31 (1.99)	.152	111
	(1972-76) less (1967-71)	.208 (0.69)	-1.40 (2.14)	.173	107

(See over for note a)

