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*The Dynamics of the "Revolving Door" on the FCC**

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Previous studies consider the revolving door to be a static concept. However, the impact of the revolving door may vary over a regulator's career; that is, the revolving door may be dynamic in nature. Both static and dynamic models are tested using data on the Federal Communications Commission (FCC) covering the years 1955 through 1974. Probit analysis indicates that elements of the static version of the background and the dynamic version of the exit parts of the revolving door hypothesis are supported. Controls for other commissioner characteristics, presidential influences, and congressional influences are added to the model. Support for the hypothesis is weakened in the face of the controls, as presidential and congressional influences are uncovered. Further researchers should be aware of the multiple influences on regulatory decision making when developing theories of regulatory behavior, as political influences may be more important than interest group influences.

Introduction

Both political scientists and economists have asserted that interest groups have considerable influence over the decisions of regulatory bodies. One mechanism to explain interest-group influence is the "revolving door" hypothesis. The hypothesis asserts that regulators with prior employment in the regulated industry will be more supportive of the industry than those without industry experience. Further, the prospect of a future job in the regulated industry is another incentive that promotes support for the regulated industry. However, though the hypothesis has received much attention (Kohlmeier, 1969; Fellmeth, 1970; Krasnow, Longley, and Terry, 1982), it has only occasionally been tested with systematic data (Gormley, 1979; Eckert, 1981; Quirk, 1981).

Gormley's (1979) paper is the best analysis of the revolving door to date. He links industry background to commissioner voting behavior, which is crucial to test the hypothesis directly. He also raises the issue of spurious effects by noting the importance of party affiliation as a predictor of commissioners' voting behavior. However, he only considers the entrance side of

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the hypothesis, and his design obviates the possibility of a multivariate design. In this paper I clarify some conceptual issues related to the hypothesis, test both the entrance and exit sides of the hypothesis, and present a design that allows a multivariate framework.

The Revolving Door Hypothesis

There are two sides to the revolving door hypothesis. The entrance side suggests that regulators with prior industry experience support the regulated industry more than regulators without industry experience. This is a classic statement of the theory of background impact on elite behavior, and though the literature in other settings, such as legislatures and courts, has not found background to be very powerful (Putnam, 1976), the little systematic evidence on regulatory bodies suggests a significant role for this background variable (Gormley, 1979).

The exit side of the hypothesis suggests that the lure of a lucrative job in the regulated industry after tenure as a regulator ends will lead the regulator to support the industry. The process at work may be either (1) payment by the industry or (2) the regulator's view that tenure on the regulatory body is an investment in pursuit of an industry career (Eckert, 1981). Whichever process is at work, a pro-industry bias results. Only scant support for the exit hypothesis exists. Eckert reports on the employment patterns of regulators on three commissions—only 20 percent find direct employment in the regulated industry. From interviews, Quirk (1981) finds that regulators do not feel that their level of support will affect their chances for an industry job. However, neither study linked postemployment patterns to the behaviors of regulators.

There has been some conceptual confusion in the literature that has affected the kinds of tests proposed. Primarily, most of the conceptual work assumes that the entrance and exit patterns are static factors that affect the regulators the same way throughout their careers. However, entrance and exit patterns may vary in impact across regulators' careers.

In its commonest form, the entrance version posits that regulators coming from the industry to the agency will behave differently from those not coming from the industry. Further, it is assumed that these differences are constant and persist over the course of the regulator's tenure. For such a relationship to hold, no other factors can operate on the policy differences of the two classes of regulators. If no other factors have an impact, then any cross-sectional design is an adequate test. But it is not entirely reasonable that no other factors have an impact. In fact, the exit side of the hypothesis raises the issue of another factor, postemployment. If regulators without previous industry employment see their tenure on the regulatory body as a stepping stone into the industry, the policy differences between regulators with and without industry experience may be narrowed.

Further, other factors, such as the newness of the regulatory experience and small-group dynamics, may also narrow the policy distances between the two classes of regulators. Regulatory experience is new to most regulators (Eckert, 1981; Mitnick, 1980). One may expect new members to seek cues about behavior, and perhaps even policy decisions, from veterans. This is especially likely if the veterans and freshmen have the same status, such as on a multimember board or commission. Veterans may help socialize new members into the regulatory environment. Also, the close and personal interactions of the commission form of government (usually 3 to 11 members) may increase conformity pressures, as new commissioners try to avoid poor personal and working relations with the other commissioners. These processes may lead to decisional convergence between regulators with and without industry experience.

This has important implications for testing the hypothesis. Any random cross-section may misinterpret the impact of past experiences. A cross-section taken early in the regulators' tenure may overstate the behavioral impact of past experience, while a cross section taken later in the career may understate the importance of background. A proper test must include the possibility of both the static and dynamic versions of the entrance hypothesis.

Similarly, the exit version can be viewed both statically and dynamically. The static exit model suggests that support for the regulated industry is repaid with a job in the regulated industry. Those who get industry jobs are assumed to have been more supportive of the industry than those who do not get industry jobs. This may be because those who get industry jobs do so purposively—throughout their regulatory careers they are supportive of the industry. Thus the exit model may be viewed statically, that is, as a constant factor across regulatory careers.

But regulators may desire an industry career only after they see their tenure on the regulatory body ending and they begin searching for a new job. Therefore, in the ending phases of their regulatory careers, regulators seeking jobs in industry may posture themselves by increasing their support for the industry. While new on a commission, with years of work ahead, commissioners may not be overly concerned about which career comes next. However, if they are concerned, and they are using their governmental employment to secure a job in private industry, as Eckert (1981) argues, the static model may be more appropriate. In any case, a design using only cross-sectional data obviates the possibility of uncovering any dynamic properties.

Data and Study Design

The data base for the present study consists of all non-unanimous votes taken on the FCC between 1955 and 1974 and recorded in the FCC's

official publication, *FCC Reports.* The FCC was chosen because it has enough non-unanimous votes to analyze (Canon, 1969).

The long time span (1955 through 1974) was chosen so that general statements can be made. Further, to determine the commissioner's post–FCC career, 1974 was used as a cut-off date. Non-unanimous votes are used to lend some comparability with Gormley's study. Lastly, non-unanimous votes ensure variance in the dependent variable.

Over the 20-year period, 2,064 votes were recorded, with a maximum of 254 per year, a minimum of 29 per year, and a yearly average of 103. From this, 10 votes were randomly sampled from each calendar year. The stratification by year is justified because when the votes are pooled, it is possible that a year with a large number of votes will overpower years with smaller numbers of votes. Since my interest is with commissioner behavior, such a sample controls for this yearly variation. The 10 votes per year sample is arbitrary, but it produces a sample of almost 10 percent of the population.

The dependent variable, the vote of the commissioner, is scored so that 1 equals industry support and 0 equals nonsupport. I used Gormley's coding rules to determine the direction of support. On license renewal votes (the bulk of the votes), a probroadcasting vote is one that facilitates or approves the license. A second issue area relates to program content, and a probroadcasting vote is one that refuses to enforce program content rules, judge program content decisions, or allows broadcasters greater discretion in program content. Last are votes relating to cable TV. A probroadcasting vote is one that does not support the cable industry when pitted against the broadcast industry.[1] This produces a data base of 1,400 commissioners' votes.[2]

Next, I collected specific characteristics of the commissioners. The characteristics of interest include previous employment and post–FCC employment. Biographical material provided by the FCC, the *Who's Who* series, and *The New York Times* include the data on career patterns. Post–FCC industry employment is operationalized as existing if the commissioner accepted a direct job in the industry within two years of leaving the FCC. Other operationalizations were used, such as part-time and indirect employment (e.g., working for a law firm with an industry firm as a client), but only the more narrow operationalization produced statistical effects (see the analysis below). My operational measure is similar to the one that Gormley (1979) used; he also found that indirect employment and part-time employment "seriously dilutes" the hypothesis, and broad definitions "tend to overstate the extent of the revolving door problem (p. 682)."

[1] Generally, votes against cable TV are considered to be pro-broadcast industry; see Gormley, 1979, pp. 672–74.

[2] Seven commissioners per year times 10 votes per year times 20 years.

When cases with missing data are excluded, 735 observations remain. The major sources of missing data are exclusion of commissioners still on the FCC, commissioners who died while in office, and periods between the resignation of a commissioner and the confirmation of a successor. Exclusion of missing data for these reasons does not seem to affect the distribution of positions. The 1400-*n* data set shows support for the industry 54.8 percent of the time; with the 735-*n* data set, the figure is 53.2 percent.

This data base has additional virtues other than its ability to model the hypothesis dynamically. First, unlike Gormley's study, which is a cross-sectional analysis of two years on the FCC, this data includes votes from a period of 20 years. The longer time frame allows for more generalizations. Second, while Gormley's study included only seven commissioners, this study includes 28 commissioners, which again makes generalizing easier. Third, Gormley's study of seven commissioners limits his ability to employ control variables. For instance, he finds both industry background and party affect broadcast industry support, but the small *n* frustrates any attempt at controlling the effects of one for the other or employing multivariate analyses. This data set of 735 cases easily allows a broad array of controls, and multivariate probit analysis will be employed.

Industry Employment and Commissioner Voting Behavior

Prior Employment in the Regulated Industry

The entrance version of the revolving door hypothesis states that commissioners previously employed in the regulated industry will be more supportive of the industry than those without prior industry experience. There are a number of possible mechanisms to explain this hypothesis. First, those with prior industry employment may possess attitudes favorable to the industry because of their prior service, and they may carry those attitudes into their work on the commission. Second, prior industry service may lead to greater sensitivity to and understanding of the industry position, which translates into industry support. Third, the regulated industry often plays an important role in the recruitment of commissioners (Graham and Kramer, 1976; Cohen, 1985), and the industry may try to place their own people on the commissions to ensure support. One can formally state the static and dynamic versions of the entrance model in hypothesis form.

HYPOTHESIS 1: FCC Commissioners previously employed in the regulated industry will be more supportive of the broadcast industry.

HYPOTHESIS 2: In their first year, FCC commissioners with industry experience will support the broadcast industry more than those

without industry experience, but by the second year, the difference in industry support will narrow.

Tabular analysis finds that prior experience matters. Those with prior experience are 14 percent more supportive of the industry than those without experience. This relationship is statistically significant (chi-square is 2.59), though modest in magnitude.[3]

The dynamic model (hypothesis 2) can be tested by comparing the voting behavior of first- and second-year commissioners. Results indicate no significant difference between first- and second-year commissioners (56.3 percent support to 58.0 percent support). Also, separating first- and second-year commissioners into groups with and without prior industry employment produced no significant differences. I extended the comparisons to the third and fourth years on the FCC, but again no statistically significant differences were detected. Year of tenure makes no difference in industry support. Commissioners seem to bring prior attitudes onto the commission and hold them throughout their tenure with little modification. This finding is reminiscent of congressional studies showing career stability in the voting behavior of Congressmen (Stone, 1980; Cohen, 1981).

Post-Commission Industry Employment

The exit model is often discussed (Gormley, 1979; Hilton, 1972), but rarely tested. Quirk (1981) interviewed regulators and found that they did not think that industry support would affect their careers when they left the regulatory agency. Rather, knowledge of the regulatory agency and its policies were thought to be more important. Quirk makes the useful distinction between those who seek postregulatory industry employment and those who do not. Without the desire for an industry job, the postemployment dynamic is not likely to operate. While we cannot test this hypothesis directly (we cannot observe directly whether regulators seek industry jobs or not), we can test its implications. The testable hypothesis becomes:

HYPOTHESIS 3: Regulators employed in the regulated industry after their term in office ends will be more supportive of the regulated industry while in office than those who do not secure such employment.

Cross-tabular analysis reveals that post–FCC broadcast industry employment makes a difference, but in the wrong direction. Those who secure broadcast industry jobs are actually less supportive of the industry than those who do not secure industry jobs (44.9 percent to 55.4 percent).

[3] The votes were also separated by issue area as Gormley did, but because few inter-issue area differences were found, the issue areas are combined.

The relationship is statistically significant, though modest in size (chi-square is 4.56, significance is .03).

It may not be unreasonable for the industry to hire former enemies. It may make more sense to hire someone with the knowledge or skills that will help the industry, even if the person once opposed the industry, than to hire a friend who can add little to the business (Quirk, 1981).

The dynamic exit hypothesis expects increasing support for the regulated industry only when the regulator is nearing the end of a government term and begins looking for a new job. Therefore, to make himself or herself more attractive to the regulated industry, the regulator will increase support for the industry. One can state this expectation hypothetically:

> HYPOTHESIS 4: In a commissioner's last year on a regulatory body, the commissioner's support for the regulated industry will increase.

Data analysis supports hypothesis 4. In the last year on the FCC, commissioners hired by the industry increased their support by 11 percent, from 52.7 percent to 63.9 percent. The relationship is statistically significant (chi-square is 4.43). Further, during the last year on the FCC, those hired by the industry show greater support for the industry than those not hired (63.9 percent to 51.9 percent), but voting in the next-to-last year does not show any differences between the same two groups (52.7 percent and 53.6 percent). It appears as if commissioners nearing the end of their terms are posturing to increase their attractiveness to the regulated industry.

Multivariate Analysis

The univariate analysis of the preceding paragraphs was presented in detail in order to apply the logic of the competing static and dynamic models. Now, consider the effects of the variables in a multivariate framework. The multivariate model uses probit analysis and includes all the variables previously mentioned, plus a new control, a dummy variable for whether the commissioner was employed in the regulated industry both before and after tenure on the FCC. These commissioners may view governmental service as an interlude in a private career, and thus, they may be immune to post–FCC employment incentives. Equation 1 presents the full probit model. All variables are scored 1 if the commissioner fits the variable label, 0 otherwise. Note that variables b_7X through $b_{11}X$ are interactive terms.

$$\begin{aligned} Y(\text{industry support}) = {} & a(\text{constant}) \\ & + b_1\,(\text{pre–FCC industry employment}) \\ & + b_2\,(\text{post–FCC industry employment}) \\ & + b_3\,(\text{first year on the FCC}) \\ & + b_4\,(\text{second year on the FCC}) \end{aligned} \tag{1}$$

$+ b_5$ (last year on the FCC)
$+ b_6$ (next to last year on the FCC)
$+ b_7$ (pre–FCC industry employment × first year)
$+ b_8$ (pre–FCC industry employment × second year)
$+ b_9$ (post–FCC industry employment × last year)
$+ b_{10}$ (post–FCC industry employment × next to last year)
$+ b_{11}$ (both pre- and post–FCC industry employment).

Only three variables proved to be statistically significant: pre–FCC industry employment, post–FCC industry employment, and last year on the FCC. Table 1 presents the final probit results containing only the three significant variables. On the table, *MLE* is the maximum likelihood estimator, *SE* is the standard error, t is the t-test statistic, and the significance level is also shown. The results indicate that those with prior employment in the broadcast industry and those in their last year on the FCC are more supportive of the industry, while those who are hired by the industry subsequent to the FCC tenure are less supportive of the broadcast industry. These findings confirm the results of the univariate analysis.

Probit provides one with a number of statistics to analyze. For example, an R^2 is provided, but it is quite small (.031). However, the probit R^2 has been criticized because it is sample-specific and its precise sampling distribution is unknown, making it difficult to interpret (Aldrich and Cnudde, 1975; Fiorina, 1981; Brunk, 1985). An alternative statistic is the percentage correctly predicted. This analysis uses a null model as a base. In this case the null model is the percentage of support for the industry (53.2 percent) without the information presented by the independent variables. The percentage correctly predicted is 55.9 percent, which is an improvement of 2.7 percent over the null model. This statistic has come under suspicion because it is sample-specific (Brunk, 1985). Probit also presents *MLE*s, which are analogous to bs in regression; but the *MLE*s are hard to interpret substantively (Aldrich and Cnudde, 1975; Fiorina, 1981). Therefore, scholars suggest relying on the probability estimates that can be derived from the *MLE*s.

Table 1 lists the probability estimates, which indicate a model that is more robust than if one relied on the R^2 or percentage correctly predicted. The probabilities also are substantively and intuitively understandable. For instance, assume the null model: no pre–FCC industry experience, no post–FCC industry employment, and the regulator is not in the last year on the FCC. Under such conditions a commissioner is expected to vote for the industry with a probability of .532. However, changing to having pre–FCC industry experience raises the probability of a pro-industry vote to .685, an increase of .153. Similarly, assuming it is

TABLE 1

Probit Estimates of Interest Group Variables and Industry Support on the FCC

Variable	*MLE*	*SE*	*t*
Pre–FCC industry experience	.405	.209	− 1.94*
Post–FCC industry experience	− .306	.121	2.53**
Last year on the FCC	.320	.140	− 2.29*
Constant	.080	.055	− 1.46
N	735		
R^2	.031		
Predicted correct	55.9%		

Probability Estimates[a]	Probability of a Pro-Industry Vote
Pre–FCC industry experience	.685
No pre–FCC industry experience	.532
Post–FCC industry experience	.411
No post–FCC industry experience	.532
Last year on the FCC	.655
Not last year on the FCC	.532

[a]All values set to 0 (no pre–FCC industry employment, no post–FCC industry employment, not the last year on FCC).

*Significant at .05; **significant at .01 level

the last year on the FCC increases the probability of a pro-industry vote to .655, an increase of .123. Conversely, assuming post–FCC industry employment decreases the probability of a pro-industry vote to .411, a drop of .121. Combined, the three variables produce a probability of a pro-industry vote of .687, an increase of .155 over the null model. Viewed this way, the model has some statistical power.

Alternative Explanations

Analysis in the previous section provides modest support for two aspects of the revolving door, industry background and the last-year surge in industry support. How well do these factors hold up when controls for other variables are applied? For instance, Gormley (1979) found that both party and previous industry employment affect FCC voting, but he was unable to

control the effects of one for the other. Is either party or industry background spurious? How strong are they in comparison to each other? This section develops three alternative explanations: other characteristics of the commissioners, the impact of the president, and the influence of the Congress.

Other Characteristics of Regulators

Studies have shown that Democratic and Republican regulators vote differently (Gormley, 1979). Generally, Democrats are less supportive of regulated interests than Republicans. This leads to hypothesis 5:

HYPOTHESIS 5: Democrats will be less supportive of the broadcast industry than Republicans.

In congressional studies, the party variable denotes two possible party-related mechanisms, ideology and party organization. Party organization is somewhat irrelevant to the regulatory commission environment; hence party in this study is more closely related to ideology. Yet parties in the U.S. are not always ideologically cohesive. A split between northern liberals and southern conservatives divides the Democratic party. This leads to another characteristic of regulators, region (which may also be tapping ideology) and the next hypothesis:

HYPOTHESIS 6: Northern FCC commissioners will be less supportive of the broadcast industry than southerners.

The 11 states of the confederacy operationalize south, and the major region of residence classifies the commissioners as northern or southern.

Presidential Impacts

A number of studies argue that the president has considerable influence over the behavior of regulators. For instance, Moe (1982) found that the decisions of the Securities and Exchange Commission, National Labor Relations Board, and Federal Trade Commission shifted with new presidential administrations (see also Stewart and Cromartie, 1982). Krasnow et al. (1982), Moe (1982), Welborn (1966), and Scher (1961) detail the numerous avenues of presidential influence, which include appointment power, budgetary control, and legislative clearance, among others. One can divide presidential influence into two broad categories, one relating to the time of appointment, the other relating to influences at the time of the decision.

Different presidents may seek different kinds of regulators. For instance, while Reagan sought deregulators, Carter sought consumer advocates. Moe (1982) found shifts in commission decisions with the onset of new administrations, implying the possibility of appointment effects, and Welborn (1966) and Scher (1961) argue explicitly that Eisenhower used appointments to affect regulatory decisions. This leads to the next hypothesis:

HYPOTHESIS 7: Appointees of different presidents will vote differently on the FCC.

On the other hand, a number of factors mitigate against strong individual presidential appointment impacts. First, presidents usually spend little time searching for regulators; instead they focus their personnel decisions on the more visible cabinet appointments (Mackenzie, 1981). Second, regulatory appointment is often used as patronage for supporters of the president who were unable to hold onto or secure elective office (Graham and Kramer, 1976). Third, prospective regulators, rather than presidents, usually initiate the campaigns for appointment. Therefore, presidents have little impact over the pool of available candidates (Graham and Kramer, 1976). Cohen (1985) argues that party may be an important mediating variable in understanding the behavior of regulators and the impact of presidents on the commissions. If appointment effects exist, they would more likely vary with the party of the president than with individual presidents. This leads to hypothesis 8:

HYPOTHESIS 8: Democratic appointees will be less supportive of the broadcast industry than Republican appointees.

The second class of presidential variables deals with presidential influences at the time of the decision. For instance, it has been argued (though without much empirical support) that presidents may affect regulatory decisions and policy through control of budget requests sent to Congress and legislative clearance (Krasnow et al., 1982; Moe, 1982). Aside from these formal mechanisms, presidents may also apply informal pressures. For instance, presidents may try to persuade regulators, either through public statements or through more direct bargaining and persuasion. One measure of the possible potency of informal presidential influence is the president's standings in the polls. Such measures have been suggested by Neustadt (1960) and utilized by Edwards (1980) to tap the influence of the president on the Congress. Neustadt's theory of presidential influence generalizes to more than just the Congress. It is meant to apply to the whole Washington community, including regulators. This discussion leads to the next two hypotheses:

HYPOTHESIS 9: During Democratic administrations, FCC commissioners will be less supportive of the broadcast industry than during Republican administrations.

HYPOTHESIS 10: During highly popular Democratic administrations, FCC commissioners will be less supportive of the broadcast industry than during highly popular Republican administrations.

Popularity is operationalized similarly to Edwards (1980): it is the average Gallup popularity level of the president during the calendar year.

Congressional Influence

Scholars have long held that the Congress can influence regulators. One of the most venerable theories in the discipline, that of iron triangles, places the Congress, especially its committees, into a position of influence over the behavior of bureaus and regulatory bodies.

In the major study of the FCC, Krasnow et al. (1982) term Congress the most powerful determinant of regulatory policy. Among the methods of congressional influence over the FCC that Krasnow et al. cite are statutory control, appropriations control, and the power of investigations and oversight. Using rational choice theory, Barke and Riker (1982) and Weingast and associates (Calvert and Weingast, 1982; and Weingast and Moran, 1983) suggest that commissioners anticipate the Congress' desires and act accordingly. Such anticipated reactions help to preserve the regulatory agency's budget and discretion.

This study also applies the anticipated reaction model and suggests that FCC commissioners will adjust their support for the broadcast industry depending upon the prevalent congressional preference. Congressional preferences can be tapped indirectly by using party seat divisions and the activity of and support for the conservative coalition (CC). These party and coalition measures are assumed to tap the general ideological leanings of the chambers as collective bodies, though not necessarily the ideological preferences of individual legislators. The specific variables are the percentage of Democrats in each chamber per year, the yearly activity of the CC in each chamber (the percentage of non-unanimous votes upon which the CC appeared), and the victory level of the CC in each chamber (the percentage of CC votes that the CC won). The CC measures are found in Shelley (1983).[4] This discussion leads to the final hypothesis:

> HYPOTHESIS 11: The more Republicans in each legislative chamber, the more active the CC will be; and the more successful the CC, the more supportive of the broadcast industry FCC commissioners will be.

Analysis

Equation 2 is used to estimate the probit results of the impact of industry employment on broadcasting support, controlling for the impact of other commissioner characteristics, presidential impact, and congressional impacts. Other than the congressional and popularity variables, all the variables are coded 1 if the variable label is present, 0 if it is not.

[4] Committee variables could also have been used. However, the available source for such data, the *Congressional Quarterly,* only began collecting the CC support scores in 1961. This would mean losing over 25 percent of the cases for analysis and omitting the entire Eisenhower period.

$$
\begin{aligned}
Y\,(\text{broadcast industry support}) = {} & a\ (\text{constant}) \\
& + b_1\ (\text{pre–FCC industry employment}) \\
& + b_2\ (\text{post–FCC industry employment}) \\
& + b_3\ (\text{last year on the FCC}) \\
& + b_4\ (\text{party of commissioner, Democrat}) \\
& + b_5\ (\text{region of commissioner, North}) \\
& + b_6\ (\text{Democratic appointing president}) \\
& + b_7\ (\text{appointing president—Kennedy}) \\
& + b_8\ (\text{appointing president—Johnson}) \\
& + b_9\ (\text{appointing president—Nixon}) \\
& + b_{10}\ (\text{Republican president at time of vote}) \\
& + b_{11}\ (\text{presidential popularity at time of vote}) \\
& + b_{12}\ (\%\ \text{Democrats—House}) \\
& + b_{13}\ (\%\ \text{Democrats—Senate}) \\
& + b_{14}\ (\text{CC activity—House}) \\
& + b_{15}\ (\text{CC activity—Senate}) \\
& + b_{16}\ (\text{CC wins—House}) \\
& + b_{17}\ (\text{CC wins—Senate}).
\end{aligned}
\tag{2}
$$

Results of the data analysis found four variables consistently significant: post–FCC industry employment, last year on the FCC, party of the appointing president, and the CC victory level in the House. The reduced form of equation 2 is presented in Table 2. The probit model's R^2 is .09 with 60.6 percent correctly predicted (an improvement of seven percent over predicting a vote by the null model, support for the broadcast industry). The results indicate that support for the broadcast industry increases in the last year on the FCC, if a person is not employed in the broadcast industry subsequent to tenure on the FCC, if the appointing president is a Republican, and if the CC is less victorious in the House.

One complication that time-series data present is autocorrelation. However, probit models do not as yet have an established procedure to detect and correct for autocorrelation. Even more troublesome with the data at hand is their pooled, cross-sectional, time-series design. As an initial attempt to deal with this problem, I ran a sign test on the predicted values. The sign test indicated no temporal relationship, which helps allay fears of autocorrelation problems, but one must stress the nondefinitiveness of this procedure.

Concerning the substantive findings, one variable previously found significant, pre–FCC employment, has dropped out of the new equation. Party of the appointing president assumes its variance. In fact, Democratic presidents did not appoint one commissioner with previous broadcasting experience! Here one can see how the appointment decisions of presidents may affect the decisions of regulatory agencies.

TABLE 2

Probit Results of Reduced Model on Industry Support

Variable	*MLE*	*SE*	*t*
Constant	1.28	.25	−5.12
CC wins—House	−.01	.003	3.47**
Last year on the FCC	.39	.14	−2.74*
Post–FCC employment	−.54	.13	4.07**
Party of appointing president	−.61	.12	4.95**
N	735		
R^2	.09		
Correctly predicted	60.6%		

Variable	Probability of a Pro-Industry Vote[a]
Appointing president	
Democrat	.528
Republican	.732
Last year on the FCC	.844
Not last year on the FCC	.732
Post–FCC industry employment	.533
No post–FCC industry employment	.732
CC wins—House	
100.0%	.611
66.2% ($\bar{X}$)	.732
40.0%	.811
00.0%	.900

[a]Values set at 0 (President = Republican; no post–FCC employment, not the last year at the FCC), and CC wins at its mean (66.2 percent).

*Significant at .01; **significant at .001.

Second, none of the individual presidential appointment variables could attain significance, even after I controlled for the party of the appointing president. Multicollinearity may inhibit attempts to separate the effects of individual presidents from their parties. A number of techniques were used to deal with this problem. First, separate equations were run using either presidential party, individual presidential dummies, or a combination of all the presidential dummies. In all cases, the equations with the presidential party variable showed the strongest results. Second, the presidential dummies were added into an equation containing the presidential

party variable. Comparison of these mixed equations with ones containing only the presidential party variable showed that the more complex equations added nothing (i.e., $-R^2$). While different presidents may pursue different appointment strategies, cross-party differences seem more important.

Third, presidential influence at the time of the vote, as measured by both party of the president and presidential popularity, has little impact. This lack of impact may be due to two factors: communications policy is rarely high on a president's agenda, and the First Amendment may discourage presidential intervention in FCC proceedings.

In contrast, Moe (1982) found shifts in commission decisions with the onset of new administrations. Three factors may account for the difference between his and my findings. One, the changing composition of the commissions through appointment may account for Moe's results. Also, aggregation properties may lead to differences between individual and collective outcomes. Moe's dependent variable was the direction of the outcome of a commission's decision, while mine was the individual's vote. Lastly, we studied different commissions: Moe did not examine the FCC.

Fourth, the victory level of the CC in the House also had impact.[5] The results point in the direction opposite from what one would expect, that greater CC victory rates should lead to higher support for the broadcast industry. The opposite is the case. This result may be spurious. It is important to note that no committee-level variables were incorporated into the analysis. It may be the case that inclusion of committee-level variables would wash out the effects of the chamber-level variables. Also, there may be other variables that are highly correlated with the CC victory variable, and if they were included in the model, the CC victory variable would become unimportant (or its sign would reverse). The objective of this paper is not to specify, a congressional model, but rather the revolving door.

Fifth, when party of the appointing president is controlled, party of the commissioner drops out. This is in part a function of the party bias in the appointment process, whereby presidents are allowed through appointment to shift the party balances on the commissions.

If one focuses on the summary statistics, one would get a picture of a weak, though significant, model (recall the discussion concerning equation 1). However, the probabilities that probit provides reveal the strong impact of the significant variables. The probabilities indicate the impact of a variable on the dependent variable under certain conditions.

Consider this general condition as a baseline: the appointing president is a Republican, the commissioner is not serving his last year, the

[5] Each chamber variable worked similarly, thus one should not read the equations as relating strictly to either chamber. Using either chamber variable produces the same results.

commissioner will not find employment in the regulated industry, and the CC wins at its average rate (66.2 percent). Under such conditions, the probability of a vote for the broadcast industry is .732.

Changing these conditions allows one to determine the impact of any variable. Now suppose the appointing president is a Democrat. The probability of a pro-industry vote reduces to .528 (a drop of .204). Or consider the change to a commissioner hired by the industry: the probability of a pro-industry vote now decreases to .533, a drop of .199. Changing to a commissioner in his or her last year on the FCC raises the probability of a pro-industry vote to .844, an increase of .112. Lastly, consider altering the CC victory level. A decrease to its lowest actual victory rate (about 40 percent), increases the likelihood of a pro-industry vote to .811 (an increase of .083), while an increase of the victory level to its highest level, 100 percent, reduces the likelihood of a pro-industry vote to .611 (a decrease of .117). These probabilities reveal a more robust model than that portrayed by the summary statistics of the probit equation.

Conclusion

The results reported in this paper have a number of implications for the revolving door and interest group capture theories. First, the revolving door does not appear to be a highly potent influence on FCC decisions. Given the stress placed upon the revolving door in the literature, this finding is all the more significant. The two major avenues of influence that the hypothesis posits, background and future job incentives, either have little impact, or ironically have the opposite impact.

The dynamic models aid one in sorting out the numerous ways that the revolving door's entrance and exit patterns could affect regulatory decisions. The dynamics involved are highly complex, but of the many possibilities, only a few had an impact. Entrance patterns appear unimportant; political factors overwhelm them. Exit patterns showed some effects even when controlling for political factors, but the effects were not overly strong, nor were they always in the predicted direction.

Employers seem to hire those who were less supportive of the industry, a finding that runs counter to expectations. Such a finding has been noted before (Quirk, 1981), but it may not be common. Quirk found this result only in one agency that he studied. This study presents a second case. Further tests are needed to determine how often this occurs, why, and under what circumstances.

Increases of industry support during the commissioners' last year on the FCC was the strongest finding supporting the revolving door hypothesis. Such posturing is consistent with the hypothesis, but it undermines the idea that regulators use their tenure as an investment in a future industry

job. It appears more of an afterthought, and occurs only when their career in government is coming to a close. This is consistent with studies that emphasize the patronage nature of regulatory appointments (Graham and Kramer, 1976). Unsuccessful politicians often are repaid for support by presidents with commission appointments. Perhaps only after these types see their regulatory careers ending, as they once saw their political careers ending, do they consider a private industry job.

The findings presented here do not bode well for the revolving door version of interest group capture theory. In recent years, other studies have found political factors to be important (e.g., Moe, 1982), while tests of other versions of capture theory have not found support for it either (Meier and Plumlee, 1978; Schwert, 1977). It may be that capture theory has been overstated and perhaps we should look more closely at political control models that find support here and elsewhere (Moe, 1982). Yet evidence to make broad statements about decision making in regulatory agencies is scant: only a handful of studies exist and more studies are needed. Findings reported here and elsewhere need to be tested on other regulatory bodies.

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APPENDIX

Results of the Full Probit Model: Interest Group Model

Variable	*MLE*	*SE*	*t*
Pre–FCC employment	0.83	0.34	2.41
Post–FCC employment	−0.27	0.15	−1.83
First year	0.03	0.24	0.14
Second year	0.24	0.16	1.48
Last year	0.32	0.16	1.96
Next to last year	0.13	0.15	0.84
Pre–FCC × first year	3.10	17.88	0.17
Pre–FCC × second year	−0.50	0.49	−1.02
Post–FCC × last year	0.38	0.37	1.02
Post–FCC × next to last year	−0.07	0.35	0.20
Both pre- and post-	−0.52	0.50	−1.02
Constant	0.04		
N	735		
R^2	0.03		
Predicted correctly	56.0%		

Multivariate Model

Variable	*MLE*	*SE*	*t*
Pre–FCC employment	0.01	0.29	0.02
Post–FCC employment	−0.33	0.14	−2.26
Last year	0.43	0.15	2.82
Party (D)	−0.19	0.27	0.69
Region (N)	−0.20	0.30	−0.66
Appointing president (D)	−0.00	0.01	−0.00
JFK	0.23	0.32	0.72
LBJ	−0.00	0.26	−0.01
Nixon	0.73	0.26	2.80
Presidential party (R)	−0.23	0.23	−1.00
Presidential popularity	0.00	0.01	0.33
% Dem.—House	0.05	0.03	1.74
% Dem.—Senate	−0.05	0.03	−1.73
CC activity—House	0.01	0.01	0.76
CC activity—Senate	−0.03	0.01	−2.47
CC wins—House	−0.01	0.00	−1.83
CC wins—Senate	0.00	0.01	−0.83
Constant	1.60		
N	735		
R^2	0.09		
Predicted correctly	61.0%		

REFERENCES

Aldrich, John, and Charles Cnudde. 1975. Probing the bounds of conventional wisdom: A comparison of regression, probit, and discriminant analysis. *American Journal of Political Science,* 19:571–608.

Barke, Richard, and William Riker. 1982. A political theory of regulation, with some observations on railway abandonments. *Public Choice,* 39:73–106.

Brunk, Gregory. 1985. On estimating distance-determined voting functions. *Political Geography Quarterly,* 4:55–65.

Calvert, Randall, and Barry Weingast. 1982. Runaway bureaucracy and congressional oversight: Why reforms fail. *Policy Studies Review,* 1:557–64.

Canon, Bradley C. 1969. Voting behavior on the FCC. *Midwest Journal of Political Science,* 13:587–612.

Cohen, Jeffrey E. 1981. The dynamics of party voting in Congress, 1955–78: A cohort model. *Political Behavior,* 3:211–27.

———. 1985. Presidential control of independent regulatory commissions through appointment: The case of the ICC. *Administration and Society,* 17 (May):61–70.

Eckert, Ross D. 1981. The life cycle of regulatory commissioners. *Journal of Law and Economics,* 24:113–20.

Edwards, George C. 1980. *Presidential influence in Congress.* San Francisco: W. H. Freeman.

Fellmeth, Robert. 1970. *The interstate commerce ommission: The public interest and the ICC.* New York: Grossman.

Fiorina, Morris. 1981. *Retrospective voting in American national elections.* New Haven: Yale.

Gormley, William. 1979. A test of the revolving door hypothesis on the FCC. *American Journal of Political Science,* 23:665–83.

Graham, James, and Victor Kramer. 1976. *Appointments to the regulatory agencies: The Federal Communications Commission and the Federal Trade Commission (1949–1970).* Committee print, Committee on Commerce, U.S. Senate, 94th Congress, 2nd session. Washington, D.C.: U.S. Government Printing Office.

Hilton, George W. 1972. The basic behavior of regulatory commissions. *American Economic Review,* 62:47–54.

Kohlmeier, Louis M. 1969. *The regulators: Watchdog agencies and the public interest.* New York: Harper and Row.

Krasnow, Erwin, Lawrence Longley, and Herbert Terry. 1982. *The politics of broadcast regulation.* 3rd ed. New York: St. Martins.

Mackenzie, G. Calvin. 1981. *The politics of presidential appointments.* New York: Free Press.

Meier, Kenneth, and John Plumlee. 1978. Regulatory administration and organizational rigidity. *Western Political Quarterly,* 31:81–95.

Mitnick, Barry M. 1980. *The political economy of regulation: Creating, designing, and removing regulatory forms.* New York: Columbia University Press.

Moe, Terry. 1982. Regulatory performance and presidential administration. *American Journal of Political Science,* 26:197–224.

Neustadt, Richard E. 1960. *Presidential power: The politics of leadership.* New York: Wiley.

Putnam, Robert D. 1976. *The comparative study of political elites.* Englewood Cliffs, NJ: Prentice-Hall.

Quirk, Paul. 1981. *Industry influence in federal regulatory agencies.* Princeton: Princeton University Press.

Scher, Seymour. 1961. Regulatory control through appointment: The case of the Eisenhower administration and the NLRB. *Journal of Politics,* 23:667–88.

Schwert, G. William. 1977. Public regulation of national securities exchanges: A test of the capture hypothesis. *Bell Journal of Economics,* 8:128–50.

Shelley, Mack C. III. 1983. *The permanent majority: The conservative coalition in the United States Congress.* University, AL: University of Alabama Press.

Stewart, Joseph, and Jane S. Cromartie. 1982. Partisan presidential change and regulatory policy: The FTC and deceptive practices enforcement, 1938–74. *Presidential Studies Quarterly,* 12:568–73.

Stone, Walter. 1980. The dynamics of constituency: Electoral control in the House. *American Politics Quarterly,* 8:399–424.

Weingast, Barry R., and Mark J. Moran. 1983. Bureaucratic discretion or congressional control? Regulatory policymaking by the Federal Trade Commission. *Journal of Political Economy,* 91:765–800.

Welborn, David. 1966. Presidents, regulatory commissioners, and regulatory policy. *Journal of Public Law,* 15:3–39.