THESIS
5
1999

MICHIGAN STATE LIBRARIES
3 1293 01812 8623

This is to certify that the

dissertation entitled

THE DYNAMICS OF INSTITUTIONAL CONTROL OVER U.S. FEDERAL TELECOMMUNICATIONS POLICY DECISIONS: THE CASE OF "ADJUDICATIVE RULE-MAKING DECISIONS" REGARDING AT&T ACTIVITIES IN THE ARENA OF LONG-DISTANCE SERVICE REGULATION

presented by

Kwangho Sim

has been accepted towards fulfillment
of the requirements for

Ph.D. degree in **Political Science**

Major professor

Date June 23, 1999

MSU is an Affirmative Action/Equal Opportunity Institution O-12771

LIBRARY
Michigan State
University

PLACE IN RETURN BOX to remove this checkout from your record.
TO AVOID FINES return on or before date due.
MAY BE RECALLED with earlier due date if requested.

DATE DUE	DATE DUE	DATE DUE
DEC 0 3 2001 0 9 2 9 0 1		

1/98 c:/CIRC/DateDue.p65-p.14

THE DYNAMICS OF INSTITUTIONAL CONTROL OVER U.S. FEDERAL TELECOMMUNICATIONS POLICY DECISIONS: THE CASE OF "ADJUDICATIVE RULE-MAKING DECISIONS" REGARDING AT&T ACTIVITIES IN THE ARENA OF LONG-DISTANCE SERVICE REGULATION

VOLUME I

By

Kwangho Sim

A DISSERTATION

Submitted to
Michigan State University
in partial fulfillment of the requirements
for the degree of

DOCTOR OF PHILOSOPHY

Department of Political Science

1999

ABSTRACT

THE DYNAMICS OF INSTITUTIONAL CONTROL OVER THE U.S. FEDERAL TELECOMMUNIICATIONS POLICY DECISIONS: THE CASE OF "ADJUDICATIVE RULE-MAKING DECISIONS" REGARDING AT&T ACTITIVITES IN THE ARENA OF LONG-DISTANCE SERVICE REGULATION

By

Kwangho Sim

This study analyzes policy decisions (that is, "adjudicative rule-making decisions") made by the Federal Communications Commission (FCC) regarding the long-term dominant, monopolistic carrier, AT&T, in the U.S. federal long-distance telecommunications service market domain over the 31-year period (1965-1995). With the goal of identifying the determinants of the federal long-distance telecommunications policy decisions which were made in favor of AT&T over other common carriers or public interest groups, this study seeks to test regulation theories regarding interest group power and the roles of political institutions. An empirical model (logit regression) characterizing the conditions under which the FCC actually adopted policy decisions in favor of or against AT&T's interests is developed to understand the response of the FCC and assess the relative and simultaneous effects of interest groups, political institutions, and other contextual factors on the FCC's adjudicative rule-making decisions. The logistic regression analyses of the FCC's adjudicative rule-making decisions show that FCC policy-making is significantly influenced by interactive and simultaneous modes of interest group power, coming from the long-term dominant firm (AT&T), other common carriers and other public/consumer interest groups, and the roles of political institutions,

including the federal agency itself (FCC), Congress, the American presidents, and the federal courts. Specifically, while confirming the importance of interest group politics and the roles of political institutions in the long-distance telecommunications policy domain, two quantitative analyses conducted for the two separate periods (1965-1983 before the break-up of AT&T and 1984-1995 after the historical event) find that the impacts of business/public interest groups through strong petitions and the federal agency's own past policy-making are more significant upon the federal long-distance telecommunications policy decisions after the divestiture of AT&T. Also, the influence of American presidents before the break-up of AT&T is the very opposite to that of presidents before the event. Based on the analysis, the study suggests that a complete explanation on the dynamics of federal telecommunications policy-making could be derived by an analytical framework that considers simultaneously the influence of interest group power and political institutions. Future research with an enhanced model combining the details of interest group politics and institutional differences could provide policy analysts with more sound insights into the dynamics of the U.S. federal telecommunications policy-making.

Copyright by
Kwangho Sim
1999

To my parents and my wife, Eunju

ACKNOWLEDGMENTS

I would like to express my appreciation to Dr. Robert Lowry, who guided and supported my dissertation with his endless valuable suggestions and intelligent insights and taught me about policy analysis throughout my doctoral studies. I also owe a large debt of gratitude to Drs. Thomas Hammond, Carol Weissert, and Johannes Bauer for their continuous guidance and helpful criticisms and the Department of Political Science professors of the Michigan State University for their excellent classes and support.

I would like to express my deep appreciation to my mentor, Professor Moon-Seok Ahn, who supported and encouraged my interest in public administration and policy analysis and made me "think" every moment throughout my studies in Korea and the United States. I am also deeply grateful to the Department of Public Administration professors of the Korea University for their precious classes and guidance.

I want to express my sincere thanks to my parents and my parents-in-law. I am also deeply grateful to all the members of my family, my brothers and sisters and their families, for their encouragement and endless support. I acknowledge special debts to my eldest brother Professor Kyung-Ho Sim for his guidance of my thinking at an early stage and my brothers-in-law Jae-Ku Lee and Seung-Chul Yoo for their warm encouragement. Also my special thanks are due to my friends Ph.D. Candidates Jong-Pil Kim and Jin Sunwoo, who encouraged me to specify and improve my study.

My most heartfelt thanks must go to my beloved wife, Ansoon [Eunju] Yoo, and to my bright son, Kyusou. Without the extraordinary patience, bright mind and love with which my Eunju in Korea has supported me throughout the many hard times, I could never completed this dissertation. I owe her a lifetime of gratitude.

TABLE OF CONTENTS

		Page
LIST OF TABLES		x
LIST OF FIGURES		xii
LIST OF ABBREVIATIONS		xiv
Chapter 1	INTRODUCTION: PURPOSE OF THE STUDY AND STATEMENT OF THE PROBLEM	1
Chapter 2	THEORETICAL REVIEW AND COMPARISONS WITH OTHER STUDIES	24
	1. THEORETICAL REVIEW	24
	2. COMPARISONS WITH OTHER STUDIES	31
Chapter 3	THE POLITICAL, ECONOMIC, AND LEGAL CONTEXTS OF FCC POLICY-MAKING IN THE HISTORY OF U.S. FEDERAL TELECOMMUNICATIONS REGULATION REGARDING LONG-DISTANCE SERVICE MARKET	52
	1. THE FCC'S LEGAL RIGHTS AND RESPONSIBILITIES AND POLITICAL RELATIONSHIPS	52
	1-1. THE FCC'S POLITICAL RELATIONSHIPS WITH POLITICAL INSTITUTIONS	53
	1-2. SUPREME COURT DECISIONS REGARDING THE AUTHORITIES OF THE FCC	59
	2. U.S. FEDERAL TELECOMMUNICATION REGULATORY POLICIES INDICATING THE POLITICAL CONTEXT OF THE FCC AND AT&T	66
	2-1. U.S. TELECOMMUNICATIONS REGULATORY POLICIES BETWEEN POST-1934 AND AT&T DIVESTITURE	72
	2-2. U.S. GOVERNMENT'S KEY TELECOMMUNICATIONS REGULATORY POLICIES IN THE POSTDIVESTITURE ERA	99

Chapter 4 FCC POLICY-MAKING THROUGH RULE-MAKING AND ADJUDICATION 123

1. AGENCY POLICY-MAKING THROUGH RULE-MAKING AND ADJUDICATION IN GENERAL 123

1-1. RULE-MAKING 124
1-2. ADJUDICATION 126
1-3. COMPARING RULE-MAKING WITH ADJUDICATION 131
1-4. POLITICAL CONTEXT OF RULE-MAKING AND ADJUDICATION 135

2. THE CASE OF THE FCC 139

2-1. FCC POLICY DECISIONS THROUGH RULE-MAKING 141
2-2. FCC POLICY DECISIONS THROUGH ADJUDICATION 148
2-3. THE POLITICAL CONTEXT OF FCC RULE-MAKING AND ADJUDICATION 155

Chapter 5 RESEARCH METHOD AND STATISTICAL MODEL: VARIABLES AND HYPOTHESES 159

1. DEPENDENT VARIABLE: FCC'S ADJDUICATIVE RULE-MAKING POLICY DECISIONS ON AT&T'S PETITIONS 163

2. INDEPENDENT VARIABLES AND HYPOTHESES 183

2-1. INTEREST GROUP POWER VARIABLES 183
2-2. POLITICAL INSTITUTIONS VARIABLES 202
2-3. CONTEXTUAL IMPACT VARIABLES 239
2-4. INTERACTION VARIABLES 250

Chapter 6 APPLICATIONS OF STATISTICAL METHOD OF ANALYSIS TO THE FCC'S ADJUDICATIVE RULE-MAKING DECISIONS REGARDING THE U.S. LONG-DISTANCE TELECOMMUNICATIONS SERVICE MATTERS: TESTS OF HYPOTHESES AND DERIVED RESULTS OF ESTIMATION 254

1. METHODS OF ESTIMATION 254

2. GENERAL DIAGNOSTIC TESTS FOR LOGIT ESTIMATION 257

3. RESULTS OF ESTIMATION 260

3-1. RESULTS FOR TIME PERIOD I (1965-1995) 261
3-2. DIAGNOSIS OF INITIAL LOGIT MODELS FOR TIME PERIOD II (1965-1983) AND TIME PERIOD III (1984-1995) 305
3-3. RESULTS FOR TIME PERIOD II (1965-1983): BEFORE THE AT&T BREAK-UP 307
3-4. RESULTS FOR TIME PERIOD III (1984-1995): AFTER THE AT&T BREAK-UP 333
3-5. COMPARING TOTAL MODEL WITH PARTIAL MODELS BY LOG-LIKELIHOOD TEST 357

Chapter 7 CONCLUSION 360

APPENDICES

APPENDIX A. MATRICES OF CORRELATIONS AMONG INDEPENDENT VARIABLES 394

APPENDIX B. RESULTS OF THREE DIAGNOSTIC TESTS FOR OUTLIER PROBLEMS IN LOGIT MODELS 3 & 4 396

APPENDIX C. COMMANDS AND STEPS BY THE *STATA* PROGRAM FOR LOGIT MODEL 2 (1965-1995) 397

APPENDIX D. INITIAL LOGIT REGRESSIONS FOR TIME PERIOD II (1965-1983) AND TIME PERIOD III (1984-1995) 404

BIBLIOGRAPHY 406

LIST OF TABLES

		Page
Table 1.	U.S. Federal Regulatory Policies regarding AT&T in the Long-Distance Telecommunications Service Market Setting (after 1934)	120
Table 2.	Interest Group Power Variables	186
Table 3.	Political Institutions Variables	203
Table 4.	Contextual Impact Variables	240
Table 5.	Interaction Variables	252
Table 6.	Logit Regression of Variables from Regulatory Theories on the FCC's Adjudicative Rule-Making Decisions (Model 1) over the 31-year period of 1965-1995	263
Table 7.	Correlations between Estimated Coefficients of Logit Model 1	264
Table 8.	Cases with above 5 $\Delta\chi^2_P$ value in Model 1	266
Table 9.	Cases with above 5 $\Delta\chi^2_D$ value in Model 1	269
Table 10.	Cases with above 1 ΔB value in Model 1	271
Table 11.	Final Logit Regression of Variables from Regulatory Theories on the FCC's Adjudicative Rule-Making Decisions (Model 2) over the 31-year period of 1965-1995	273
Table 12.	Correlations between Estimated Coefficients of Logit Model 2	274
Table 13.	Marginal Effect of Each Regressor on the FCC's Adjudicative Rule-Making Decisions in Model 2 over the 31-year period of 1965-1995	284

Table 14.	Conditional Effect of Each Regressor by its Percentile Values on Probability of FCC's Favoring AT&T in the Adjudicative Rule-Making Decisions over the 31-year period of 1965-1995 in Model 2	290
Table 15.	Final Logit Regression of Variables from Regulatory Theories on the FCC's Adjudicative Rule-Making Decisions (Model 3) during the 19-year period of 1965-1983	309
Table 16.	Correlations between Estimated Coefficients of Logit Model 3	309
Table 17.	Marginal Effect of Each Regressor on the FCC's Adjudicative Rule-Making Decisions in Model 3 during the 19-year period of 1965-1983	318
Table 18.	Conditional Effect of Each Regressor by its Percentile Values on Probability of FCC's Favoring AT&T in the Adjudicative Rule-Making Decisions during the 19-year period of 1965-1983 in Model 3	323
Table 19.	Final Logit Regression of Variables from Regulatory Theories on the FCC's Adjudicative Rule-Making Decisions (Model 4) during the 12-year period of 1984-1995	335
Table 20.	Correlations between Estimated Coefficients of Logit Model 4	335
Table 21.	Marginal Effect of Each Regressor on the FCC's Adjudicative Rule-Making Decisions in Model 4 during the 12-year period of 1984-1995	343
Table 22.	Conditional Effect of Each Regressor by its Percentile Values on Probability of FCC's Favoring AT&T in the Adjudicative Rule-Making Decisions during the 12-year period of 1984-1995 in Model 4	347

LIST OF FIGURES

		Page
Figure 1.	Framework of the Analysis	21
Figure 2.	FCC Policy Decisions through Rule-Making	147
Figure 3.	FCC Policy Decisions through Adjudication	154
Figure 4.	Determinants of the FCC's Adjudicative Rule-Making Decisions For and Against AT&T (1965-1995)	162
Figure 5.	Nine Combinations of FCC Policy Decisions and Coding Mode	172
Figure 6.	Ratio of FCC Policy Decisions Favoring AT&T over OCCs/Public	175
Figure 7.	Excerpt from a MO&O regarding AT&T's Petition for Declaratory Ruling re Interconnection, issued by the FCC in 1978	178
Figure 8.	Excerpt from a MO&O regarding AT&T's Tariff Revision, issued by the FCC in 1980	179
Figure 9.	Excerpt from a MO&O on Reconsideration regarding AT&T's Tariff Filings, issued by the FCC in 1986	180
Figure 10.	Excerpt from a MO&O regarding AT&T's Tariff Revisions, issued by the FCC in 1995	181
Figure 11.	Poorness-of-Fit Statistic 'Pearson χ^2 versus Predicted Probability' of Favoring AT&T's Interests ($\Delta\chi^2_P$ vs. $\hat{P}$) in Model 1	266
Figure 12.	Poorness-of-Fit Statistic 'Change in Deviance versus Predicted Probability' of Favoring AT&T's Interests ($\Delta\chi^2_D$ vs. $\hat{P}$) in Model 1	269
Figure 13.	'Change in Deviance versus Predicted Probability' of Favoring AT&T's Interests ($\Delta\chi^2_D$ vs. $\hat{P}$) with Symbols Proportional to Influence Statistic (ΔB) in Model 1	271

Figure 14.	**Relationships of Influence from Interest Group Politics and Political Institutions, in terms of Odds Ratios, for Time Period I (1965-1995)**	**366**
Figure 15.	**Relationships of Influence from Interest Group Politics and Political Institutions, in terms of Probabilities, for Time Period I (1965-1995)**	**366**
Figure 16.	**Relationships of Influence from Interest Group Politics and Political Institutions, in terms of Odds Ratios, for Time Period II (1965-1983)**	**373**
Figure 17.	**Relationships of Influence from Interest Group Politics and Political Institutions, in terms of Probabilities, for Time Period II (1965-1983)**	**373**
Figure 18.	**Relationships of Influence from Interest Group Politics and Political Institutions, in terms of Odds Ratios, for Time Period III (1984-1995)**	**379**
Figure 19.	**Relationships of Influence from Interest Group Politics and Political Institutions, in terms of Probabilities, for Time Period III (1984-1995)**	**379**

LIST OF ABBREVIATIONS

ADA	Americans for Democratic Action
AHTUC	Ad Hoc Telecommunications Users Committee
ALJ	Administrative Law Judge
APA	Administrative Procedure Act
AT&T	American Telephone & Telegraph
BOC	Bell Operating Company
CAB	Civil Aeronautics Board
CAP	Competitive Access Provider
CCB	Common Carrier Bureau
CFA	Consumer Federation of America
C.F.R.	Code of Federal Regulations
COPE	Committee on Political Education of the AFL-CIO
CPE	Customer Premises Equipment
Datapro	Datapro Information Service Group
DOD	Department of Defense
DOJ	Department of Justice
EEOC	Equal Employment Opportunity Commission
EPA	Environment Protection Agency
En Banc	full bench
FCC	Federal Communications Commission
F.C.C.Rec.	FCC Records
F.C.C.2d	FCC Reports Second Series
FDA	Food and Drug Administration
FR	Federal Register
F.2d	Federal Reporter Second Series
F.3d	Federal Reporter Third Series
F.Supp.	Federal Supplement
FTC	Federal Trade Commission
GAO	General Accounting Office
GTE	General Telephone and Electronics
ICPSR	Inter-University Consortium on Political and Social Research
IXC	Interexchange Carrier
LATA	Local Access and Transport Area
LEC	Local Exchange Carrier
MCI	Microwave Communications, Inc.
MFJ	Modification of Final Judgment
MO&O	Memorandum Opinion and Orders
MTS	Message Telecommunications or Toll Service
NARUC	National Association of Regulatory Utility Commissioners
NATA	National American Telecommunications Association
NLRB	National Labor Relations Board
NOI	Notice of Inquiry
NRRM	Notice of Proposed Rule-Making

NRC	Nuclear Regulatory Commission
NTIA	National Telecommunications and Information Administration
OCC	Other Common Carrier
OMB	Office of Management and Budget
ONA	Open Network Architecture
OSHA	Occupational Safety and Health Administration
PBX	Private Branch Exchange
POTS	Plain Old Telephone Service
PSTN	Public Switch Telephone Network
PUC	Public Utility Commission
RBHC	Regional Bell Holding Company
R&O	Report and Orders
ROR	Rate of Return
SCC	Specialized Common Carrier
SCt	Supreme Court Reporter
SDN	Software Defined Network
SDDN	Software Defined Data Network
SPCC	Southern Pacific Communications Company
telco	telephone company
The Act	The Communications Act of 1934
WATS	Wide Area Telecommunications Service

Chapter 1

INTRODUCTION:

PURPOSE OF THE STUDY AND STATEMENT OF THE PROBLEM

The purpose of the present study is to examine the influence of the variation of American political institutional arrangements on U.S. federal telecommunications policy decisions during the period 1965-1995. The study analyzes policy decisions (which I refer to as "adjudicative rule-making decisions"[1]) by the Federal Communications Commission (FCC or the Commission) which still favored the interests of the long-term dominant long-distance carrier, AT&T, more than other common carriers (OCCs) or/and the American public in the U.S. long-distance telecommunications service industry and its market over the 31-year period. The study focuses on the FCC's adjudicative rule-making decisions about rules or regulations governing long-distance service rates or tariffs related to interconnection or access, which were the most fundamental telecommunications issues in the federal long-distance telecommunications service regulation.[2] I explore the dynamics of federal telecommunications regulations by identifying the key political and economic factors that influenced FCC policy decisions regarding AT&T. The main factors are the long-term regulated interest group (i.e., AT&T or the Bell System), which was the most powerful, dominant political economic

---

[1] I term the FCC's policy decisions, with which this study is dealing, as the "adjudicative rule-making decisions" (i.e., 'orders' such as *Memorandum Opinion and Orders* and *Report and Orders*). It is because they contain two kinds of characteristics: "rule-making" and "adjudication." In other words, they are related to general "rule-making" proceedings yet are closer to decisions through "adjudication." This argument will be explained in detail later (*see* **Chapter 4**).

[2] *See* **Chapter 5**.

actor in the U.S. long-distance service industry over the regulatory period, other common carriers, other public and consumer interest groups, political institutions, and contextual factors such as macroeconomic and telecommunications market conditions. The key political institutions include the federal regulatory agency itself (i.e., the FCC), Congress, the President, and the courts. A statistical model of the FCC's adjudicative rule-making decisions, which characterizes the conditions under which the FCC adopted the policy changes and made the decisions 'for' and 'against' AT&T petitions, is developed and tested to explore simultaneously the influence of the regulated interest group and other public interest groups, the roles of key political institutions, and the effects of other contextual factors on the U.S. federal long-distance service regulation regarding AT&T over the period from 1965 to 1995.

For many decades, the United States federal government has imposed regulations on the telecommunications industry. From the 1930s until the late 1970s, almost every aspect of interstate telephony was comprehensively regulated. The regulated environment has changed rapidly in the last two decades, however. Especially from 1972 (when the specialized common carriers like MCI began to enter the long-distance telephone market) to 1995 (just before the *Telecommunications Act of 1996*), U.S. federal telecommunications regulatory policy decisions in the long-distance service market were deregulatory processes toward the two large, basic themes of more competition and the guarantee of public interest. In 1996, much of this market came to be no longer subject to significant regulation of any kind.[3] Nevertheless, there is much evidence (as presented

[3] A more competitive policy theme came to be expressed in the enactment of the landmark *Telecommunications Act of 1996*, which was supposed to usher in a new competitive environment in which cable industry, local phone companies, and long-distance service companies would all poach on each



below) that over the period from 1965-1995, FCC policy decisions (i.e., adjudicative rule-making decisions) primarily served the private interest of an organized group, AT&T and its Bell Operating Companies (BOCs) before the break-up and AT&T Corporation and its 22 interexchange counterparts after the divestiture effective in 1984.

When the FCC was created by the *Communications Act* of 1934, AT&T and its affiliated BOCs were providing virtually all interstate long-distance services and access to long-distance service, although the federal regulator never granted AT&T an exclusive franchise for the provision of all such services. A number of independent local telephone companies depended upon AT&T for long-distance connections to other local companies, and thus effectively operated as cooperating partners with the Bell System. AT&T wielded virtual monopolistic influence over long-distance telephone service during the period 1934-1971. During that period, the FCC embraced an assumption that long-distance telephone service is a natural monopoly like local service. The federal regulator believed that competition was certainly possible during that period if only because the Bell System (with the Commission's full approval) inflated the price of long-distance service to subsidize local connections. However, in reality competition was considered to be inefficient in the short run and not economically viable in the long (Kellogg 1992: 588).

The development of microwave transmission (and satellite) technologies radically changed that picture, making competition in the long-distance marketplace both practical and inevitable, since they reduced the overall entry costs for new firms while simultaneously increasing the geographic mobility of the fixed assets needed to provide

---

other's turf.

service. During the late 1940s, the Commission received several applications for private microwave construction permits. Initially, the Commission was inhospitable to these applications. Having largely limited the microwave spectrum to common carrier use, the Commission refused to require AT&T to interconnect with the other carriers' microwave facilities.[4] Some Commissioners claimed that in the absence of interconnection, no common carrier could compete with the Bell System in the intercity video transmission, and thus AT&T had sustained a monopoly in the field of long-distance service.[5]

The Commission's first major break from the old monopoly paradigm, thereby bringing competition to the long-distance market, came with its 1959 *Above 890* order.[6] In *Above 890* the Commission allocated spectrum to private microwave users (especially big businesses) who would use it for their own end-to-end private connections, thereby completely bypassing the established long-distance network.[7] Thus, the *Above 890* decision established an important principle, radical in its time: the established monopoly telephone companies (that is, AT&T or Bell System) enjoyed no presumptive right to carry all long-distance traffic and collect all long-distance revenues (Kellogg 1992: 593).

Nationwide price averaging and the subsidy of local service by long-distance--the very factors that made private microwave systems attractive--also provided an irresistible lure for new entry by 'specialized common carriers' seeking to provide not universal service, but service on specific high-density routes where per unit costs were low but

---

[4] *Establishment of Physical Connections and Through Routes and Charges Applicable Thereto*, 17 F.C.C.2d 152 (1952).
[5] *Id.* p. 175.
[6] *Allocation of Frequencies in the Bands Above 890 Mc*, 27 F.C.C.2d 359 (1959), *recon. denied*, 29 F.C.C.2d 825 (1960) ("Above 890 Reconsideration Order").
[7] Prior to that time, the FCC's general policy had been to license microwave systems only to common carriers and other special entities like the military, right-of-way companies (railroads, pipelines, and power companies) and state and local government agencies involved in police, fire, and highway maintenance

rates were high (Hillman 1984-1985: 1183, 1187-1193). In 1963 the newly formed Microwave Communications, Inc. (MCI) filed an application with the FCC for construction permits for new facilities to provide point-to-point microwave radio service transmission between Chicago (IL), St. Louis (MO), and nine intermediate points.[8] After six years of opposition and foot dragging by AT&T and dissenting Commissioners, the FCC voted 4-3 to grant MCI's application.[9] This was an advance from *Above 890*, in that the new company would operate as a common carrier, and thus the microwave bypass services would become available to smaller users and to users who did not care to operate their own telecommunications facilities.

Until the 1970s there was essentially no competition for long-distance and local telephone carriers as well. AT&T was a *de facto* monopolist of long-distance services, protected by the FCC from competition, as local companies enjoyed public utility monopoly franchises granted by state governments. However, real competition of long-distance services between common carriers (that is, AT&T and OCCs) began with a rule-making proceeding initiated by the Commission to establish an overall policy concerning new entry into the "specialized communications field."[10] In its 1971 *Specialized Common Carrier* order, the FCC announced a new, even more general policy favoring competition in the provision of intercity (long-distance) private line connections.[11] The Commission had not precisely defined the boundaries of this new long-distance market in which competition was to be permitted, but it was being approved for 'specialized,

---

activities. *Id.*
[8] *MCI*, 18 F.C.C.2d 953 (1969), *recon. denied*, 21 F.C.C.2d 190 (1970).
[9] *Id.* p. 953.
[10] *Specialized Common Carrier*, 29 F.C.C.2d 870 (1971).
[11] *Id.*

private line' point-to-point services, not for switched long-distance service generally.[12] In short order, the Commission granted new licenses to various microwave carriers who would now be competing against AT&T.[13] MCI was the first, in early 1972, when it completed its St. Louis to Chicago system and began offering service between these two points; another entrant, Southern Pacific Communications Co. (forerunner of Sprint) also established a bicoastal microwave system by the end of 1973.

Hence, AT&T began to lose its monopolistic power as technological progress such as microwave communications lowered the costs of providing long-distance service and thus began to open new policy-making avenues for telecommunications competition. The FCC's policies, initially unreceptive to new competition, gradually changed, opening the door to new entry in limited market segments. The specialized common carriers' (that is, OCCs') competitive entrance into switched-access long-distance services came only after MCI began to market its *Execunet* service in 1975. The FCC's policy decisions, however, had sustained AT&T's monopoly over switched long-distance telephone services (that is, its MTS and WATS), rejecting MCI's *Execunet* tariffs.[14] However, prodded on by the Supreme Courts' various *Execunet* rulings,[15] which had directed the Bell System and all independent local exchange carriers (LECs)[16] to provide OCCs including MCI with full identical interconnection rights for switched long-distance

---

[12] Nevertheless, in *Execunet I*, discussed below, the D.C. Circuit would subsequently argue that the FCC had failed to make the definition of private line service set out in 47 C.F.R. Section 21.1 expressly applicable to the licenses granted to specialized carriers. *See* MCI v. FCC, 561 F.2d 365, 373-374 (D.C. Cir. 1977), *cert. denied*, 434 U.S. 1040 (1978) ("Execunet I").

[13] *Specialized Common Carrier*, 29 F.C.C.2d 926 (1971).

[14] *MCI*, 60 F.C.C.2d 25 (1976).

[15] MCI Telecommunications Corp. v. FCC, 561 F.2d 365 (D.C. Cir. 1977) ("Execunet I"); MCI v. FCC, 580 F.2d 590 (D.C. Cir. 1978) ("Execunet II"); and Lincoln Tel. & Tel. Co. v. FCC, 659 F.2d 1092 (D.C. Cir. 1981) ("Execunet III").

[16] Local exchange carriers (LECs) are providers of local exchange services, including the Bell companies

services, the FCC opened a new rule-making proceeding and in 1980 formally came to adopt an open entry policy for all interstate services.[17]

Even with full rights to interconnect with local exchange distribution facilities, the cost for the new specialized carriers to deploy a nationwide long-distance network remained prohibitive. Hence, the OCCs wanted the right to interconnect with the Bells' long-distance facilities, in other words, resell the Bells' long-distance services, too. In 1976 the FCC directed AT&T and other carriers to eliminate all resale restrictions from their interstate private line tariffs.[18] From 1979 until 1985, the FCC issued a series of *Competitive Carrier* orders to reduce many of the barriers to effective competition in the long-distance service marketplace related to the share and resale of MTS and WATS services as well as private line services, which were still dominated by AT&T.[19] In 1980, on the heels of the *Execunet II* court ruling, the Commission directed AT&T to remove similar restrictions from its MTS and WATS tariffs.[20] In 1983 the Commission extended resale rights to *intrastate* WATS used for "access" to interstate communication (Haring and Levitz 1987: 261, 263).

In short, in the two decades from 1960 until 1980, the FCC initiated policies to

---

and all independent telephone companies.

[17] *MTS and WATS Market Structure*, Phase I, 81 F.C.C.2d 177 (1980), 93 F.C.C.2d 241 ("Access Charge Order"), *mod'd on recon.*, 97 F.C.C.2d 682 (1983), *mod'd on further recon.*, 97 F.C.C.2d 834 (1983), *aff'd in principal part and remanded in part*, National Assn. of Reg. Util. Commissioners (NARUC) v. FCC, 737 F.2d 1095 (D.C. Cir. 1984), *cert. denied*, 469 U.S. 1227 (1985). *See also* MTS and WATS Market Structure, Phase II, 94 F.C.C.2d 292 (1983).

[18] *Regulatory Policies Concerning Resale and Shared Use of Common Carrier Services and Facilities*, 60 F.C.C.2d 261 ("Facilities Resale"), *mod'd on recon.*, 62 F.C.C.2d 588 (1977) ("Resale and Shared Use"), *aff'd*, AT&T v. FCC, 572 F.2d 17 (2d Cir.), *cert. denied*, 439 U.S. 875 (1978).

[19] *Competitive Carrier*, Notice of Inquiry and Proposed Rulemaking, 77 F.C.C.2d (1979).

[20] WATS was a discount service for volume users; MCI and other specialized carriers were targeting those same users. The new entrants viewed WATS as their most difficult competitor and frequently complained that WATS prices were being manipulated and artificially depressed to thwart the new competitive challenges. *See* Regulatory Policies Concerning Resale and Shared Use of Common Carrier Domestic Public Switched Network Services, 83 F.C.C.2d 194 (1980) ("Switched Network Resale").

bring competition to the long-distance market step by step. However, during this period there was no direct assault on the Bell System's venerable long-distance monopoly, even though the erosion of monopoly began to come on the technological flank with microwaves, satellites, coaxial cables, and mobile radio services and many of the barriers to effective competition had been reduced with the advent of various business and public/governmental interest groups.[21] By the early 1980s, the regulated AT&T business group still appeared to dominate the long-distance service market domain in light of its high (over 90%) market share of long-distance service revenues.[22]

Under the atmosphere of political concern about the on-going domination by AT&T of the long-distance service market in the early 1980s, the Bell System divestiture was under way in the political battles among the Commission, federal courts, Congress, the Justice Department, and AT&T. With the superficial goal to facilitate more heightened competition in the long-distance telephone service market which had been still dominated by AT&T even after the implementation of various "pro-competitive" policy initiatives, the federal regulators came to execute the historical break-up of AT&T effective in 1984 by separating twenty-two BOCs from AT&T and grouping them into seven Regional Bell Holding Companies (RBHCs). The 1982 divestiture decree made AT&T lose any ability either to subsidize the prices of its interexchange service with revenues from local exchange services or to discriminate against its long-distance competitors through its control of bottleneck local interconnection facilities, and thus made AT&T implement equal access for interstate long-distance telephone service to all

[21] *See* Haring and Levitz 1987: 261, 263.
[22] *See FCC Records*. Vol. 1, No. 1 (1986) through Vol. 11, No. 6 (1996).

old and new common carriers.[23]

In particular, the express equal access obligations in the 1982 divestiture decree resulted in a more competitive setting for long-distance service provision, situating the downsized AT&T, MCI, and all other new carriers as equal customers of the RBHCs, entitled to equal treatment. As the divestiture decree obligated the RBHCs to treat all long-distance carriers equally, the FCC was forced to proceed with policy-making for equal access. By 1985, the FCC adopted and implemented equal access rules. That is, the Commission directed all local exchange carriers (including RBHCs) to undertake equal access conversions.[24] In 1986 the FCC ordered owners of basic transmission facilities to provide equal access to planned changes in network design or inter-carrier connections.[25] In 1990 the Commission ruled that pay phone operators might not block customers' access to the long-distance carrier of choice.[26] Thus, detailed rules to implement an orderly transition to competition--aimed at assuring equal access for both providers and users of long-distance service--were almost fully in place. That is to say, these equal access rules came to cover both switched and private line services, both business and residential phones as well as pay phones, and business operating toll-free numbers. The long-distance market appeared to respond these competitive regulatory changes. In the early 1990s, over 97 percent of all Bell company lines and 91 percent of total lines were covered to support '1 + dialing.'[27] AT&T's two largest competitors, MCI

---

[23] United States v. AT&T, 552 F. Supp. 226-234 ("1982 Decree").
[24] *MTS and WATS Market Structure*, Phase III, 100 F.C.C.2d 860 (1985) ("Phase III"); *Investigation into the Quality of Equal Access Services*, 60 Rad. Reg. 2d (P&F) 417, 419 (1986) ("Equal Access Quality Investigation").
[25] Amendment of § 64.702 of the Commission's Rules and Regulations (Third Computer Inquiry), 104 F.C.C.2d 958-1086 (1986) ("Computer III").
[26] *See* "Pay-Phone Users to Get Access to their Carriers." Wall Street Journal, July 12, 1991. p. A7, col. 5.
[27] '1 + dialing' or '1 + access' means a local exchange service that automatically routes a subscriber's

and Sprint, were buying equal access in every state,[28] and as of 1994 more than 400 carriers were competing in one segment or another of the long-distance market (Hundt 1994).

After the historical AT&T divestiture, other common carriers were slowly but surely expanding their presence in the market. During the period of 1984-1995, many of the entry barriers that had previously restricted competition in the long-distance telephone service market, including both regulatory and technological barriers, were eliminated or substantially reduced by FCC policy decisions through rule-making proceedings. However, it was also evident that competition did not completely replace AT&T's monopolistic power in the market even after the divestiture. Although AT&T market share had declined steadily, it was still taking the largest volume of toll revenues.[29] Such domination by AT&T of the long-distance marketplace, even after the break-up of AT&T (effective in 1984) is in part due to the policies where the FCC as well as a U.S. district court that administered the 1982 antitrust decree still have constrained much of the new telecommunications rivalry. At any rate, by the early 1990s, AT&T remained subject to significant regulation of its long-distance operations and the FCC's 1980 classification of AT&T as a "dominant carrier" was not rescinded. Many analysts (e.g., Kaserman & Mayo 1988; Kahn 1990; and Noll and Rogers 1990) criticized the FCC's "pro-competitive" regulations regarding AT&T. They argued that although competition was

---

interLATA (long-distance) calls to the interexchange carrier chosen by the subscriber in advance. One alternative to 1 + access is to dial additional digits and access codes. *See* Industry Analysis Division, FCC. Trends in Telephone Service. p. 21.

[28] *Interexchange Competition*, 5 F.C.C. Rec. 2633.

[29] By 1990, with its toll revenues virtually unchanged, AT&T's share of total industry toll revenues had decreased to approximately 65 percent, but it was still the largest revenue. In addition, AT&T's share of the market for interstate switched minutes was about 62 percent in the third quarter of 1991. *See* Industry Analysis Division, FCC. Long-Distance Market Share. p. 1.; Industry Analysis Division, FCC. Third

evident in all aspects of the long-distance market, it was impossible to ascertain whether the FCC's pro-competitive schemes had been in fact protecting consumers or working to the advantage of sheltered smaller competitors. However, ironically their suggested solution was not more regulation of AT&T but quick deregulation of AT&T. Indicating the relief of many of AT&T's competitors, they condemned that the FCC's ongoing asymmetric regulation would protect potentially inefficient entrants, depriving consumers of the benefits of active competition. Taking a position that competition had increased sufficiently to remove many constraints to inflict AT&T's activities of interstate long-distance service provision, the FCC was proceeding streamlined regulation schemes for AT&T through its *AT&T Price Cap Order* of 1989 and its approvals of a series of AT&T's customer-specific contract tariffs in the early 1990s. Hence, the U.S. telecommunications regulators were said to be "captured" by the only long-term monopoly interest group (that is, AT&T) they regulated, even after the divestiture in 1984 which brought more competitive telecommunications setting favorable for other common carriers and AT&T Corporation as well (Peter 1991: 495-513).

As suggested above, over the period from the early 1960s through 1995, the FCC initiated some policy changes for more competitive long-distance service market by making decisions to reduce or remove the entry barriers to effective competition in the U.S. long-distance service market. In many cases, especially after the break-up of AT&T in 1984, FCC policy decisions were based on the federal regulator's tentative conclusion at each time that competition had increased sufficiently to allow a gradual lifting of many of the constraints then binding AT&T's provision of interstate long-distance services

---

Quarter Market Share. p. 6.

which the FCC believed to be the most vigorously competitive. Hence, the FCC tried to retain ongoing regulatory safeguards for AT&T's primary long-distance services (e.g., domestic toll MTS and *ReachOut America* services) purchased by American consumers. As a result, the FCC's orders (through rule-making procedures) were made in AT&T's favor in some cases, favoring other common carriers (OCCs) in other cases, or even beneficial for both parties, even though each party tried to appeal to the courts and thereafter original decisions were sometimes reversed.

Over the period from the early 1960s to 1995, FCC policy decisions were affected by the activities of the regulated long-term dominant business group (i.e., AT&T Corp.), various pubic interest groups including private individuals and consumer organizations, and political institutions including Congress, the President, the courts and the federal regulatory agency itself.

The long-term regulated monopoly firm, AT&T Corp. and a number of new long-distance service companies such as MCI, U.S. Sprint, Telecom U.S.A, Allnet, USTS, and Cable & Wireless also showed great persistence and skill in obtaining the resources and authority to enter the market and came to file their complaints against each other. Besides these other common carriers or interexchange carriers, various public interest groups or consumer user groups (e.g., Ad Hoc Telecommunications Users Committee, Consumer Federation of America, National American Telecommunications Association, the bank coalitions, educational institutions like public universities, and individual American citizens) and even government organizations (e.g., Department of Defense, other executive offices, state public service or utility commissions, etc.) filed petitions or complaints to demand policy decisions to continue to weaken the monopolistic position

of AT&T in the long-distance service market. News media groups were getting more involved as allies of public interest groups by putting their petitions together against AT&T. Of course, AT&T and its affiliates also immediately resisted by filing opposite petitions.

In addition to the influence of private and public interest groups, the impacts of key political institutions such as the congressional committees and subcommittees, the Presidents, the courts, and the FCC were evident from the policy-making proceedings regarding long-distance telecommunications service matters over the period. The federal legislators (e.g., the Subcommittee on Communications in the Senate; the Subcommittee on Telecommunications and Finance in the House; etc.) had some impacts on FCC policy-making by increasing or cutting the FCC's annual budgets. Prominent political figures (that is, the Presidents) in the White House influenced FCC policy decisions by appointing and reappointing new commissioners. That is, the Presidents could have some impacts on FCC policy-making process through their own leadership, partisanship, and appointive power. In reality, there are many decision cases where new FCC Commissioners opposed the FCC's final decisions by expressing different opinions in favor of AT&T or against it. The courts also appeared to have influenced FCC policy decisions by upholding or reversing its decisions. In many cases, the FCC reversed its previous policy decisions according to the courts' ruling by mentioning the specific legal cases.

Given the facts in the U.S. federal long-distance service policy-making processes above, *theories of regulation* provide possible explanations of regulatory settings and regulatory policy change in the government regulation of business--that is, the FCC's

adjudicative rule-making decisions--by combining insights from interest group theories with insights about the role of political institutions. Many political scientists (as indicated in Chapter 2) have emphasized both the power of interest groups and the roles of political institutions in affecting regulatory policy decisions regarding the relationship between government and regulated business. In recent years, their foremost interests have been theory development and empirical testing of the impacts of factors stemming from interest group theories and institutional theories of regulation. Such policy studies on regulation have been extended to explore the interaction of political economic factors influencing policy-making procedures by combining explanations from the economic theory of regulation, the emerging works on political institutions, and theories of interest group organization to gain insights into regulatory regimes (see, esp., Rothenberg 1994). In the current studies of regulation, emphasis is frequently placed upon the interactive roles of political institutions such as Congress, the President, the courts, and agencies in shaping policy decisions and controlling regulatory policy-making (see, e.g., Moe 1985; Wood 1988; Wood and Waterman 1991, 1993; Hammond and Knott 1996).

The analysis examines the factors influencing the FCC's adjudicative rule-making decisions regarding the long-term dominant long-distance telephone carrier (i.e., AT&T) in the U.S. federal long-distance service regulation over the period from 1965 to 1995. I explore simultaneously the impacts of interest group politics, institutional differences, and the roles of other contextual factors on FCC policy decisions. The study explores the modes of interactive impacts that are coming from the federal regulatory agency, the long-term regulated monopoly business group, other long-distance carriers, external public/consumer interest groups, and three main political institutions (Congress, the

Presidents, and the courts). Then, in order to assess the interactive ways of interest group power, institutional influence, and other contextual impacts over the federal long-distance regulatory policy-making regarding AT&T, I develop and test a statistical model which characterizes the conditions under which the FCC adopted the policies through adjudicative rule-making decisions for American public and OCCs in the interstate long-distance service matters, but actually made policy decisions favoring AT&T's petitions in a large amount of cases or rejecting them in other many cases.

RESEARCH QUESTIONS

The purpose of this study is to analyze policy decisions (i.e., adjudicative rule-making decisions) made by the Federal Communications Commission regarding AT&T in U.S. interstate long-distance service matters, over the 31-year period of 1965-1995, by applying regulation theories regarding interest group power and the roles of political institutions.

The central questions for the study are:

- What are the determinants of the U.S. federal telecommunications policy decisions regarding the U.S. long-distance service market over the 31-year period, from 1965 to 1995?
- What accounts for the FCC's long-distance service policy decisions for and against the interests of the regulated interest group, AT&T, over the period? What kinds of political economic conditions permitted AT&T to get what it wanted from the FCC's regulatory policy-making? Under what conditions did AT&T's

competitors and American public obtain what they pursued from FCC policy decisions?

More specifically,

- Do the traditional interest group theories or/and institutional approaches adequately determine the dynamics of FCC policy decisions (i.e., adjudicative rule-making decisions) on AT&T's petitions in the U.S. long-distance service market over the period from 1965 through 1995?
- Did a special interest group, AT&T, dominate FCC policy decisions regarding interstate long-distance service matters, consistent with the traditional capture theories over the period? If AT&T was able to dominate FCC policy decisions, it may indicate some evidence of "capture" by the regulated dominant interest group. It may also mean that it was difficult for OCCs and other consumer interest parties representing public interest to change the federal regulators' decision making process in behalf of themselves during the regulatory period.
- Were the impacts of political institutions (such as the congressional committees, subcommittees, and chairmen), the President, the courts, and the FCC itself) upon FCC policy decisions on AT&T's petition(s) significant during the regulatory period?
- Did the roles of political institutions interact with interest group power to influence FCC policy decisions made for and against AT&T interest over the period?
- Were FCC policy decisions on AT&T petitions affected by other contextual factors as well as various interest groups or/and political institutions over the

period?

In addition, I conduct the analysis within two separate time periods:

- Is each theory more appropriate to assess FCC policy decisions in certain time periods: the first 19-year period (1965-1983) before the break-up of AT&T, the second 12-year period (1984-1995) after the event, or both periods?

More specifically,

- Does the capture theory explain correctly FCC policy decisions favoring AT&T in the long-distance service matters during the period of 1965-1983 rather than during the period of 1984-1995 or else over the total period of 1965-1995?
- Did the political institutions strongly affect FCC policy-making during the period of 1984-1995 rather than during the period of 1965-1983 or else over the total period?
- Did other contextual factors or factors representing public interest have strong impacts on FCC policy decisions during the period of 1984-1995 rather than during the period of 1965-1983 or else over the total period?

In short, over the 31-year period from 1965 to 1995, the FCC initiated many policy decisions (i.e., adjudicative rule-making decisions), approving AT&T's petitions in some cases or rejecting them in other cases, regarding the various long-distance service matters, although the federal regulators frequently expressed to facilitate more deregulatory settings for OCCs or American public. Hence, this study assesses whether FCC policy decisions in the U.S. federal long-distance telecommunications service market were dominated ("captured") by the regulated AT&T interest group, strongly affected by key institutional factors (such as Congress, the Presidents, the courts, and the

FCC itself), or/and controlled by other contextual factors over the long-distance service regulatory period from 1965 to 1995. The relative and simultaneous effects of interest group power, political institutions, or/and other contextual factors are estimated upon FCC policy decisions on AT&T's petitions during the regulatory period.

FRAMEWORK OF THE ANALYSIS

The relative effects of the regulated interest group, other public interest groups, political institutions, and contextual factors on FCC policy decisions on AT&T's petitions regarding the U.S. long-distance service matters are assessed by statistical model—'logistic regression.' A total analysis is first carried over the whole regulatory period of 1965-1995, and then the assessment is carried within two separate time periods (that is, the first 19-year period of 1965-1983 and the second 12-year period of 1984-1995). This indicates that in the analysis, I consider two important regulatory events: the *Above 890* order in 1959 and the AT&T divestiture effective in 1984.

I selected 1965 as a starting point of the study because it was the year when the petitions by other interexchange carriers against AT&T regarding long-distance service matters and FCC policy decisions on the petitions appeared noticeably in the FCC's documents (i.e., FCC Reports). The FCC's 1959 Above 890 order initiated for the first time a federal policy to break the old monopoly paradigm dominated by AT&T. According to the FCC Reports, the Above 890 order, however, did not result in any substantial competition between interexchange carriers in the long-distance service

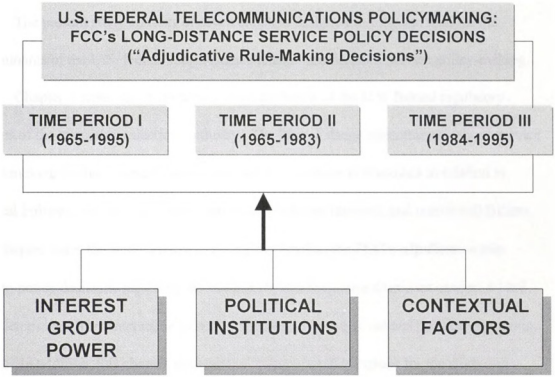
market. Competition in the provision of interstate long-distance services was not active, because local telephone companies had to totally depend upon AT&T and its affiliated 22 BOCs for long-distance connections to other business companies. According to the *FCC Reports*, during the period 1965-1971, there were no petitions against AT&T by other interstate long-distance telephone carriers, but instead a small number of petitions against AT&T were filed with the Commission by teletypewriter carriers, state public utility commissions (PUCs), individuals, interexchange record carriers (IRCs). Substantial competition between long-distance carriers was brought by the Specialized Common Carrier order in 1971 when the FCC began to allow other common carriers such as MCI and Western Tele-Communications, Inc. (called "Specialized Common Carriers" at that time) to enter the interstate long-distance service market with the goals of triggering substantial competition in the provision of long-distance services and protecting public interest.

I selected 1984 as a diverging point of the study because effective on 1 January 1984, the monopolistic giant carrier AT&T was broken up by separating twenty-two Bell Operating Companies (BOCs) from it and grouping them into seven Regional Bell Holding Companies (RBHCs). A new more competitive setting began to emerge because the AT&T divestiture removed discrimination and cross-subsidization, two of the principal practices by which AT&T could engage in anti-competitive practices, and required the local exchange companies to provide all interexchange carriers with access that is "equal in type and quality" to that provided to AT&T. Hence, it is noted by many critics that by setting more competitive long-distance market through removal of many entry (regulatory and technological) barriers, the AT&T break-up of 1984 made

substantial impacts upon the on-going FCC policy-making.

With the help of theoretical and statistical models that are linked to the practical policy arena of U.S. federal long-distance service regulation, this study is analyzed as expressed in the following **Figure 1**.

Figure 1. Framework of the Analysis



OVERVIEW OF THE ANALYSIS

The present study consists of seven chapters designed to seek and analyze the determinants of the U.S. federal long-distance telecommunications service policy-making.

Chapter 1 states the characteristics and problems of the U.S. federal regulatory policies of the telecommunications industry. The long-distance telecommunications service policy-making by the Federal Communications Commission is discussed in relation to political influence by various institutional actors, industry interests, and contextual factors. This chapter states the study's purpose to explore whether the FCC's adjudicative rule-making policy decisions regarding the petitions by the long-term dominant carrier, AT&T, were determined from interactive patterns of influence between various political economic factors. In addition, this chapter presents the main research questions for the study and explains the approach of the analysis.

Chapter 2 introduces theories of regulations concerning political economic control over regulatory policy settings in relation FCC policy-making. This chapter also deals with main studies applying regulatory theories and integrating the interest group and institutional views, particularly as they apply to the federal regulatory decisions regarding long-distance telecommunications service matters. The study of the FCC's adjudicative rule-making decisions is compared with previous studies on bureaucratic agencies' various regulatory policies.

Chapter 3 examines the political context and history of the U.S. federal telecommunications regulatory policies regarding long-distance telecommunications service matters involving AT&T's activities in the market and presents the FCC's legal rights and

responsibilities and its political relationships between other political actors.

Chapter 4 explores FCC policy-making through rule-making and adjudication and shows the political context of FCC policy decisions. This chapter also shows that the FCC made various regulatory policies through adjudicative rule-making and discusses in detail its adjudicative rule-making policy decisions (i.e., MO&Os and R&Os) regarding long-distance telecommunications service matters occurring between AT&T and other common carriers or other public/consumer organizations.

Chapter 5 shows a descriptive analysis of FCC policy-making, considering various causal factors. This chapter explains the statistical model ('logistic regression') of the FCC's adjudicative rule-making policy decisions characterizing the conditions under which the FCC adopted the policy-making for and against AT&T's petitions. For the quantitative model, the hypotheses deduced from the theoretical perspectives will be constructed, and the variables will be defined and operationalized.

Chapter 6 tests the hypotheses by applying the logistic regression model to the FCC's adjudicative rule-making policy decisions regarding the U.S. long-distance telecommunications service matters with the help of STATA program. Thus, this chapter presents my findings about the federal long-distance telecommunications service policy-making and interprets the results of the logistic regression analyses in relation to theories of regulatory policy-making and institutional roles.

Chapter 7 summarizes the results of the study and provides common key points from the statistical analyses in the concluding remarks concerning the major findings. At the end, I mention the directions of future research to advance our understanding regarding the U.S. federal telecommunications policy-making.

Chapter 2

THEORETICAL REVIEW AND COMPARISON WITH OTHER STUDIES

This chapter introduces theories of regulation concerning political economic control over regulatory policy-making in relation to FCC policy-making. In addition, this chapter deals with main studies applying regulatory theories and integrating the interest group and institutional views, particularly as they apply to the FCC's regulatory decisions regarding long-distance telecommunications service matters. Hence, the study of the FCC's adjudicative rule-making decisions is compared with previous studies on bureaucratic agencies' various regulatory policies.

1. THEORETICAL REVIEW

There is a substantial body of literature dealing with the interest theory and the roles of public institutions. A number of political scientists have confirmed the importance of interest group politics in shaping specific regulatory policy-making through statistical and theoretical models (see, e.g., Sabatier 1975; Berry 1979, 1984; Gormley 1983, 1986). The most important contributions to theories of regulation came from a body of works that demonstrated the influence of political institutions such as Congress, the President, the courts, and the agencies over policy-making process in special regulation arena (see, e.g., Weingast and Moran 1983; Moe 1985; McCubbins, Noll, and Weingast 1987; Wood 1988; Ferejohn and Shipan 1990). Recently, political scientists

have started to demonstrate some ways in which both interest groups and institutional factors interact to influence the regulatory policy-making process (see, e.g., Rothenberg 1994; Olson 1996; Harris 1996). The important studies on political institutions' joint control over bureaucratic policy-making have been accomplished by some of political scientists (see, esp., Hammond and Knott 1996).

The foremost *theories of regulation* developed by social scientists are: the *public interest theory*, the *capture theory*, the *interest group theory*, and the *institutional model*. For past years, most studies of regulation regarding the relationship between government and regulated industries made use of either the *public interest theory* or the *capture theory*. *Public interest theory* explains regulation as consumer protection, while *capture theory* explains regulation in terms of producer protection. *Public interest theories* of regulating monopolies, which were originally based on the assumptions of inefficient markets and costless government regulation (Pigou 1932; Davis 1958; Bonbright 1961; and Friendly 1962), state that industries affected with the public interest are subject to regulation (Weiss and Strickland 1982). According to *public interest theory*, federal regulation began as a way to curb the power of industry monopolies (like AT&T) and was designed to protect consumers from exploitation by producers.

These *public interest theories* were challenged by both political institutionalists and economists who questioned the ability of the regulatory agencies to avoid being captured by the regulated industries. The *capture theory of regulation* (Posner 1974) was developed in two overlapping versions. A political version of the capture theory is *interest group theory* that describes the relations between business and government as the byproducts of competition by interest groups seeking to influence public policy. In other

words, *interest group theory*, developed by political scientists who were mainly interested in institutional issues (Bentley 1908; Beard 1913; Truman 1951; Latham 1952; Mott 1952; Huntington 1952; Bernstein 1955; Schattschneider 1960; McConnell 1966; Edelman 1967; Lowi 1969; Sabatier 1975; Krasnow and Longley 1978; and Kelman 1980), implies that regulatory agencies attempt to compromise with competing interest groups seeking to affect policy-making process. Olson's (1965, 1982) *theory of collective action* helped to bridge the gap between political interpretation and the economic approach on the government-business relations. He argues that in the collective action problem, private interests of concentrated small groups are expected to be supported by government regulators. An economic version of the capture theory was developed by economists, especially Stigler (1971), Peltzman (1976 & 1989), and Becker (1983 & 1985). In his *economic theory of regulation*, Stigler (1971) insisted that the government regulations would confer monopoly benefits on regulated industries which seek to harness the coercive powers to further their own economic ends such as control over entry and price fixing. His argument implies that regulation is a powerful mechanism for the guarantee of the producer interest over the consumer interest. Peltzman (1976) revised Stigler's theory by claiming that regulatory agencies would not exclusively serve a single economic interest. He argued that regulation is likely to confer benefits on several politically influential groups, so neither producers nor consumers will get all they seek from government regulation. Furthermore, Becker (1983, 1985) argues that competition between groups is a positive sum game with a cost, usually deadweight, which induced taxed groups to discourage subsidies. He says that since the political allocations resulting from competition among pressure groups are implemented by politicians and bureaucrats,

"a more general analysis would incorporate this principal-agent relation between bureaucrats, politicians, and pressure groups into the determination of political equilibrium" (Becker 1983: 396).

Both versions--political and economic--of *capture theory* suggest that regulators serve the private interests of politically effective groups and provide a theoretical foundation for the 'producer protection' viewpoint that the private (or producer) interest prevails over the public (or consumer) interest. Regarding the relationships between federal agencies and the regulated economic interests, Sabatier (1975) indicated that the FCC as a federal agency had apparently become dominated after a period of time by AT&T, the very economic interest they were supposedly regulating. The capture theory fits hand-in-glove with the *subgovernment theory*,[30] predicting that special interest groups dominate policy decisions in regulation. Bernstein (1955), Huntington (1952), Lowi (1969), and Fiorina (1995) all have emphasized that the "iron triangles" relationship between interest groups, congressional committees, and government agencies were condemned for having "captured" the policy process in the course of constant mutual interaction, which subverted the principles of popular democracy by ensuring that their own self-interests prevailed over those of the general public. They suggested that if

[30] The literature on policy subgovernments and their theoretical applications to the policy areas is quite extensive. *See* Cater 1964; Freeman 1965; Davidson 1976; Helco 1978: 87-124; Weingast 1981: 147-177; Berry 1984: 524-558; Ripley and Franklin 1984; Hamm 1986: 321-351; Browne 1987: 47-86; Berry 1989: 239-260; Blakely 1990; Fiorina 1995; Howlett and Ramesh 1995; Harris 1996; and Gambescia 1996. However, even though the subgovernment politics model remains popular, many contemporary scholars of American national policy-making have questioned the subgovernment approach as an appropriate analytical tool in the light of emerging political and socioeconomic changes which they believe are taking place in the various policy fields including the long-distance telecommunications service policy. They all agree that the policy-making processes involve a less stable, less predictable, and less restricted group of participants than under the iron triangle imagery. Some scholars detected subgovernments having given way to more loosely organized policy network, while others simply find the concept of diminishing relevance. *See also* Davidson 1976; Helco 1978; Ripley and Franklin 1987; Berry 1989; Fiorina 1995.

regulatory agencies are captured by special interest groups, then the public interest be perverted into a private distributive relationship between the federal regulator and the cartel, with the overt sanction of or tacit consent by Congress. Thereby, the capture concept may imply the operation of an institutional structure known as the subgovernment.

By quoting the argument of Peltzman (1976), Weingast (1981) also emphasized that regulation may benefit organized industry groups like AT&T instead of consumers within the broad political system. He indicated that because more concentrated producers have both lower organization costs and higher individual stakes in regulatory policy, they provide greater political support to the regulator in the subgovernment formation. However, he also illustrated how institutions outside a subgovernment may substantially influence the course of policy-making in the three regulation arenas (that is, Airline deregulation by the CAB, common carrier regulation of the telephone system by the FCC, and nuclear power regulation by the AEC). Moe (1985) has indicated that the classic notion of the "iron triangles" is a familiar by-product of the general perspective on the causal structure of regulatory performance, which emphasizes that public agencies' policy-making processes are shaped by complex systems of relationships between regulatory agencies and a variety of political and economic factors. Shields (1991) also showed some evidence that even after the AT&T divestiture facilitated more competitive setting for other business actors in the U.S. long-distance telephone market, the federal regulator was captured by AT&T's monopolistic power in the long-distance marketplace. He indicated that the FCC's *AT&T Price Cap Order* of 1989 and other competitive policy decisions for other common carriers (OCCs) induced cartelization of AT&T and its

affiliates and the protection of inefficient competitors (Shields 1991: 495-513). In addition, Harris (1996) suggested that capture might refer to distributive politics (Palamountain 1955) which implies congressional influence over bureaucratic decisions favoring special interest groups (Rundquist and Ferejohn 1975). Suggesting that the subgovernment theory is a unifying conceptual framework for competing theories of regulation such as the public interest, capture, distributive politics, and neoclassical economics theories, in the same context of Weingast (1981), he indicated that in many policy areas, the federal regulators are "captured" by the very industry monopoly group they regulated, often under the mechanism of subgovernment politics.

However, many political scientists asserted that regulatory policy-making is not dominated simply by interest group pressures and suggested that the influence of political institutions on regulatory policy must not be disregarded in the regulatory policy analyses (see, e.g., Wilson 1980; Quirk 1981; Moe 1984, 1985, 1987; Derthick and Quirk 1985; Robyn 1987; Shepsle 1982, 1989). They note that most traditional economic theories of regulation neglected the roles of political institutions and did not explore simultaneously the impacts of both interest groups and political institutions.

Many political scientists emphasized the dominant influence of Congress (especially its committee and subcommittee system) over the bureaucracy (Fiorina 1977; Weingast 1981, 1984; Weingast and Moran 1983; McCubbins and Schwartz 1984; McCubbins 1985; Moe 1987; Calvert, Moran, and Weingast 1987; McCubbins, Noll, and Weingast 1987; and Ferejohn and Shipan 1990). Other political scientists explored the roles of other political institutions such as the President, the courts, and the agencies in the regulatory policy-making. Some scholars explored the impact of the President on

regulatory decision-making (Wildavsky 1964 & 1978; Moe 1985; Kiewiet and McCubbins 1988; Waterman 1989). Others maintained that bureaucratic policy-making was significantly constrained by the courts (Breyer and Stewart 1992; Macey 1992; Davis and Pierce 1994; Mashaw 1994; West 1995). Others asserted that the bureaucratic agencies were still autonomous enough to maneuver or balance political controls from the President, Congress, and the courts (Dahl and Lindblom 1953; Moe 1985; Bryner 1987; Miller 1992). Furthermore, political scientists studied ways to combine explanations from the interest group theories, the economic theory of regulation, and the emerging works on the role of political institutions (Wood and Waterman 1991, 1993; Rothenberg 1994; Harris 1996; and Hammond and Knott 1996). Recently, Hammond and Knott (1996) developed an explicit theory of how the President, Congress, and the courts interact to influence bureaucratic policy-making by presenting a formal model of multi-institutional policy-making. They suggest that a complete picture of the bureaucratic policy-making process could result from an analytical framework that considers the joint control of all key political institutions such as the President, Congress, and even the courts.

Over the period 1965-1995 in which actual competition in the provision of long-distance services proceeded in the U.S. long-distance market domain, FCC policy decisions (i.e., adjudicative rule-making decisions) were made in favor of the regulated monopolistic interest group, AT&T, in many cases, although initiated with the purposes of promoting competition and protecting American consumers in the U.S. long-distance service market. FCC policy decisions were influenced by various interest actors, political institutions, and some contextual factors. They were not only from the regulated long-

term dominant business group (i.e., AT&T), the other competitive long-distance service carriers (i.e., OCCs or IXCs), other telecommunications industry organizations (e.g., cable companies and telecommunications equipment industry), and various external interest groups (e.g., private individuals, public interest groups, and press or broadcasting coalitions), but also from political institutions including the congressional subsets (i.e., committees, subcommittees, and chairmen), the Presidents, and the courts (that is, the U.S. Supreme, Appeal, and trial courts). Accordingly, the previous studies on capture theory and the roles of political institutions provide important insights into interest group power and institutional influence over FCC policy decisions (i.e., adjudicative rule-making decisions).

2. COMPARISON WITH OTHER STUDIES

In relation to my study of the FCC, particular attention is paid to several recent literatures in political economy which attempted to explain regulatory agencies' decision-making by developing sound frameworks to understand the factors to which regulatory agencies respond and examining how these factors may influence agency decision-making. Among them are Mary Olson's (1996) study of the Food and Drug Administration (FDA) enforcement policy, Wood and Waterman's (1991) study of various agencies, John Scholz's (1991) study of state-level Occupational Safety and Health Administration (OSHA) enforcement policy, Weingast and Moran's (1983) study of the Federal Trade Commission (FTC), Terry Moe's (1985) study of the National Labor Relations Board (NLRB), and Paul Teske's (1990, 1991) cross-sectional study of state-

level telecommunications policy choice.

Summarizing these studies, I will show some relevance to my study of FCC policy-making, in relation to whether the kinds of decisions being studied are similar to those of FCC policy decisions I am studying and whether the causal mechanisms that are identified by these other studies might apply to those of FCC policy decisions. All these studies give some insights to understand why regulators choose some actions over others in the regulatory settings where a diverse set of political and economic interests influences policy-making or change, and ultimately enhance our understanding of bureaucracy's regulatory behavior and regulatory theory as my study of the FCC does.

Mary Olson's study (1996) of the FDA is similar to my study of the FCC in light of the fact that she develops an analytical framework to understand how the agency responds to political/economic influence derived from changes in the regulated industries, in the political environment, and among consumers and explores how these changes may create opportunities for substitution among the agency's actions. This framework was used to explain the changing portfolio of FDA "enforcement" actions between 1972-1992. Over the period 1972 through 1992, the FDA accomplished inspections to monitor whether the firms were complying with FDA guidelines, and then pursued several different courses of enforcement activities against the firms, including seizures, injunctions, prosecutions, and recalls. There were reductions in some resource-intensive FDA enforcement activities (that is, seizures, prosecutions, and injunctions) over these twenty years, while FDA product recalls increased during the period. She indicates that the changing mix of FDA enforcement actions represents a change in FDA policy. Using the *external signals framework*, she asserts that the variation in an FDA enforcement

action may be explained as a function of signals from Congress (the agency's budget and oversight), signals from the regulated industries (the number of approval applications submitted by these industries and past FDA violations), and signals from consumers (the Adverse Drug Reactions reports), including control variables for the different presidential administrations. From the empirical test results, she derives a result that the change in FDA enforcement behavior, that is, its substitution of some regulatory actions (less resource-intensive enforcement actions, i.e., recalls) for others (more resource-intensive enforcement actions, i.e., seizures, prosecutions, and injunctions), observed between 1972 and 1992, was caused by the changing signals from Congress, the regulated industries, and consumers, and not by the changing budget costs of FDA's individual enforcement actions.

Hence, her study's contribution to regulatory theory development regarding the relationship between government and regulated business may be a finding that regulators are responsive to a diverse set of interest factors outside the agency, in contrast to theories that suggest that regulators are either captured by industry, are dominated by Congress, or serve the public interest. In relation to variables, she used the terms of "signals" from Congress, the regulated industries, and consumers, but the terms are just indicators for the variables in usual empirical studies. At any rate, some indicators of the independent variables (Congress, the regulated industries, consumers, and presidential administration) considered in her function may be applicable to my study of the FCC. In addition, the FDA "enforcement" actions she studied are not general policy-making by regulatory agencies through general rule-making or adjudication. Rather, the agency's enforcement activities are used to compel violators to comply with its regulatory requirements, after

directed by orders resulting from rule-making or adjudicative decisions. As I will explain later, every agency has been making its policies through rule-making or/and adjudication. Here, a point of note is that my study is dealing with FCC policy decisions (that is, adjudicative rule-making decisions) that contain both characteristics of rule-making and adjudication, as explained later.

John Scholz's study (1991) of state-level Occupational Safety and Health Administration (OSHA) "enforcement" actions also gives some insight into my analytical framework of political control over bureaucratic outputs. His empirical results indicate that cooperation between policy beneficiaries and opponents in the political interest groups does enhance the impact of enforcement in reducing workplace injury rates in the narrow administrative game but that policy beneficiaries oppose and sabotage cooperation in the settings of principal-agent control[31] and collective action problems. These findings in the state-level OSHA enforcement provide evidence that regulatory enforcement outputs in the occupational safety and health policy arena are responsive to the demands of interest groups and their elected representatives (governor and state legislature and their federal counterparts, the President and Congress).

In Scholz's analysis, the dependent variable was measured by a single scale of effectiveness of enforcement actions (i.e., serious citations, inspections, and penalties) which were estimated in reducing industrial injury rates from 1976 to 1985 for each of the

[31] Quoting Moe (1984), Scholz argued that the hierarchy of controls from interest groups through elected representatives to bureaucratic leaders and their subordinates could be represented as a hierarchy of principal-agent games and that the administrative game takes place within a political context with asymmetric information problem in which political principles desires the bureaucratic agent to perform certain tasks and devises some incentive scheme to get the self-interested agent to perform as desired.

34 states.[32] Enforcement effectiveness appeared to increase by interest group strength (that is, labor involvement) and the partisanship of elected officials (that is, party of governor). In addition, in the separate empirical analysis of factors influencing level of enforcements, he found that labor and their liberal (that is, Democratic) congressional representatives were significantly associated with higher levels of enforcement, while business and their conservative (that is, Republican) representatives decrease the level of enforcement. Also, the presidential-federal administration decreased the level of enforcement in states with federal enforcement. Hence, OSHA provides one of the better opportunities to analyze the relationship between political interests and enforcement effectiveness. Scholz's empirical analysis generally confirms the expected responsiveness of agency outputs to the partisanship of Presidents and governors, congressional delegates, and interest group strength, as estimated in my study of FCC policy decisions.

Wood and Waterman's (1991) study of various agencies also contributes to the growing number of empirical studies that explore the dynamics of political control of the bureaucracy. In order to show the causal mechanisms of political control across multiple agencies, they examined time series from seven different public bureaucracies[33] for responsiveness to political tools applied in the late Carter and early Reagan administrations. Considering both timing and covariation between independent political

[32] Enforcement measures included the annual number of inspections, serious citations, and penalties per worker in manufacturing, which were provided by OSHA. The measure of workplace injuries included lost workday injury and illness incidence per worker.

[33] The sample of agencies in their analysis consists of: three independent regulatory commissions (the Equal Employment Opportunity Commission, the Federal Trade Commission, and the Nuclear Regulatory Commission); three executive department agencies (the Food and Drug Administration, the Office of Surface Mining, and the National Highway Traffic Safety Administration); and one independent executive branch agency (the Environmental Protection Agency).

events and bureaucratic response in each bureaucracy, they integrated qualitative methods with quasi-experimental time series analysis. The findings confirmed past research on assorted agencies showing that bureaucracies do respond to external politics, and they found responsiveness in all seven cases. That is, political appointments--a shared power of the President and Congress--is the most important instrument of political control, while changing budgets, legislation, congressional signals, and administrative reorganizations are less important.

Wood and Waterman insist that their study differs from previous research on political-bureaucratic relations in that the designated purpose is to reveal the scope and specific mechanisms of political control, but each analysis of an individual bureaucracy is similar to past studies of that bureaucracy. Although their study is the first to examine outputs from many different agencies in comparative contexts, it is but one of many individual empirical studies dealing with an agency's policy-making because they did not generalize the relationship between bureaucracy and political factors in each category of agency. Nevertheless, their study is noteworthy in that they emphasized the significance of political control of the bureaucracy (as my own study likewise hypothesizes). They considered several types of independent political events as independent variables such as political appointments, resignations, budget increases and decreases, congressional oversight hearings, administrative reorganizations, legislation, and political signals, which come from both congressional and presidential control approaches.[34] Among

[34] Congressional control models suggest that legislators are the most important actors to consider, since bureaucrats continuously watch the rewards and sanctions from Congress. Meanwhile, presidential control studies suggest that the President affects bureaucratic performance through some channels such as political appointments, the Office of Management and Budget (OMB), personal authority, reduction and transfer, and reorganization.

these, political appointments to the agencies and budget changes and their causal relationships with relevant dependent variables are also considered in my study of FCC policy decisions. In addition, they used various core regulatory "enforcements" as dependent variables called bureaucratic responses, such as litigations, sanctions, and administrative decisions. Especially, the dependent variables they used in the empirical analyses of three independent regulatory commissions are the results of adjudicative proceedings: the EEOC's output they measure is the number of litigations for employment and gender discrimination initiated between 1981-87; the FTC's enforcement measure is a monthly sum of all consent decrees obtained, final administrative orders issued, and concluding agreements reached by the FTC between 1977-87; and the NRC's enforcement activity was measured by the monthly number of nuclear safety violations found by NRC field inspectors from 1978 to 1988.

Arguing that a variety of research did not develop an accurate characterization of the legislative-agency relationships on which major policy issues hinge, Weingast and Moran (1983) develop a model of agency decision making based on the premise that agencies are controlled by the legislature, that is, under the hypothesis of systematic congressional influence over the FTC policy decisions. The model characterizes legislative politics to understand the stability and change in agency policy. They focus on the changing mix of cases pursued by the FTC to illustrate how the FTC policy shifted from being activist in the late 1960s and 1970s to less activist following 1979. In order to evaluate that their *legislative choice model* adequately explains the FTC's policy shift (namely that Congress controlled the FTC all along and the 1979-80 policy reversals), they empirically tested for the influence of congressional preferences over the FTC's

choice in the distribution of policy cases related to the consumer protection progr
Demonstrating the model of legislative choice, they argue that the power vested l
committee system affects not only the policy chosen but also, through veto powe
ability to ensure that future majorities of the whole legislature will not overturn t
policy. Thus, they suggest the important predictions of congressional control of
decisions through the committee system, that is, that the FTC activities after 197
remarkably sensitive to changes in the policy preferences of the congressional co
members. They used the individual senators' liberal support scores, *American Democratic Action* (ADA) rating, as the preferences of legislators on the FTC ov
subcommittee in the Senate. They demonstrated that these ADA scores are a ren
good index of senator preferences over FTC issues, assuming that the higher AD
the greater the support for FTC activism associated with consumer protection thr
the 1970s.[36] Their empirical results show that the preferences (in terms of ADA
of the members on congressional oversight committees and subcommittees, not t
Congress, were significant determinants of FTC case selection.

First, their general finding that the activities by congressional institutions
specific committees or subcommittees) wield strong influence on the agency poli

---

[35] They use 47% (1,294) of the total 2,729 policy cases considered by the FTC during this period
They classify them by four categories which correspond to sections of the major acts enforced by
and therefore they are very broad: *credit cases* (#291) consistent with FTC's consumer protectior
textile cases (#664) and *Robinson-Patman cases* (#228) associated with anti-consumer protectior
the 1950s and early 1960s; and *mergers cases* (#111) as the benchmark, which is the most stable
categories. They assume that all cases under each category are relatively homogenous.

[36] They estimate the "probability" [Y] of a case as a function of the ADA scores on subcommittee
congressional chambers and a FTC budget variable, which is constructed so as to measure the inc
influence of the appropriations committee. The coefficients from the estimation describe the effe
independent variables on the probability of bringing a given type of case relative to the probabilit
a merger case. As ADA scores rise, they expect a greater proportion of cases consistent with the
consumer protection activism and fewer cases of the other categories.

making will be also tested in my study of the FCC. Second, they demonstrate that ADA scores are a meaningful index of congressional committee preference over FTC activism. Hence, the ADA scores will be also used as congressional variables, that is, preferences of federal legislators who may oversee the telecommunications matters related to FCC policy decisions in my study. Third, the political control of congressional committees or/and subcommittees (in terms of ADA scores) over the agency (i.e., FTC) policy-making may also form a basis of the political aspect of FCC's policy decision cases.

Here, an important point of note is that all policy cases they classified by the major acts were actually "adjudicative" case-by-case decisions brought before the commission each year, not the decisions through general rule-making. Mentioning that each policy case they use is a final result reached at the final stage before the five commissioners for review through many stages, they say, "it is not simply a rubber stamp of what occurs in earlier stages...the commissioners are likely to be the most sensitive to political pressure...the results may obtained for the critical administrative law judge (ALJ) stage that parallel the results reported below for the five commissioners."[37] Hence, they indicate that political control over the adjudicative decisions by ALJs is significant, since ALJ-stage decisions are finally reviewed by the commissioners.

Moe's (1985) study also found evidence suggestive of political control of the bureaucracy, that is, the National Labor Relations Board (NLRB), especially under the principal-agent model assuming that political principals attempt to control the actions of the government agent. He empirically analyzed the "adjudicative" decisions made by the NLRB to show how the agency's policy had shifted between pro-labor and pro-

management biases over time. In a broader causal framework of regulatory performance, he found that the institutional and contextual factors such as the Presidents, congressional committees, the courts, agency staffs, constituents, and economic conditions had significant impacts on NLRB's adjudicative regulatory decisions. Especially, he found that the quarterly data on NLRB adjudicative decisions varied with features of all three major U.S. institutions: the President, Congress, and courts.

Moe's analytical framework on conflictual relationship between business and labor gives very useful insights into my analysis on conflictual relationship between AT&T and OCCs/public in the U.S. telecommunications policy-making process. In addition, his empirical analysis also indicates the significant influence of political institutions (i.e., the President, Congress, and the courts) over the agency's adjudicative decisions. Moe used the data on Board decisions taken from a comprehensive coding of all (more than 12,000) NLRB formal adjudicative decisions during the period 1948-1979. A formal complaint accepted through two earlier stages (e.g., filing with a regional office, investigation of staff members) within the NLRB go into adjudication. With NLRB lawyers representing aggrieved parties (i.e., prosecuting) and defendants hiring their own counsel, cases are heard in trial-like settings before administrative law judges. The losers can (and usually do) appeal to the Board, which, in order to hear so many cases, is broken down into five three-member panels (with each Board member sitting on three panels). Most cases are heard and decided by one of these panels; a much smaller portion is considered by the full Board, often cases considered important or controversial. Each case involves one or more issues in which the Board is asked to decide whether the

[37] *See* Weingast and Moran 1983: 786 ("footnote 23").

respondent is guilty or innocent of an unfair labor practice.

Moe showed that the President's appointment power was of significant consequence in explaining the fluctuation of NLRB adjudicative policy-making over time. That is, arguing that the Presidents used their appointment power to pursue their political goals and the Board members (especially chairs) did effectively act as presidential agents, he showed that the Presidents involved in a partisan change of administration generally behaved as the presidential control hypothesis. For example, President Carter's liberal NLRB chair Truesdale moved the NLRB's decision-making in a more pro-labor direction (Moe 1985: 1106). He also expected political control of Congress over the NLRB's adjudicative decision-making and found that the ADA scores of the chairs and members of the relevant oversight committees in the House and Senate accounted for a significant portion of impacts upon the Board. In addition, since all adjudicative decisions can be appealed to the courts for review and a large percentage in fact were, his empirical results confirmed the expected impacts of the courts on the NLRB's adjudicative decision-making. At the same time, he proved that the impacts of economic conditions such as unemployment, inflation, and strike activity over the NLRB's adjudicative decisions were strong enough to suggest that they should be kept in his model. Hence, the evidence of political economic control of political institutions (the Presidents, Congress, and the courts) and macroeconomic conditions (unemployment and inflation) over the NLRB's adjudicative policy-making in his study provides a basis of sound framework applicable to my study of political economic control over the FCC's adjudicative rule-making decisions, granting or denying petitions against unlawful or discriminatory activities related to rules or regulations.

As presented above, many regulatory policies by federal agencies such as the FDA, OSHA, FTC, and NLRB have been studied in the effort to develop and test theories of the factors shaping public policy. However, in the literature on U.S. telecommunications policy area, few political scientists have tried to analyze any specific telecommunications policy with combination of theoretical and statistical analyses. Paul Teske (1990, 1991) alone has analyzed the U.S. telecommunications policy in the state level theoretically and methodologically, but the object of the cross-sectional study was a part of the U.S. local telephone market (i.e., intraLATA market) at the state level and the study span was just a four year period (1984-1987) that might not be long enough to assess the relative effects of his three variables. In my study of FCC policy decisions, I am analyzing the U.S. long-distance service market at the federal level, and the study is covering a 31-year period (1965-1995). A point of note is that the decisions by state public utility commissions (PUCs) he considered are just policy "choices" that states made about telecommunications pricing and intraLATA competition, not general policy decisions through rule-making or/and adjudication. That is, state PUCs just decided whether they would reduce intrastate toll rates or residential subscriber access charges and whether they would authorize intraLATA competition. These decisions were neither through rule-making nor adjudication. Although Teske did a cross-sectional study of policy choices regarding local telephone regulation by state PUCs, my study does get some useful guidance from Teske's three -- interest, contextual, and institutional -- variables in identifying significant political economic factors that influenced FCC policy decisions regarding AT&T in the long-distance service regulation arena.

Teske's (1990, 1991) studies test interest group and institutional theories of

regulatory change, focusing on the deregulation of *state* telecommunications services (i.e., a part of local telephone service called 'intraLATA') after the AT&T divestiture in 1984 as a laboratory. He estimates two logistic regression models of state policy choices about rate structures and competitive entry into intraLATA market to assess the relative effects of variables derived from interest group preferences and institutional characteristics on these two binary dependent variables. Especially, large business user groups with the highest per capita stakes, active consumer interests, the regulated firms (that is, AT&T and seven RBHCs), and cable television firms were considered as strong interest groups which were expected to exert political pressure upon state PUCs' policy changes in rate structure and competition. Since large business groups (especially financial, insurance, and business service firms) which use long-distance telecommunications most intensively make economic threat and political pressure through bypass,[38] the proxy variable used was the number of headquarters of Fortune 450 firms in a state, under the assumption that they lobbied heavily to gain from rate structure changes and competition. Two variables representing consumer interest groups' influence were measured by the existence of grassroots consumer advocates and government-funded advocates in a state, since he contends that lobbyists who represent widely dispersed small consumers and advocates funded by state governments had become increasingly active in state regulatory proceedings. Arguing that the most politically active regional holding company had been US West (as a local exchange company separated from the AT&T) and assuming that intense pressure by US West

[38] The term of 'bypass' is usually used to describe connections between customers and long-distance carriers that avoid either services (switching services, for example) or facilities formerly furnished by local telephone companies.

should make regulators more likely to change rate structures and to allow competitive entry (differently from seven RBHC's past interests to oppose competitive entry into their markets), he also included a dummy variable for the 14 states served by US West subsidiaries. Cable television firms were included as another interest group factor with important stakes in state telephone regulation, since some cable firms were competing with local telephone companies, and their economic stake and political power was measured by the percentage of television households served by cable in a state.

Emphasizing important roles of political institutions and government actors (i.e., state commissioners and legislators) in influencing bureaucratic decisions, Teske measured four institutional variables that capture important elements of institutional accountability, capacity, and ideology to test whether embedded institutional factors affect regulatory policy choices in states. First, to test whether state commissions structured from direct elections act differently than state commissions with appointed members, he used a dummy variable for state with elections. He hypothesized that elected commissioners are more likely to favor consumers' short-term interests, by not changing rate structures and by allowing competitive entry, since they are not insulated from direct voter power. Second, he used the full state regulatory budget to measure the institutional resources and analytic capacity that allow state PUCs to make different decisions with some degree of autonomy. Arguing that regulatory budgets are needed to keep regulatory commission staffs who handle consumer complaints, he hypothesized that regulators with higher budgets should be more likely to change rate structures and to allow competition because of the more complete staff analysis of future consequences. Third, assuming that regulators' own attitudes affect policy choices, another institutional

factor he used was Wall Street measures of regulatory climate with a higher figure indicating a better regulatory climate for firms. Hence, he hypothesized that state commissions with higher Wall Street ratings should be more likely to change rate structure and to allow competitive entry. Fourth, legislative influence on regulatory decisions was measured by party control of the state legislatures as another important institutional factor. Stressing that congressional scholars became more sensitive to the role that legislators play in influencing bureaucratic policy decisions even if no bills are passed and little formal oversight is visible and that congressional votes in 1984 followed party lines on the issue of restructuring rates, he argues that party control of the state legislatures should affect regulatory decisions. Hence, he hypothesized that Republicans are more likely to favor the interests of the regulated firms by pushing for changes in rate structures and opposing competition, while Democrats are more likely to favor consumers by opposing rate changes and allowing competitive entry.

As a result, Teske's two logistic regression analyses of state PUCs' decisions about rate structures and competitive entry show that institutional factors, including regulatory budget, regulatory climate in terms of Wall Street ratings of regulation, and legislative party control, have more influence than pressure by interest groups, including US West and government-funded consumer advocacy. The regulatory budget was the most potent explanatory variable in policy choices to change rate structures; state telecommunications choices were consistent with regulators' general policy attitudes and their decisions in other industries, that is, higher-rated regulatory climates led to policy change; and state legislatures controlled by Democrats were associated with a higher probability of decisions that allow competition. He indicates that this evidence generally

supports theories of regulatory policy that stress important roles for institutions and governmental actors over the simple interest group theories of the Chicago School.

I discussed Teske's study in detail because our studies share some critical common grounds in the aspects of study theme of telecommunications regulations and application of regulatory theories such as interest group theories and institutional theories, although there are some obvious differences between his and my studies: a cross-sectional study of policy choices by *state* PUCs in the local telephone service (i.e., *intraLATA*) regulation during the three-year period of 1984-1986 versus a study of *federal* policy decisions (i.e., "adjudicative rule-making decisions)" by the Federal Communications Commission in the interstate long-distance service regulation over the 31-year regulatory period from 1965 to 1995. Teske's study shows that state telecommunications regulatory choices were not merely a function of interest group pressure but also institutional factors that may be more influential in changing policy, which many previous scholars ignored, thereby incorrectly specifying the models of regulatory policy decisions or choices. Furthermore, his findings show that the institutional theory, emphasizing the importance of regulatory commissioners and legislators in mediating interest group pressure, explains state telecommunications regulatory choices (about changes in rate structures and competitive entry) better than simply the power of organized interest groups. As he also recognizes, institutional variables are not complete determinants of regulatory policy-making, although they have large influences in some policy choices, since some interest group variables show significant influence and thus prevent regulators from exercising complete discretion in policy-making. In short, his study explores simultaneously the influence of interest group power and the mediating roles of political institutions. My

study of FCC policy decisions (i.e., adjudicative rule-making decisions) also follows such a framework to test theories of the economic and political factors shaping federal telecommunications policy decisions in the long-distance service arena regarding AT&T. Furthermore, indicating that all regulators are forced to respond to their economic environment to some extent when balancing the need for utility financial health and lower consumer rates, he considers the impacts of two contextual factors: NECA funds and access costs. He hypothesized that regulators in states that receive funds should be more likely to oppose changes in rate structures and competition because they would be losing two sources of subsidies (interstate and intrastate) for low residential rates, and that regulators in states with higher average access costs should be more likely to change rate structures but less likely to allow competition in the local telephone market, respectively. My study also estimates the impacts of some external contextual factors (i.e., macroeconomic factors and long-distance service rates) upon the FCC's long-distance service policy decisions.

Several variables and hypotheses Teske employed provide some insights to develop and test quantitative models for my study. Related to congressional control, he indicated that the robust influence of state legislative party control parallels that at the federal level, so his findings add to a literature on legislative influence that has focused on federal policy decisions, as my study does. Especially, using the Wall Street ratings to catch the general regulatory ideology of the commissioners, Teske mentions that the Wall Street scores are partly similar to legislative scores such as ADA and COPE scores because they aggregate past regulatory decisions (Teske 1991: 146). I consider the ADA ratings of congressional committee members as indicators of congressional influence over

FCC policy decisions. The regulatory budget or staff of the FCC is considered as another institutional variable in my study, following Teske's general hypothesis that the commission with higher budgets or large staffs is more likely to allow competition in the telecommunications market because larger staffs in the commission with higher regulatory budget more fully analyze regulatory matters in the market, which gives commissioners a vital resource to oppose the monopolistic activities of self-interested groups such as AT&T. Of course, I consider several other institutional factors (that is, Congress, the Presidents, and the courts) in my study. In addition, I consider variables of interest group pressure different from those he considered, since the pressure modes of interest groups that formed to influence policy decisions are different according to policy scopes, that is, state regulation of local telephone service versus federal regulation of long-distance service.

At any rate, my statistical tests share the basic modeling strategy Teske employed in his study, although there are some evident differences in the aspects such as study scope, study period, and kinds of data. He says "states should be considered an excellent laboratory for theories that have not been adequately tested (just) because of the limited number of federal cases" (Teske 1991: 152). However, studies on state-level only cannot be always preferred since (as he also indicates) there are differences in institutions across jurisdictions (state v. federal) and their interaction with the political-economic factors. A study of FCC policy-making of long-distance service regulation over the long period needs the federal jurisdiction as an appropriate laboratory. My study of FCC long-distance service regulation adds to a literature on institutional and interest group influence that has focused on federal policy decisions.

In short, my study's application of federal long-distance service regulation policy decisions arena to the emerging approach which demonstrates the modes of simultaneous influence of various interest groups and political institutions over regulatory policy-making process was inspired by valuable studies of agency policy-making by political scientists such as Mary Olson's (1996) study of the FDA, Wood and Waterman's (1991) study of various agencies including EEOC, FTC, and NRC, John Scholz's (1991) study of OSHA, Weingast and Moran's (1983) study of the FTC, and especially Terry Moe's (1985) study of the NLRB and Paul Teske's (1990, 1991) cross-sectional study of state PUCs' policy-making as presented above. In addition, there are many other political scientists (especially, e.g., Rothenberg 1994; Hammond and Knott 1996) who all initiated empirical testing or/and theory development of the interactive roles of economic factors or/and political institutions in shaping regulatory policy-making in each specific study area (e.g., federal motor freight policy and formal study on multi-institutional policy-making, respectively). Their studies are also helpful in identifying some variables and hypotheses and developing some interaction modes of influence of economic and political factors in the federal long-distance service regulatory policy decisions.

Compared to previous studies, my study of FCC policy-making has several characteristics as follows.

First, my study contributes to the contemporary empirical studies which explore the dynamics of political control of the bureaucratic agency policy-making by various institutional actors, industry interests, and contextual factors. As other studies did, my study also tries to assess the relative, simultaneous effects of interest group pressure and the roles of political institutions upon the specific policy area. That is to say, my study is

seeking the political and economic determinants of FCC policy-making regarding the interests of AT&T and its competitors in the long-distance telecommunications service market.

Second, my study is the first to analyze the U.S. federal telecommunications policy-making by employing both statistical empirical and theoretical approaches. The analysis also covers the 31-year regulatory periods that may be long enough to assess FCC's long-distance telecommunications service policy-making.

Third, my study is also ground-breaking in that it compares the federal bureaucracy's adjudicative decisions with rule-making decisions and then analyzes the FCC's adjudicative rule-making decisions that are related to the rule-making proceedings but are actually closer to adjudicative decisions. Many past studies dealt with the agencies' regulatory activities or outputs under the name of 'policy-making' or 'policy decisions' without obvious distinction between policy decisions through 'rule-making' and 'adjudication.' This may be in part because there is substantial difficulty in differentiating one from the other, as explained later in this paper, and partly because past researchers did not make such distinction on purpose to lead their studies in the direction of their choice. For instance, Weingast and Moran (1983) did not evidently express that their study of the FTC was actually an analysis on the decisions through 'adjudication,' not through rule-making, although they just used the term of policy-making or policy decision, while Moe (1985) expressed that his study of the NLRB was an analysis on policy decisions through 'adjudication.' My study of the FCC is estimating the FCC's "adjudicative rule-making decisions" that come from the rule-making proceedings but are actually closer to adjudicative decisions. In other words, my study of FCC policy-making

regarding the long-distance telecommunications service matters (occurring between AT&T and its other common carriers) is the first to examine federal telecommunications 'rule-making' policy decisions with the characteristics of 'adjudication' (that is, "adjudicative rule-making decisions") for evaluating political control of the bureaucracy in the arena of interstate long-distance service regulation, although it is not the first to suggest how political control relates with regulatory policy-making.

Finally, my analysis on FCC policy-making is expected to offer suggestions to both the federal regulatory agency (i.e., the FCC) and the long-term dominant carrier (i.e., AT&T) in developing their own policy directions in the arena of federal telecommunications regulation. The analysis results would help the FCC make policies to effectively control the long-distance service market, still dominated by AT&T. That is, my study can provide some insights into how to deal with the regulated dominant business group, AT&T, in the FCC's future policy-making. The long-term dominant carrier, AT&T, also can get some insights on how to confront the federal regulators and other political interest groups and how to adjust its own behavior towards sustaining its dominant position in the market.

Chapter 3

THE POLITICAL, ECONOMIC, AND LEGAL CONTEXTS OF FCC POLICY-MAKING IN THE HISTORY OF U.S. FEDERAL TELECOMMUNICATIONS REGULATION REGARDING LONG-DISTANCE SERVICE MARKET

This chapter provides the political, economic, and legal contexts for FCC policy decisions through rule-making or/and adjudication which were made throughout its history of telecommunications regulation.

1. THE FCC'S LEGAL RIGHTS AND RESPONSIBILITIES AND POLITICAL RELATIONSHIPS

The United States government has imposed regulations on the telecommunications industry for about 130 years since the passage of the Post Roads Act in 1866. Federal regulation of the U.S. telecommunications industry is entrusted primarily to the Federal Communications Commission (FCC or the Commission), an entity created by the *Federal Communications Act of 1934*.[39] As an independent government agency responsible directly to Congress, the FCC is charged with regulating interstate and international communications by radio, television, wire, satellite, and cable, while interstate telecommunications regulation is under the authority of the state commissions.[40] The FCC's jurisdiction covers the 50 states and territories, the District of

[39] 47 U.S.C. § 151.

[40] Generally, the state utility commissions all operate similarly and follow the lead of the FCC in their

Columbia, and United States possessions (e.g., Guam, Puerto Rico and the Virgin Islands).

Over U.S. telecommunications history, some statutes prescribed the legal rights and responsibilities of the FCC. I need to discuss some relevant Supreme Court decisions which affected the FCC's authorities, since FCC policy decisions through rule-making or/and adjudication were derived from its authorities given by the federal judicial actors. In addition, I need to recognize the FCC's relationships with external political actors, which are directly or indirectly derived from its legal rights and responsibilities, since political impacts on FCC policy decisions are caused by its political relationships.

Hence, in this section, I discuss the FCC's political relationships with external political actors, and then several Supreme Court decisions regarding long-distance telecommunications regulation (excluding mobile telephony, cable television, and international telecommunications issues), which affected the FCC's authorities.

1-1. THE FCC'S RELATIONSHIPS WITH POLITICAL INSTITUTIONS

The FCC is one of the independent agencies of the U.S. government. Although falling under the Executive Branch, the FCC is a *regulatory* rather than an *executive* agency. While independent executive agencies and regulatory agencies both are headed by administrators appointed by the President and confirmed by the Senate, the former serve at the pleasure of the President, while the latter like the FCC serve for fixed terms and cannot be removed by the President (Hilliard 1991: 6).

---

regulation of telecommunications, although the state agencies predate the creation of the FCC.

The FCC, as a regulatory agency, is composed of five Commissioners and other staff, with one political party permitted no more than a majority of one. The five commissioners who direct the agency are appointed to five-year terms by the President, who designates one of them to serve as Chairman. The FCC Chairman presides over all FCC meetings, coordinates and organizes the work of the Commission, and represents the Commission in legislative matters and in relations with other government agencies.[41] The Commissioners supervise all FCC's activities through the Commission that is the main body of all five Commissioners making up the FCC. The Commission holds regular meetings, some open and some closed to the public, and special meetings called by the Chairman, to consider items prepared by the staffs for a weekly agenda of business.[42] Sometimes special items are brought to the attention of the Commission by one or more of the Commissioners. At the Commission meetings the bureau or office chief makes a brief presentation to the commissioners. The Commissioners sit *en banc*, similar to judges in a courtroom, and question the presenters of the item, then have an open discussion among themselves before voting to accept, reject, or send the item back for further work (Hilliard 1991).

The FCC's activities, as those of other regulatory agencies do, have been initiated and proceeded in relation to its external political context and affected by various political interests. The political influence over FCC policy-making usually comes from its

---

[41] The FCC Chairman delegates management and administrative responsibilities to the Managing Director, and other functions to staff units and bureaus and to committees of the Commissioners. If the Chairman is absent or the office is vacant and the President has not appointed one of the sitting Commissioners to the post, the Commissioners designate one of their members to serve as 'Acting Chairman.'

[42] Each Commissioner is provided with funds for a professional and service staff, which can be used in any way the Commissioner sees fit. Usually, a Commissioner will have a legal assistant and an engineering assistant. The Commissioners' assistants receive and evaluate the agenda items supplied by the staffs of the Bureau or Office preparing the item, usually at least a week before the commission meeting, and brief their

relationships to the political actors as follows.

❑ Relationship to the Executive Branch

While the Chairman of the FCC and the Commissioners are appointed and reappointed by the President, they do not report to the White House. Nevertheless, all appointees to any position owe a political debt to the person who appointed them. The President ostensibly does not get involved in the operations of the independent regulatory agencies. However, the chair of a given agency is, with rare exceptions, a member of the President's party, and is likely to come in contact with the President during his or her tenure, even if only at ordinary social or political events. One notable departure from the Executive Branch's direct continuing relationship to an FCC Chairman through party politics was Democrat Lyndon B. Johnson's naming of sitting Republican Commissioner Rosel H. Hyde as Acting Chairman, then Chairman following the departure of Democrat Chairman E. William Henry in 1966. One explanation is that President Johnson wished to avoid the appearance of directly influencing the FCC in light of his personal extensive communications holdings (Hilliard 1991).

❑ Relationship to Congress

Control and oversight of the executive departments are functions of Congress in its authority to enact laws, appropriate funds, and make rules for government operations.

---

respective Commissioners prior to the meeting.

In that sense, the FCC is directly responsible to Congress, especially the authorizations and appropriations committees. As of 1995, in the Senate the FCC falls under the jurisdiction of *the Committee on Commerce, Science, and Transportation*, and more specifically under *the Subcommittee on Communications*. In the House of Representatives *the Committee on Commerce* is the overseeing body, with *the Subcommittee on Telecommunications and Finance* taking direct responsibility.[43] In addition, in both the Senate and the House independent agencies are subject as well to the decisions of the respective Committees on Appropriations. In the Senate the FCC falls under *the Subcommittee on Commerce, Justice, State, the Judiciary, and Related Agencies*, and in the House under *the Subcommittee on Commerce, Justice, State, and Judiciary*. These committees or subcommittees may at any time hold a hearing on an amendment to the *Communications Act of 1934*, summon the FCC for a briefing, require written submissions from the FCC, require the FCC to testify at a bill consideration, and otherwise maintain continuing check on the FCC's operations (Hilliard 1991).

Quite obviously, the real power of Congress is control of the purse strings as much as authorization of statute. The FCC, as do other agencies, prepares its budget requests in the summer. These are reviewed in detail in the fall by the Office of Management and Budget (OMB) and presented to the President in the context of the overall budget plan. The funding recommendations are made by the President to

---

[43] During the period from 1965 to 1995, in the House of Representatives, the relevant authorizations committees and subcommittees were: the House Interstate and Foreign Commerce Committee (1965-1980), the House Energy and Commerce Committee (1981-1994), and the House Commerce Committee (1995); the House Communications and Power Subcommittee (1965-1974), the House Communications Subcommittee (1975-1980), the House Telecommunications, Consumer Protection & Finance Subcommittee (1981-1986), and the House Telecommunications & Finance Subcommittees (1987-1995). During the same period, in the Senate, the relevant authorizations committees and subcommittees were: the Senate Commerce Committee (1965-1976) and the Senate Commerce, Science & Transportation

Congress, which begins its formal review in January. Two steps are taken: first the enacting of legislation authorizing the outlay, and second the legislation of legal appropriation of the money. Individual agencies are responsible for administering their budgets in accordance with the specified approved allocations. OMB reviews programs and financial reports and the General Accounting Office (GAO) conducts regular audits (Hilliard 1991).

Because each Commissioner nominated by the President must be confirmed by the Senate, appointees must have sufficient political connections and support to be appointed. It is rare that a commissioner is approved by the Senate without the approval of both of the senators from his or her home state. As in the relationship to the President, any appointee not only must be politically acceptable to a majority of the Senate, but also owes a debt to the Senators who promoted his or her candidacy (Hilliard 1991).

❑ Relationship to Other Federal Agencies

As an independent regulatory agency, the FCC is not obligated to work or consult with other federal agencies. But as a practical matter it finds it necessary to do so because of complementary and sometimes overlapping jurisdiction of specific communications matters. For example, the *National Telecommunications and Information Administration (NTIA)* in the *Department of Commerce* has responsibility for the future development of telecommunications and information technology and services; the FCC maintains continuing liaison with the NTIA. When planning for World Administrative Radio

---

Committee (1977-1995); and the Senate Communications Subcommittees (1965-1995).

Council (WARC) meetings for use of international frequency space, the FCC works closely with the *State Department*, which also represents the United States at such meetings. The FCC participated in the combined work of the member agencies, as it related to FCC concerns, of the *Federal Interagency Media Committee*, an organization of some 30 federal agencies seeking the most efficient use and development of federal telecommunications efforts through cooperative projects. The FCC frequently finds itself relating to other federal agencies, sometimes in a cooperative, sometimes in an adversarial role, ranging from the *Department of Justice* (on such items as minority preferences and other legal issues) to the *Federal Trade Commission* (for example, false or misleading advertising on television or radio) to the *Department of Interior* (special frequency assignments for Native American reservations or Alaskan outposts) (Hilliard 1991).

❑ Relationship to the Judiciary

Actions of the FCC are challenged in each federal court level: U.S. Supreme Court, U.S. Court of Appeals, and trial courts. Both U.S. Supreme Court and U.S. Court of Appeals frequently overturn FCC decisions and enunciate principles that must be followed in new directions. The U.S. Court of Appeals cannot review the factual determinations of the Commission, but it can review the decisions for procedural correctness and relationship to the record and statute. Because telecommunication policy over the past twenty-five years (since the early 1970s) has departed substantially from the environment envisioned in the 1934 Communications Act, a strict interpretation of the

Act severely limits FCC freedom to substitute market forces for traditional regulation. Thus, the federal court becomes an important telecommunication policy player itself. However, it can only rule on cases brought before it. Therefore, the more effort the FCC makes to create a consensus decision, the less likely it is to be appealed and potentially overturned (Brock 1994: 58).

Appeals court cases are heard by panels of three judges, with each panel created specifically for a particular case. Consequently, even though judges have lifetime tenure, no single judge routinely oversees FCC decisions, and the judicial review is characterized by examining individual cases without regard for related cases that determine overall policy (Brock 1994: 58).

1-2. SUPREME COURT DECISIONS REGARDING THE AUTHORITY OF THE FCC

The FCC's legal rights and responsibilities for the regulation of all interstate and international communications were prescribed by the *Communications Act of 1934*.[44] In

[44] The Act consists of the following sections and appendices. Section 1 of the Act describes its purposes in creating the FCC; Section 2 of the Act defines the FCC's jurisdiction; and Section 3 of the Act defines the means of communication and other key terms under FCC jurisdiction. The General Provisions under Title I also describes the organization and functioning of the Commission and its staff; Title II describes the FCC's jurisdiction over common carriers, including service and charges; Title III covers radio, including allocation of facilities, licensing of stations, equal time facilities for candidates for public office (Section 315), operations of transmitters, broadcast matter and content, radio operations and requirements on ships, and provisions of the *Public Broadcasting Act of 1967* that pertain to facilities grants and the establishment of the Corporation for Public Broadcasting and national systems of public television and public radio; Title IV delineates the administrative procedures of the Commission; Title V deals with penal provisions for violations of the Act, and includes detailed prohibitions on rigging contests--reaction to the infamous quiz-show scandals; and Title VI covers miscellaneous provisions such as unauthorized interception of communications, presidential powers over communications during a war emergency, and provision of telephone service for the disabled. The *Communications Act of 1934*, as amended, also contains several appendices. Appendix A relates to the administrative procedures and judicial review of the FCC, with such items as public information, rule-making procedures, case hearings, and imposition of sanctions; Appendix B has definitions of federal agencies' relationship to the federal courts; Appendix C, constituting only one

addition, the duties and jurisdiction of the FCC are implemented through the FCC's *Rules and Regulations*, a body of specific definitions, requirements, and interpretations that have been developed by the FCC over its many years of existence. The *Rules and Regulations* is contained in what is called Title 47 of the *Code of Federal Regulations* (CFR), which consists of five separate volumes. Each volume covers a general area of FCC responsibility, and is divided into parts covering the specific services regulated.[45]

The *Communications Act of 1934* purports to restrict the FCC to the regulation of "interstate and foreign communication by wire and radio," while denying it any "jurisdiction with respect to...intrastate communication service."[46] The Act goes on to cover telephony and radio broadcast in detail, but the FCC's jurisdiction is not limited to any technology. New communications technologies, the Supreme Court has ruled, fall within the FCC's "ancillary jurisdiction." Section 154(i) of Title 47 provides that "[t]he Commission may perform any and all acts, make such rules and regulations, and issue such orders,..., as may be necessary in the execution of its functions."[47]

While the Act grants the FCC expansive powers over interstate communications, it sheds no useful light on regulatory jurisdiction for any matters that do not divide neatly

---

page in the Act, nevertheless contains provisions that have had widespread effects: broadcasting lottery information, using communications for fraud, and broadcasting "obscene, indecent, or profane language;" and Appendix D is the *Communications Satellite Act of 1962*, which created a communications satellite corporation, COMSAT. At various times since 1934 attempts have been made to rewrite the *Communications Act of 1934*, notably in the late 1970s and 1980s, and all failed. For example, "New Communications Act" bills introduced by Van Deerlin in 1978 and again in 1979 were not approved by Congress. In 1981 two bills ("S898" sponsored by Senator Robert Packwood and "HR5158" sponsored by Representative Timothy Wirth) were introduced in both houses of Congress to propose major revisions to the *Communications Act of 1934*. As the last session of the 97th Congress drew to a close in 1982, neither of these bills had become law. Then, because of ensuing events involving the AT&T antitrust settlement, no new legislation calling for comprehensive revisions in the Act of 1934 was introduced after these bills expired. However, improving telecommunications policy remains an active project in both the Senate and the House.

[45] *See* Code of Federal Regulations Title 47-Telecommunication 1997: 1-748.

[46] 47 U.S.C. § 152(a) and (b).

and obviously into interstate and intrastate spheres--which is to say, all matters in any aspect of telephony. Although the Act mandates that "any proceeding regarding the jurisdictional separation of common carrier property and expenses between interstate and intrastate operations" be referred to a joint state-federal board, the state members of the Joint Board have no voting power, while the states have no vote in the FCC's final determination.[48] The ultimate decision is entirely within the discretion of the FCC. With respect to other regulatory issues of joint concern, the FCC has complete discretion whether to submit them to a board and is not bound in any way by the board's decision.[49]

The FCC's main powers, which were given by the *1934 Communications Act* and later often affirmed or represcribed by the U.S. Supreme Courts, are largely its control over competition, of reviewing and prescribing rates, and of industry oversight.

First, the FCC is given virtually unlimited power to suppress competition if it so chooses. Indeed, the emergence of competition in the industry has depended critically on FCC initiative, or, more precisely, FCC retreat from its own prior anticompetitive policies (Kellogg 1992: 120). The FCC may control which carriers compete, where, and under what corporate structures. Section 201 of the Communications Act provided the authority, for example, to reintroduce competition into customer premises equipment (CPE)[50] markets after a six-decade lapse.[51] Section 214 of the Act authorizations that allowed microwave carriers to deploy competitive long-distance facilities, and Section

---

[47] 47 U.S.C. § 154(i).
[48] 47 U.S.C. § 410(c).
[49] 47 U.S.C. § 410(a).
[50] Customer premises equipment (CPE) means products (including ordinary telephones, modems, fax machines, computers, etc.) that interconnect with the network on the customer's premises, or that are owned by someone other than the telephone company itself.
[51] *Use of the Carterfone Service in Message Toll Telephone Services*, 13 F.C.C.2d 420; *reconsideration denied*, 14 F.C.C.2d 571 (1968). *See also* 47 U.S.C. § 10.4.2.

201 of the Act mandates to permit both interconnection and resale, were likewise key in introducing competition to long-distance markets. For years, the choice for or against competition was left almost entirely to the FCC's unguided discretion. Finally, however, in 1983 Congress amended the Act to make clear that '[i]t shall be the policy of the United States to encourage the provision of new technologies and services to the public" and requiring any person who opposes a new technology or service to "demonstrate that such proposal is inconsistent with the public interest."[52] By 1983, this shift toward competition was already irrevocable (Kellogg 1992: 120).

Second, the FCC was given broad authority to screen both prices and terms of proposed rates, investigate existing ones, and, if necessary, prescribe alternatives. Under the original 1934 Act, the FCC could only suspend a tariff in its entirety. In 1976 Congress added Section 204 to the Act, which permits the FCC to allow tariffs to take effect in part, or temporarily.[53] Section 205 of the Act delineates the FCC's remedial powers upon finding that a tariff is unlawful: it may simply order a carrier to eliminate an unacceptable rate disparity, or specify which rate is to be raised or lowered. In prescribing a new rate, the FCC must specifically find it to be "just, fair, and reasonable," not merely "the best of the alternatives discussed herein."[54] The *Communications Act of 1934* contemplates the prescription of rates, not rates of return. In 1967 the FCC announced that it would prescribe a rate of return instead; and in 1989 the FCC came to replace rate-of-return regulation with price caps for AT&T, which set limits on prices, not

[52] 47 U.S.C. § 157(a) (as added Dec. 8, 1983).
[53] 47 U.S.C. § 204(b).
[54] 47 U.S.C. § 205(a).

profits.[55]

Third, the 1934 Act also empowers the FCC to oversee the industry in the aspects of transactions, internal management, and depreciation. Section 211 of the Act requires carriers to file with the FCC all contracts they enter into with other carriers.[56] Section 215 of the Act directs the FCC to "examine" the transactions entered into by carriers and to report the Congress whether any of these transactions have adversely affected service or rates.[57] Section 212 of the Act prohibits all interlocking directories between common carriers absent FCC approval, and Section 218 of the Act authorizes the FCC to inquire into the management of carriers. The FCC is also authorized by Section 220 of the Act to prescribe depreciation rates and accounting rates on which the cost of telephone service (mainly, the cost of capital investment in fixed physical plant) depends. The FCC has prescribed both rates through 'rule-making' for accounting rules[58] and through 'adjudication' for depreciation.[59] In addition, Section 221(a) of the Act empowers the FCC to regulate mergers and consolidations. Any merger or acquisition that will culminate in a common carrier must be approved in advance, and the FCC must consider the effect of merger on competition.[60] Once the FCC approves a transaction as "in the public interest," however, it is exempt from the federal antitrust laws.[61]

In relation to the FCC's authority over interstate communications, the *Communications Act of 1934* has granted the FCC the power to regulate facilities used for

---

[55] 9 F.C.C.2d 30 (1967); 4 F.C.C. Rec. 2873 (1989) (*AT&T Price Cap Order*).
[56] 47 U.S.C. § 211(b).
[57] 47 U.S.C. § 215(a).
[58] 47 C.F.R. § 32 *et seq.*
[59] *Louisiana PSC*, 476 U.S. 360-363.
[60] 47 C.F.R. §§ 66.11, 66.12.
[61] *Id.*

interstate and intrastate communication, but denied jurisdiction over intrastate service and authority over intrastate "charges, classifications, practices, services, facilities, or regulations for or in connection with intrastate communication service."[62] A major 1986 Supreme Court ruling accordingly came to strike down depreciation practices prescribed by the FCC insofar as they sought broad preemption of conflicting state regulation.[63] Section 152(b) of the Act, the Court concluded, constitutes "a congressional denial of power to the FCC to require state commissions to follow FCC depreciation practices for intrastate ratemaking purposes."[64] In 1990 an appellate court, in relation to the FCC's *Computer III* Order, also rejected the FCC's attempted preemption of contrary state regulation regarding enhanced services (i.e., services that combine elements of computing and communications).[65] The Court concluded that as long as enhanced services are provided by communications carriers over the intrastate telephone network, they are placed under the regulatory authority of the states.[66] Regulatory divisions were thus reaffirmed once again. The FCC retained full authority over AT&T, OCCs, and the unarguably federal markets for telecommunications services and equipment, while state regulators regulated local services. However, the areas of greatest regulatory instability were at the fault lines, where the long-distance network merged into the local one. In this case, the FCC tends to have more authority rather than state regulators. On January 1, 1991, for example, the FCC shifted the largest local exchange carriers (LECs) from a "cost-plus" system to an incentive-based system similar to the price-cap regulation now

---

[62] 47 U.S.C. § 152(b).
[63] Louisiana Public Service Commission v. FCC, 476 U.S. 355 (1986).
[64] *Id.* p. 374.
[65] California v. FCC, 905 F.2d 1217 (9th Cir. 1990).
[66] *Id.* p. 1240.

governing AT&T.[67] The FCC, not the state regulators, could initiate the new regulation of LEC interstate charges by formulating an interstate access price-cap index (Kellogg 1992: 479-481).

In addition, a federal court's decision has represcribed the FCC facility authorization regarding long-distance services in a one-shot ruling with a single application. In its 1971 *Specialized Common Carrier* order made through a rule-making proceeding, the FCC clearly stated that the new microwave facilities would be used to provide "private line" services, since Section 214(c) of the Communications Act permits the FCC to place conditions in licenses--to limit the services that may be provided on authorized facilities.[68] In 1974, however, MCI filed a new tariff for its new "Execunet," which was essentially a switched public message telephone service.[69] AT&T and the FCC immediately opposed MCI's tariff, indicating that MCI as a *Specialized Common Carrier* has authorized only "private line" communications.[70] Upon MCI's appeal to the court, the D.C. Circuit Court of Appeals ruled in MCI's favor in *Execunet I*, declaring that Section 214 of the Act required an express determination ("affirmative finding") by the FCC that such service restrictions to authorized facilities were required by the "pubic convenience and necessity" and that there had been no affirmative finding by the FCC, and thus claiming that any facility authorizations granted under the FCC decision could not be limited to private line services.[71]

In 1985, another federal court limited the FCC authority of tariff regulation

---

[67] *LEC Price Cap Order*, 5 F.C.C. Rec. 6787.
[68] 47 U.S.C. § 214(c).
[69] MCI, Tariff F.C.C. No. 1 (1974).
[70] *MCI*, 60 F.C.C.2d 63 (1976).
[71] *Execunet I*, 561 F.2d 365-380.

regarding nondominant carriers. During the period from 1979 to 1985, proceeding its *Competitive Carrier* order, the FCC decided to stop regulating entire "nondominant" carriers, which were defined as telephone companies that lacked market power, by simply refraining from subjecting these carriers to various procedural requirements, including the tariff filing requirements of Section 203 of the 1934 Act. However, the D.C. Circuit Court of Appeals ruled that the Communication Act leaves the FCC with "no statutory authority to prohibit the filing of tariffs that, by statute, every common carrier 'shall' file."[72]

2. U.S. FEDERAL TELECOMMUNICATION REGULATORY POLICIES INDICATING THE POLITICAL CONTEXT OF THE FCC AND AT&T

Since 1866 the telecommunications industry in the United States has been subject to federal government regulation. As the industry grew, especially as new telecommunications technologies--such as microwave, satellite, and computers--made competition and new services both possible and inevitable, various industry actors and political interest parties were involved in the telecommunications matters. Hence, the U.S. government and the FCC came to control the telecommunications environment by making a variety of regulatory policies. Beginning in the mid 1950s, and reaching full force in the 1970s and up to the recent period, the FCC has dramatically realigned its regulatory priorities to promote competition and deregulation (McKenna 1985: 32-33:

[72] Interestingly, MCI appealed to this federal court in order to continue being regulated. *See* MCI v. FCC, 765 F.2d 1186.

Haring & Levitz 1989: 296-297; Noam 1983: 956; and Kellogg 1992: 92-93).[73]

In general, government intervenes in the marketplace when free competition does not adequately or fairly regulate the supply, price, and distribution of goods or services. The nature of the telecommunications industry is such that strict guidelines have been deemed necessary to ensure fair business practices as well as to guarantee uninterrupted service to the public over a broad geographical area. For most of this century the basic telephone service network was viewed as a natural monopoly, although advances in technology over the past years considerably altered the telecommunications market. The high cost of fixed plant, the steadily declining average cost of service, and the need for all customers to interconnect with one another made it seem both sensible and inevitable to have a single monopoly provider. The Bell System or AT&T[74] was born in 1877 on that premise and with it an elaborate body of regulation designed to reconcile private monopoly with the public good. This regulatory paradigm had three basic pillars. First, the *protected franchise*: would-be competitors were barred from competing or even interconnecting with the enfranchised carrier. Second, the *quarantine*: the monopolist was restricted to its regulated sphere and barred from exporting its expertise into adjacent competitive markets. Third, *cradle-to-grave regulation*: prices, terms, and conditions of the monopolist's services had to be sold to regulators before they could be sold to customers. For over 50 years, this regulatory paradigm permitted AT&T to deploy the

[73] Many state regulators, however, continued to face intense political pressure to maintain subsidies that had become established under the old monopoly. They preferred to exclude competition and keep products and services under tariff. The FCC responded by preempting the states. With near unanimity the courts upheld the FCC's power to do so. *See* Kellogg 1992: 93.

[74] Commercial telephone service in the United States began with the establishment of AT&T in 1877. At first the Bell System held the essential patents and, hence, enjoyed a complete monopoly. The Bell Telephone Company was renamed the American Bell Telephone Company in 1880 and was incorporated as the American Telephone & Telegraph Company (AT&T) in 1900.

best, most technologically sophisticated telephone monopoly system in the country (Kellogg 1992).

In addition, until the early 1930s, the power to regulate wire and radio communications in the United States had been divided among the Commerce Department, the Post Office Department, the State Department, and the Federal Radio Commission. Hence, the regulatory authorities lacked broad statutory and never formulated any national plan to control the old telephone monopoly system for the telecommunications industry. Recognizing the need of a single regulatory body to deal with matters in the communications field, in 1933 President Franklin D. Roosevelt requested the Secretary of Commerce to appoint and convene an interagency committee to study the problem of government regulation of electronic communications. The interdepartmental committee recommended that Congress establish a single agency to regulate all interstate and foreign communications by wire and radio, including broadcasting, telegraph, and telephone, with provisions for inclusion of newly developing technologies and media that might fall under these categories. Congress enacted the *Communications Act of 1934*, which created the Federal Communications Commission and assigned it responsibility for this unified regulation. The Act's objective was to "make available, so far as possible, to all the people of the United States a rapid, efficient, nation-wide, and world-wide wire and radio communication service with adequate facilities at reasonable charges."[75] Consequently, the responsibility for the regulation of all interstate and international communications was finally consolidated by the

[75] *Communications Act of 1934*, ch. 652, § 1, 48 Stat. 1064 (1934), *codified as amended* at 47 U.S.C. § 151 (1988). The new Commission was to regulate radio as well as wire communications and, hence, replace the Federal Radio Commission established by the *Radio Act of 1927*, 44 Stat. 1162 (1927).

Communications Act of 1934, transferring to the FCC powers formerly exercised by other government agencies and broadening the scope of communications regulation in general (Hilliard 1991; Kellogg 1992).

The FCC began operations on July 11, 1934, as an independent agency comprised of seven Commissioners, appointed by the President with the advice and consent of the Senate; in 1983 the number of Commissioners was reduced to five. Since 1934 the regulatory powers and practices of the FCC have changed principally only in degree, its basic mandate still governing its activities. The expansion of existing communication technologies and the development of new ones, such as satellite, cable, and others, resulted in new rules and regulations and, in some instances, amendments to the Act. Depending on the party in power, the country's political climate, and the philosophical orientation of individual Commissioners, the FCC has regulated strongly in the public interest or deregulated in the industry interest (Hilliard 1991: 66).

To carry out the mandate to effectively regulate interstate and international communications, Congress granted the FCC a measure of administrative, legislative, and judicial power. The FCC operates differently today than it did during its early years, the main difference being that the federal regulatory agency has been given more power to make rules or adjudicative orders and to enforce them. From its existence the FCC has controlled the long-standing problem like the other side of the coin--that is, competition and monopoly--by making policies through rule-making and adjudicative order-making.

In relation to long-distance telecommunications matters regarding AT&T, for instance, in 1936 the FCC began an investigation into AT&T's rate structure. Beginning with the 1956 *Hush-A-Phone* order, the FCC made a series of decisions that were aimed

at introducing competition into telecommunications market. In that year the Department of Justice and the Bell System entered a Consent Decree which left intact the Bell physical distribution channel structure, but restricted the company to offering regulated common carrier services. That is, the events leading to both deregulation and divestiture actually began in 1956. In 1968 it began to deal with the interconnection issue, by ordering that AT&T should file revised tariffs that eliminated prohibitions against the competitive use of interconnection equipments (i.e., Carterfone devices). Since the early 1970s, the protected franchise eroded as new entrants had been permitted first to serve niche markets and then to compete for core business of AT&T; the quarantine had been partially lifted as the boundaries between regulated and competitive markets had eroded; and pervasive regulation of prices and terms of service is gradually giving way to competition. A new paradigm of unfettered competition--without entry barriers, quarantines, or tariff regulation--began to emerge (Kellogg 1992). In 1972 it adopted a policy of increased competition in the interstate service market by allowing any other common carriers to enter the microwave transmission field. In 1976 it began to apply a method of cost allocation to modify AT&T's monopolistic interstate rate of return. In 1989 it ratified price cap regulation for AT&T, expecting that price caps would bring higher rates of return to telcos,[76] despite oppositions from users, other common carriers, and Congress. In 1990 it adopted streamlined regulation of AT&T in the enhanced service market. In 1991 it ordered the implementation of *800 Portability* that allows customers to change carriers, which inflicted AT&T's market share. Throughout U.S. telecommunications history, the AT&T divestiture was a big event that changed the face

[76] 'telco' is a generic abbreviation for telephone company.

of the industry forever and continued to affect how regulators view the industry. The protection of competition or removal of monopoly continued to be the driving force behind regulations by the FCC in the AT&T divestiture of 1984 and the *Telecommunications Act of 1996* as well. FCC's policy decisions through rule-making or/and adjudication are expected to be affected by the new legislation of 1996, as it continued to review the impacts by the AT&T divestiture in 1984 and adopt policy changes.

In short, under the old regulatory settings before the creation of the FCC in 1934, the federal regulators' task was to impose regulations not only to ensure that a monopoly did exist, but also to see to it that the dominant company (that is, AT&T) was allowed to operate as a monopoly provider at reasonable rates. Under the new regulatory mode which started with the Communications Act of 1934 and continued after the break-up of AT&T, the federal regulator's main task was still to proceed regulatory policies to ensure that the monopolist enjoyed no more than a "fair" rate of return and to manage competition as well. Shifting from managing monopoly to managing competition had accelerated in the recent FCC regulatory policy-making processes, but the transition was by no means complete (Kellogg 1992). In addition, as the new telecommunications settings supported active competition by fledgling telephone companies, many conflicts between incumbents and new competitors emerged in the market at the same time. As many interested parties from the industry, the public, and government had filed petitions against the monopolistic activities by the long-time dominant carrier, AT&T, such conflicts in relation with keen regulatory issues were between regulators themselves (that is, the FCC and state commissions), the FCC and the telephone companies, and the FCC

and many federal courts.

In the whirl of political relations, the U.S. government initiated various policies via FCC's rule-making or adjudication procedures to solve such conflicts and thus sustain the new regulatory paradigm of unfettered competition. Hence, a review of the U.S. basic political/economic policies that effectively governed FCC decision-making after 1934 will give some idea of the political context of the FCC and AT&T and other interested parties involved in the long-distance telecommunications matters.

2-1. U.S. TELECOMMUNICATIONS REGULATORY POLICIES BETWEEN POST-1934 AND AT&T DIVESTITURE

The *Communications Act of 1934* gave the FCC broad powers to regulate interstate and foreign commerce in communications by wire and radio. The Commission began to make substantial regulatory policies, first, to regulate and institutionalize AT&T's long-distance monopoly, later to protect it from new competition, simultaneously to dismantle it when competitive pressures became too great, and ultimately bring deregulation in the U.S. telecommunications market.

The U.S. Congress, federal courts, and the FCC continued to prove that competition in the long-distance markets was both feasible and desirable. However, between 1959 and the 1984 AT&T break-up, the Commission pursued a contradictory policy, inflating Bell's long-distance-to-local subsidy on the one hand, while idling toward long-distance competition on the other hand. AT&T spent the same decades attempting to fend off new competition, while simultaneously endeavoring to readjust its

prices to meet it. The FCC's orders through rule-making procedures (e.g., *Above 890* order in 1959, *Specialized Common Carrier* order in 1971, etc.) were created and challenged by various political parties. The culmination of *Computer Inquiry II* in 1981 and the *Modified Final Judgment* (of the Consent Decrees) in 1983 had the greatest impact upon the U.S. telecommunications market, together with the deregulation of customer premises equipment (CPE) and the divestiture of AT&T on 1 January 1984.

❑ Genesis of the Communications Act of 1934 and Creation of the FCC

By the 1930s it had become apparent that a single regulatory body was needed to deal with the changing conditions in the communications field. Consequently, the responsibility for the regulation of all interstate and international communications was finally consolidated by the *Communications Act of 1934*. This statute created the FCC, transferring to it powers formerly exercised by other government agencies and charging it with regulating interstate and international communications by radio, television, wire, satellite, and cable. The act was subsequently amended, important revisions being those in 1952 and 1960-1962 which made changes in the commission's organization and procedures. The *Communications Act* requires carriers to furnish services on request and at reasonable and nondiscriminating rates. That is, the legislation aimed in part 'to make available, so far as possible, to all the people of the United States, a rapid, efficient, nationwide and worldwide wire and radio communication service with adequate facilities

at reasonable charges.'[77] In FCC terms, a communications common carrier is an individual or corporation whose services are open to public hire for handling interstate or foreign communications by electrical means. Intrastate common carrier services come under the authority of state utility commissions (Kellogg 1992; Hilliard 1991).

The *1934 Communications Act* recognizes two types of common carriers--those fully subject to the act and those that are partially subject to it. The partially subject carriers engage only in interstate or foreign communications through interconnection with the facilities of fully regulated carriers. The Commission has the authority to prescribe the forms of records and accounts to be kept by the fully subject carriers, and it has established uniform systems of accounts for them to follow, including the establishment and maintenance of original cost accounting, continuing property records, pension cost records, and depreciation records. The carriers are required to retain these records for varying periods. The FCC prescribes the depreciation rates for the larger domestic telephone and telegraph carriers to be used in determining the depreciation charges to be included under operating expenses. These large, fully subject carriers file monthly and annual reports with the Commission, giving specified financial and operating information. Officers of a fully regulated carrier cannot hold office in another carrier unless so authorized by the FCC (Datapro 1993).[78]

In addition, before a common carrier can construct or operate facilities, the carrier must obtain from the Commission a certificate of public convenience and necessity. This requirement also applies if a carrier wishes to discontinue services to the public or

---

[77] *See* 47 U.S.C. § 201 through § 203.
[78] *See* Datapro Information Service Group. 1993. "A History of Telecommunications Regulation." *Issues & Trends* (July): 1-15 (hereafter "Datapro").

consolidate with or acquire the facilities of another carrier. The Commission must ensure that the proposed facilities are adequate, but not excessive, and that their costs are "reasonable and prudent." The common carrier portion of the *Communications Act* also requires carriers, when the Commission finds such action in the public interest, "to establish physical connections with other carriers, to establish through routes and charges applicable thereto and the divisions of such charges, and to establish and provide facilities for operating such through routes."

It is the responsibility for the FCC's *Common Carrier Bureau* (CCB) to evaluate new technologies and to conduct economic studies and investigations into industry structure, practices, and accounting systems. Moreover, the Bureau reviews carrier charges and regulations to ascertain that they are reasonable and nondiscriminatory, and it authorizes carrier facility investment and service offering.[79] The CCB handles complaints and inquiries from the public, monitors the quality of interstate telephone and telegraph service, works with state regulatory commissions and the National Association of Regulatory Utility Commissioners (NARUC), and participates in international planning and coordination conferences. It should be noted that the CCB takes part in policy proceedings through adjudication and rule-making, but it is the Commission--the main body of all Commissioners making up the FCC---that makes policy decisions regarding interstate and foreign common carriers matters (Hilliard 1991: 48).

The FCC is not responsible for regulating *intrastate* communications--that is the

[79] The Common Carrier Bureau's authority includes: licensing of radiotelephone circuits; assigning frequencies for their operation; considering applications for construction of new facilities; approving discontinuance or reduction of service; acting on applications for mergers; and regulating rates for interstate telephone and telegraph services and for services between the United States, foreign and overseas points, and ships at sea.

function of state regulatory agencies. The distinction between inter- and intrastate commerce is important in determining which aspect of the communications process is subject to which regulatory agency. For example, local telephone networks and equipment are subject to state regulation, regardless of the fact that such equipment is interconnected for interstate communications. The rates for interstate calls originating form or terminating at such local exchanges are, however, subject to federal regulation.[80]

❑ 1949-1956: AT&T Antitrust Suit resulting in the *1956 Consent Decree*

In 1949 the Justice Department filed a second antitrust suit, alleging that AT&T had attempted to monopolize telecommunications equipment and services through its practices of acquiring and licensing patents, and charging that effective regulation of telephone rates was hampered because higher prices charged by Western Electric for equipment automatically increased the investment upon which Bell System companies were allowed to earn a reasonable return.[81] The U.S. government sought to terminate AT&T's ownership of Western Electric, to dissolve Western Electric into three separate companies that would compete with other manufacturers for Bell System business, and to discontinue restrictive agreements between AT&T, Western Electric, and the 22 Bell Operating Companies (BOCs).[82] The focus of the suit was the separation of regulated monopoly services and unregulated equipment supply (Brock 1981: 187).

After several years and a change of federal administrations, an agreement was

[80] 47 U.S.C. § 152(a) and (b).
[81] Complaint, United States v. Western Elec. Co., No. 17-49 (D.N.J. Jan. 14, 1949).
[82] *Id.* p. 72.

finally reached in 1956 with a consent decree--the second consent degree between the U.S. federal government and AT&T--referred to as the "Final Judgment."[83] Under the terms of the agreement, Western Electric would not be separated from AT&T, but it would limit its manufacturing operations to the type of equipment purchased by the Bell System. AT&T agreed to restrict itself to regulated common carrier communications, refrain from entering the market for unregulated computer services, and furthermore grant licenses and to pass on pertinent technical information to applicants on reasonable terms (Johnson 1986: 59).[84]

In the 28 years the 1956 Consent Decree remained in effect, there were some major disputes about the scope and enforcement of the decree. For instance, in 1980 AT&T questioned whether the 1956 decree allowed it to provide "enhanced" services. The FCC had previously ruled that data processing was not common carrier services and had thus engaged the 1956 decree to bar AT&T from offering such services. In its 1980 *Computer II* inquiry, however, the FCC had concluded that AT&T should be permitted to provide enhanced services, subject to certain safeguards.[85] Despite opposition from the Justice Department, which was by then embroiled in its antitrust suit against AT&T in 1974, the New Jersey district court agreed.[86] However, the Justice Department appealed to the Third Circuit, but the appeal was pending, the 1982 Consent Decree replaced the 1956 decree, the appeal was dismissed, and the district court's decision was vacated as moot.[87] The 1956 decree had since been attacked by some observers, most notably Judge

---

[83] United States v. Western Elec. Co. 1956 Trade Cas. (CCH) ¶68,246 (D.N.J. 1956) ("1956 Decree").
[84] *See* also 1956 Decree, § IV, § V, § X, and § XIV.
[85] *Second Computer Inquiry*, 77 F.C.C.2d 384 (1980).
[86] United States v. Western Elec. Co., 1981-2 Trade Cas. (CCH) ¶64,275 (D.N.J. 1981).
[87] United States v. Western Elec. Co., No. 17-49 (D.N.J. Mar. 25, 1982).

Greene, as a back door political deal.[88] Others, however, praised the decree, noting that the Bell System thereafter achieved new heights in providing service, lowering price, and developing new technology (Temin 1987: 15-19).

❑ Policy re Interconnect Issue: *Hush-A-Phone* Order of 1956 and *Carterfone* Order of 1968

Following the settlement of the 1949-1956 antitrust suit by the *Consent Decree of 1956*, the FCC began to reexamine its policy of allowing AT&T to prohibit subscribers from connecting to the telephone lines any equipment not supplied by the telephone company. For years, AT&T tariffs had clearly indicated that customer attachment of virtually all foreign equipment was prohibited, with the telephone company having the right to disconnect the customer-connected equipment and even to terminate service altogether. The basis for this policy was the claim that foreign (i.e., other vendors') equipment might damage the network; however, the result was a monopoly for the Bell System on the supply of equipment.

The FCC's change in attitude was at first reflected in the *Hush-A-Phone* decision in 1956. This order opened the way for the connection of customer-provided attachments to telephone equipment. Then, the true competitive market impetus resulted from the

---

[88] Judge Greene offered his view that the Bell System (or Bell) was not permitted to offer untariffed enhanced service under the 1956 decree and that the FCC had no power to relieve AT&T of its obligation under the antitrust suit, specially under the 1956 decree. In addition, he criticized Bell's attempt to have prosecution of the 1949 antitrust case postponed until the conclusion of the Korean War. After the war Bell continued to lobby the Justice Department, the Defense Department, and the FCC in order to settle the case on some basis other than the divestiture of Western Electric. The Defense Department supported Bell's attempt to settle, since Bell had done significant service for the Department. Judge Greene was critical of an incident in which the Defense Department requested Bell's help to prepare a memorandum explaining the benefits of an integrated Bell System. *See* United States v. AT&T, 552 F. Supp. 131-180 (D.D.C.

Carterfone decision in 1968. An inductive-acoustical device was manufactured by Carter Electronics Corp. of Dallas, TX, and designed to interconnect private two-way radios with the telephone system by means of a base station. The Bell System used an anticompetitive strategy that prevented the Carterfone from entering the market, claiming that any foreign device attached to the network would adversely affect the system (Shooshan 1984: 27-28). However, the FCC decided in June 1968 that the *Carterfone* and other telephone attachments could be connected to the public telephone system but conceded that the telephone companies would be allowed to install protective equipment between lines and the foreign devices. Consequently, AT&T was required to file revised tariffs that eliminated prohibitions against the use of the *Carterfone* devices. This *Carterfone* order began to open the door to increased competition in the telephone industry and made possible a new interconnect industry that would become a viable competitive force in the communications equipment market. Telephone equipment vendors initiated competition in the vertically integrated system by springing up to offer alternatives to the AT&T's offerings. It should be noted, however, that the *Carterfone* decision dealt with what could be connected or attached acoustically or inductively to the telephone system, and not whether the customer could obtain a metallic connection without a protective connecting arrangement (Johnson 1986).

❑ Policy for Private Communications Networks (*Above 890* Order in 1959)

The FCC's *Above 890* Order in 1959 triggered the first round of adjustments

---

1982).

between competition and monopoly in the long-distance markets. In 1956 the FCC ordered an investigative review of microwave and other frequencies above 890 Mc. As a result of the investigation, the Commission found in 1959 that adequate frequencies were available for private point-to-point communications systems and that private installations should be allowed.[89] Private-line facilities offered point-to-point communication lines or multipoint communication, and provided most of the service advantages of private microwave systems. Fearing that its largest customers might decide to build their own private communications networks, AT&T introduced 'wide area telephone service' (WATS) switched services at the end of 1960, as a competitive pricing strategy. In 1961, AT&T also implemented Telpak, which is a leased private-line service dedicated to the user. Telpak consisted of bulk quantities of private line circuits provided at large "volume discounts" from the rates for individual private line circuits. Questions immediately arose over whether Telpak rates were discriminatory or below cost, and there followed lengthy administrative and legal proceedings. In its first *Final Decision and Order*, the Commission ruled that the multiple channel rates were unreasonably discriminatory in that "like" services were being offered at different rates, and directed the Bell System to demonstrate that each tariff was both justified by competitive necessity and high enough to cover actual costs.[90] The proceedings dragged on until 1981, when AT&T finally withdrew the tariff entirely (Brock 1981: 207-230).

---

[89] Specific microwave frequencies had previously been available principally for assignment to public safety agencies, power utilities and pipelines (right-of-way companies), and to the broadcasters of remote television pick-up and studio-transmitter links. *See* Allocation of Frequencies in the Bands Above 890 Mc, 27 F.C.C.2d 359 (1959); *recon. denied*, 29 F.C.C.2d 825 (1960).

[90] *Telpak*, 37 F.C.C.2d 1115-1116 (1964).

❑ 1970-1983: Policy of Cross-Subsidization via the *Ozark Plan* of 1970

In the history of all telephony, the FCC's long-term concern was that AT&T might 'cross-subsidize' its more competitive (local) services by allocating excessive costs to the monopoly (long-distance) services and thereby increasing monopoly rates. As such cross-subsidization practices were forbidden by the Communications Act, it was up to the FCC to see to it that rates for services were based on the cost of providing those services. Nevertheless, through the "separation" process--the division of costs between interstate and intrastate jurisdictions--the FCC and state regulators heavily subsidized local connections by loading costs onto interstate services. This brought universal service and helped attract long-distance competition. And with competition came today's dismaying spectacle of regulators vowing to embrace competition, maintain subsidy, and protect fledgling competitors all at the same time.

In a major 1930 ruling, *Smith v. Illinois Bell Tel. Co.*, the Supreme Court found the "separation of intrastate and interstate property, revenues and expenses of the [phone] [c]ompany" to be "essential to the appropriate recognition of the competent governmental authority in each field of regulation."[91] Thus, state and federal regulators would each be required to authorize adequate returns on the assets within their separation jurisdiction. Congress embraced the same general approach in the *Communications Act of 1934*. The Commission's authority extends to facilities used for interstate and intrastate communication. But the Commission is expressly denied jurisdiction over the intrastate service and has no authority over intrastate "charges, classifications, practices, services,

facilities, or regulations."[92]

After the Supreme Court's 1930 ruling, some fraction of each telco's costs had to be allocated to interstate accounts under federal jurisdiction. In practice, the federal regulators imposed variable usage fees to cover *traffic-sensitive* (TS) costs coming from interexchange or long-distance services while the local regulators favored flat rate fees to cover *nontraffic-sensitive* (NTS) costs related to local phone lines. The result was a subsidy flowing from heavier users of long-distance service to heavier users of local service. That is, it became politically attractive to accept high long-distance rates and low local rates--to dump costs on to interstate users and siphon revenues back in the other direction. The benefits to local regulators were obvious, and the FCC also could gain political credit by emphasizing the most populist of its statutory mandates, universal service, above all others. Thus, for 25 years, the FCC, state commissions, and AT&T allocated more and more of the local plant to the interstate jurisdiction. Gradually, it came to be accepted that facilities (like handsets and local lines) used in common for both local and long-distance calling were used for long-distance calling (Temin 1987: 26-27).

In 1970 an FCC-state utility board (called the *FCC-NARUC Joint Board on Jurisdictional Separations*), convened by the FCC, revised the jurisdictional separation manual. This revision, which came to be known as the *Ozark Plan*, assigned 3.3 percent of local NTS costs to federal accounts for every 1 percent of interstate calling.[93] Astonishingly, the common costs of local and long-distance service were going to be distributed, not just "fully," but at triple the rate indicated by relative usage. However,

---

[91] Smith v. Illinois Bell Tel. Co., 282 U.S. 145 (1930).
[92] 47 U.S.C. § 152(b).
[93] 26 F.C.C.2d 247 (1970); Amendment of Part 67 of the Commission's Rules and Establishment of a Joint

the *Ozark Plan* went wholly unchallenged in the courts. AT&T was the only long-distance carrier on the scene, but since it controlled the local BOCs, most of the inflated Ozark payments were going to occur within its own corporate family.[94]

Despite the disproportionate cost it bore, long-distance traffic nevertheless grew steadily and shifted more and more costs onto the federal side of the ledger. Interstate usage increased from 5.5 percent to 8.3 percent from 1972 to 1983; local NTS costs allocated to the interstate jurisdiction increased from approximately $1.9 billion to $11.2 billion.[95] By 1980, roughly one quarter of the cost of the access lines was being provided by long-distance tolls, even though long-distance calls accounted for only 8 percent of access line usage. AT&T, the nation's main long-distance carrier, was sending about half of the revenues it collected straight back to local exchange companies (Faulhaber 1987: 73). These transfers contributed to universal service. Between 1940 and 1980, the real price of local service declined 55 percent; subscribership increased from 37 percent of households in 1940 to well over 90 percent.[96] However, subscribers who did not use AT&T's toll service at all received phone service at below cost. Hence, OCCs could competitively enter the AT&T long-distance service market, recognizing that there were tremendous opportunities for undercutting the inflated prices that AT&T was forced charge for its long-distance service (Faulhaber 1987: 73).

❑ 1971-1978: Competitive Long-Distance Service Policy via the 1971 *Specialized*

Board, 78 F.C.C.2d 837, 841 (1980) (Section 23.44 of the Separation Manual).

[94] Since 1960, the BOCs had been responsible for 80 percent of all telephones in the U.S. and had collected 85 percent of all local service revenues. *See* United States v. AT&T, 524 F.Supp. 1336, 1348 n.33 (D.D.C. 1981); United States v. AT&T, 552 F.Supp. 131, 162 (D.D.C. 1982).

[95] MCI v. FCC, 750 F.2d 138 (D.C. Cir. 1984).

[96] *Telecomm. Rep.*, June 2, 1986, p. 6.

Common Carrier Order

AT&T's WATS and Telpak services, as private line services for multipoint communication, were aimed at groups most likely to bypass the system--government and business organizations. Both Telpak and WATS price discrimination strategies by AT&T were successful in the prevention of network bypass until 1971, when MCI and the other specialized common carriers (SCCs) received final FCC approval.[97]

The Commission's *Specialized Common Carrier* order of 1971 established a new, general policy favoring competitive provision of intercity private lines. In this specialized common carrier proceeding, the FCC adopted a policy of increased competition among existing and new common carriers in the sale of data transmission and other specialized communications services to the public. The FCC also reasoned that the adverse impact of new specialized carriers on service to the public by existing carriers would not outweigh the considerations supporting a new entry.[98]

This decision opened the door to substantial competition in the long-distance telephone industry, as it allowed virtually any common carrier to enter the microwave transmission field by permitting and requiring more liberal interconnection with each telephone company's facilities. The first specialized common carrier to initiate commercial long distance telephone service was *Microwave Communications, Inc. (MCI)*, offering voice and other services between Chicago and St. Louis in 1972.[99] With

---

[97] Customers of Telpak and WATS were able to just lease, but unable to buy the services and then resell single-line services to subleasors at prices lower than the price of single-line service offered by AT&T. In many instances MCI used its own microwave system, but the predatory disadvantages of discriminatory pricing were at work, because services were available at lower prices. *See* Johnson 1986: 61.

[98] *Specialized Common Carrier*, 29 F.C.C.2d 870 (1971).

[99] In 1969 MCI had been authorized a new point-to-point microwave service between Chicago and St. Louis

the introduction of such new competitive carriers came the dissolution of the concept of nationwide rate averaging. AT&T as an established carrier contended that new specialized carriers would seek business on the high-volume, low-cost routes, leaving the Bell System to serve the thinly populated, high-cost areas.

Until 1972, established policy for common carriers called for nationwide averaging of interstate service costs and rates. Thus, service between small towns in remote areas cost the subscribing residents no more than for the same mileage between larger cities, although it cost much more for the carriers to provide the former service. The *National Association of Regulatory Utility Commissioners* (NARUC) and the *Utilities and Transportation Commission of the State of Washington* protested that the new specialized carriers would siphon off the business service revenues of the established phone companies to the detriment of the companies' "less affluent" residential and small business users. NARUC and the Washington State Commission filed a petition with the FCC requesting that the Commission reconsider its order permitting competition among carriers providing specialized microwave communications services. The petition was denied by the FCC, which maintained its position that existing carriers would be permitted to compete "fairly and fully" in the sale of specialized services (Datapro 1993: 5-6).[100]

This 1971 *Specialized Common Carrier* order also directed the Bell System as an

---

with the FCC's 4-3 approval. See Microwave Communications, Inc. v. FCC. 18 F.C.C.2d 953 (1969); *recon. denied*, 21 F.C.C.2d 190 (1970).

[100] Hence, for example, in 1976 over 2,000 applicants were received by the FCC from common carriers wishing to construct new or modified point-to-point microwave facilities. Deciding that reducing application processing time would improve service to the public, the Commission took steps to ease the regulatory burden on applicants by simplifying rules and forms and by automating the application processing procedure.

established carrier to negotiate interconnection arrangements with the new entrants, particularly for local distribution at either end of competitors' private lines.[101] The negotiations between Bell and MCI went nowhere and finally collapsed in the late summer of 1973, when Bell unilaterally submitted tariffs to public utility commission in the states where MCI sought interconnection, declining to file these tariffs with the FCC. In the *Bell System Tariff Offerings* order the Commission declared that local-to-long-distance interconnections were matters for federal, not state, tariffing.[102]

Although the SCCs--which came to be known as Other Common Carriers (OCCs)--could construct and operate competitive microwave systems, they were initially restricted to private lease-line services. Their competitive entrance into switched-access long-distance services came only after MCI began to market its *Execunet* service in 1975.[103] This was not what the FCC had intended, but it was what the D.C. Circuit Court of Appeals desired in its *Execunet I* ruling. The Bell System immediately filed its opposition with the Commission, and the FCC rejected MCI's *Execunet* tariff two times, indicating that it had intended to confer on AT&T a monopoly over MTS and WATS (switched public message telephone services).[104] In 1977 MCI went to court, arguing that the Commission had followed illegal procedures in ruling against *Execunet*, and then the D.C. Circuit Court of Appeals ruled in MCI's favor in *Execunet I.*[105] In 1978 AT&T and the Commission petitioned, arguing that the D.C. Circuit's decision would make "cream-skimming" new entrants compete only for the high profits to be won on high-density

---

[101] *Specialized Common Carrier*, 29 F.C.C.2d 940 (1971).
[102] *Bell System Tariff Offerings*, 46 F.C.C.2d 413 (1973).
[103] *MCI Telecommunications Corp.*, 60 F.C.C.2d 25 (letter order of July 2, 1975, FCC 75-799).
[104] *MCI*, 60 FCC 2d 25, app. B at 62-64 (1976) (Letter order of July 2, 1975 (FCC 75-799)).
[105] MCI Telecommunications Corp. v. FCC, 561 F.2d 365 (D.C. Cir. 1977) ("Execunet I").

routes, thereby undermining the entire scheme of price-averaging and long-distance-to-local subsidies that had been built up over many years. In its *Execunet II*, the Supreme Court again ruled that MCI was entitled to interconnection for the full array of services that it might choose to offer over its facilities, and thus MCI won a new set of interconnection rights for its switched long-distance service.[106] Three years later, *Execunet III* extended identical interconnection obligations to all independent local exchange telephone companies.[107]

The impasse that followed was one incapable of any principled resolution. The OCCs vehemently maintained that they were just ordinary, private *buyers* and should be billed accordingly. AT&T of course saw them as competing *sellers* and demanded they pay their share of the local subsidies on the same terms as AT&T's own long-distance affiliate. Both were right, and what was wrong was the tariff structure, which had permitted sharp discrepancies between costs and prices to build up over the years under the *Ozark Plan* of costs separations (Kellogg 1992: 458). Nonetheless, with more vague hope than realistic expectation, the FCC opened an *MTS and WATS Market Structure* docket to determine "what reimbursement interstate services should make to local operating companies for the use of local plant' and "whether and how these charges [paid by interexchange carriers for interconnecting with local plant] can be equitably imposed on all interstate services."[108] In the meantime, the FCC encouraged negotiations among the parties to arrive at some interim "rough justice" tariffs. Several months of public meetings culminated in the executions, in December 1978, of an *Interim Settlement*

[106] MCI v. FCC, 580 F.2d 590 (D.C. Cir. 1978) ("Execunet II").
[107] Lincoln Tel. & Tel. Co. v. FCC, 659 F.2d 1092 (D.C. Cir. 1981) ("Execunet III").
[108] *MTS and WATS Market Structure*, Notice of Inquiry of Proposed Rule-making, 67 F.C.C.2d 757-759

Agreement (ENFIA Agreement) between AT&T, MCI, and a number of other OCCs and telcos.[109] Under the ENFIA Agreement, the OCCs were to pay progressively higher access rates, but they were allowed to provide switching in long-distance service. In reality, the OCCs paid roughly three times more than they had been paying for interconnection, but still substantially less (35 to 45 percent less) than AT&T was paying for local distribution.[110] Hence, due primarily to their own competitive prices, OCCs were then able to penetrate the AT&T long-distance market. The discounted *ENFIA* rates for OCCs remained in effect until May 1985 when the switched access tariffs implementing the Commission's access charge plan became effective after the AT&T divestiture (Brock 1981: 227-230).

The discount ostensibly reflected the inferior forms of interconnection that the OCCs still received. In fact, what it reflected was a political deal, a stop-gap private resolution of two irreconcilable telecommunications public policies. On the one hand, the FCC had accepted the *Ozark Plan of 1970*, by which Bell's long-distance operations would supply a heavy, continuing subsidy to local operations. On the other hand, the FCC (propelled by the D.C. Circuit Court of Appeals) had signed up new competition in the long-distance market without first establishing that all newcomers would be full-fledged subsidizers like AT&T. The former policy reflected a long legacy of misregulated monopoly; the latter, a short legacy of misregulated competition (Kellogg 1992: 459).

(1978).

[109] *Exchange Network Facilities for Interstate Access* (ENFIA), 71 F.C.C.2d 440 (1979) (hereinafter *ENFIA Agreement*).

❑ 1971: Deregulatory Policy for Data Processing (*Computer Inquiry I* Order)

In 1971 data network channels were allowed so that competition was not limited to long-distance "voice" channels alone. The FCC attempted to draw the line between "data processing" and "communication" by applying the *Computer Inquiry I* Order, which prescribed that communication services were to remain regulated while computer services were to be unregulated (Johnson 1986: 62).

Following a five-year inquiry, now known as *Computer Inquiry I*, into regulatory and policy questions raised by the increasing interdependence of computers and communications, the FCC issued its final order on March 18, 1971. The Commission held that, with minor exceptions, common carriers desiring to provide data processing services to persons (individuals, corporations, etc.) other than the carrier itself (or its affiliates) could do so *only* through completely separate affiliates. Smaller common carriers, whose combined annual operating revenues did not exceed $1 million, were exempt from this maximum separation requirement.[111] The chief of the CCB was charged with determining whether a particular service offering was essentially a data processing service (not subject to regulation) or a communications service (subject to regulation). Despite some protests, this action was later upheld, with minor changes, by the Second Circuit Court of the U.S. Court of Appeals.[112] The FCC had concluded, in effect, that no public interest would be served by the regulation of data processing services, but rather that the market would best develop and flourish in a competitive

---

[110] *ENFIA Agreement*, 71 F.C.C.2d 446-447, 455 (1979).
[111] *Final Decision and Order*, 28 F.C.C.2d 267-275 (1971).
[112] GTE Service Corp. v. FCC, 474 F.2d 731 (1973).

environment.

❑ 1976-1980: *Computer Inquiry II* Order of 1980

In 1976, AT&T introduced and tariffed the *Dataspeed 40/4*, an IBM 3270-compatible CRT terminal. Although AT&T claimed that the terminal would be used simply to transport data and therefore could be classified as data communications equipment, many saw the terminal as an integral component of a data processing system and therefore objected to its being tariffed. The issue brought home the inadequacies of the *Computer Inquiry I* decisions made in 1972, which attempted to establish regulations and policies on the basis of a defined difference between data processing and data communications. The FCC therefore began a second inquiry into regulatory and policy questions raised by the interdependence of computers and communications. Tentative decisions were made in 1979 and finalized on May 2, 1980; the final decision has subsequently been modified several times.

The *Computer Inquiry II* Order presented three major points as follows.[113]

First, the FCC would no longer attempt to define data processing separately from data communications. Instead, it established two classes of service--"basic" and "enhanced:" in a word, "basic service" is 'plain old telephone services' (POTS) while ancillary services such as voice storage or automatic call answering are "enhanced services." In other words, "basic" services were defined as those services providing *only* for the movement of information, by whatever means. This included computer-controlled

transport, such as message switching and packet switching, as long as the information traveled 'unchanged' through the network from the source to the destination. Basic services would remain subject to regulation by the FCC and would continue to be tariffed. "Enhanced" services were those services providing anything beyond basic transportation, such that the information reaching its destination would be "different, additional, or restructured" in comparison to the information sent by the source. Examples of enhanced services would be speed, code, or protocol conversion or any type of process that would result in content change. Also included in the definition of "enhanced" were any services that required subscriber interaction, such as electronic mail or voice mail systems. Effective January 1, 1982, all existing enhanced services were detariffed, and enhanced services were deemed no longer subject to FCC regulation.

The second major point of *Computer Inquiry II* concerned customer premises equipment (CPE), including residential and business telephones, PABX systems, modems, and other end user devices. The FCC defined two classes of CPE--"embedded" and "nonembedded." "Embedded" CPE was designated as equipment already installed and subject to state tariffing and to the separations procedures already in progress. Embedded CPE, which was retained by AT&T when the divestiture occurred on January 1, 1984, became detariffed. All remaining CPE was designated as "nonembedded" and was detariffed effective January 1, 1982.

The third major point stated that all regulated carriers (including AT&T, of course) would be permitted to provide enhanced services and nonembedded CPE only through a fully separated subsidiary. This ruling had subsequently been modified to

---

[113] Memorandum Opinion and Order on Further Reconsideration (Computer Inquiry II), Docket No. 20828,

allow regulated carriers (including divested BOCs) to sell, but not manufacturing CPE, effective January 1, 1984. AT&T's response to this point was the creation of a new, fully separated subsidiary, *AT&T Information Systems* (originally called *American Bell, Inc.*), which began operations on January 1, 1983.

❑ 1974-1983: AT&T Antitrust Suit resulting in the *1982 Consent Decree* (or *Modified Final Judgment*) and Divestiture Agreement (effective in 1984)

The U.S. federal government antitrust suits aimed at restructuring the Bell System were proceeded and three major consent decrees between the government and AT&T were entered during the 70 years between 1914 and 1982.

In 1974 the Justice Department took its third antitrust action against the Bell System, a move that was to have a tremendous impact on the telecommunications industry. On November 20, the Antitrust Division of the U.S. Department of Justice filed a complaint that accused AT&T, Western Electric, and Bell Laboratories of conspiring to "prevent, restrict, and eliminate competition from other telecommunications common carriers, private telecommunications systems, and manufacturers and suppliers of telecommunications equipment."[114] That is, the suit alleged an unlawful combination among various Bell entities resulting in the monopolization of both long-distance service and the manufacture of telecommunications equipment, and thus asked for divestiture of the entire stock interest that AT&T held in its manufacturing arm, Western Electric Co. and further requested that AT&T either give up its long-distance telephone business or

---

FCC 81-481 30260, released 30 October 1981.

[114] United States v. AT&T, 524 F. Supp. 1336-1374 (D.D.C. 1981).

retain the business but surrender its interests in its 22 local telephone companies (that is, the Bell Operating Companies [BOCs]).[115]

AT&T maintained that most of the actions with which it was charged were within the jurisdiction of the FCC and state regulatory authorities.[116] At the request of the U.S. District Court, the Commission rendered its opinion on this question, concluding that the Communications Act of 1934 did not deprive the court of jurisdiction to hear the Justice Department suit. AT&T Chairman John B. deButts warned at a press conference that economies of scale arising from the size and integrated structure of the Bell System would be lost by its dismemberment, inevitably resulting in higher costs and decreased services (Datapro 1993: 8).

In 1981 Judge Harold H. Greene issued a final judgment, declining to dismiss each party's (the government's or AT&T's) claims on the matters such as interconnection, cross-subsidy, and predatory pricing in the long-distance service and equipment markets. None of the government's allegations was ever finally adjudicated in Judge Greene's courtroom or elsewhere: shortly after the 1981 ruling, the U.S. Department of Justice made an agreement with the Bell System whereby the suit would be dropped if AT&T gave up its 22 local BOCs.[117] Ultimately, Judge Greene's only adjudicated finding was that the tentative settlement agreement was "within the reaches of the public interest."[118] The 1982 Consent Decree was announced January 8, 1982,

---

[115] *Id.*

[116] Plaintiff's Third Statement of Contentions and Proof, United States v. Western Electric. Co., No. 74-1698 (Jan. 10, 1980).

[117] United States v. AT&T, 552 F. Supp. 226-234 ("1982 Decree").

[118] In approving the decree, Judge Greene stated that "[i]t would be inappropriate for the Court at this juncture to draw definitive conclusions with regard either to the sufficiency of the evidence to sustain a finding of liability or to the validity of AT&T's various legal and factual defenses." *See* Id. pp. 151, 161.

seven years after filing its antitrust suit against AT&T, and was filed as a modification to the *1956 Consent Decree*, thereby referred to as the *Modified Final Judgment* (MFJ).

Indeed, the break-up of the Bell System was to be the largest judicially supervised, politically affected divestiture in history. U.S. District Court Judge Greene had refused, however, to approve the decree unless both parties (the Justice Department and AT&T) agreed to submit the reorganization plan to the court for its approval. Although AT&T and the Justice Department had agreed to the settlement, it was also up to Judge Greene to review its terms and dismiss the antitrust suit. In addition, approximately 110 public and private entities and organizations petitioned the court and were granted the privilege of participating in the processing, since the outcome of the case would be so far reaching. Arguments concerning many aspects of the settlement were heard, including such issues as when and how AT&T's assets and liabilities would be accounted for, allocated, and transferred and who would have what powers to set exchange access charges.

In order to obtain the court's approval, AT&T and the Justice Department made a tentative settlement with the following main points:[119]

- AT&T would have to divest itself of all segments of its business that provided exchange access and local exchange services. It could keep the segments of its business that provided customer premises equipment (CPE) and interexchange services.

[119] 1982 Consent Decree, 552 F. Supp. 227; Memorandum, United States v. Western Elec. Co., No. 82-0192 (D.D.C. Aug. 31, 1982); Memorandum, United States v. Western Elec. Co., No. 82-0192 (D.D.C. May 10, 1983); and Memorandum, United States v. Western Elec. Co., No. 82-0192 (D.D.C. May 17,

- No relationships between the divested companies and AT&T or one another could exist, except for a central services organization (CSO) that might provide such services as planning, engineering, and administration to the divested companies more efficiently than each could provide for itself.

- The divested companies (that is, seven *Regional Bell Holding Companies* [RBHCs]) would have to provide equal access to all interexchange carriers. For example, users would have to have equally convenient access to any long-distance carrier, instead of simply dialing a three-digit area code to access AT&T Long Lines and inconveniently dialing multiple strings of numbers for MCI and other independent carriers.

- The divested companies (seven RBHCs) would not be permitted to discriminate in favor of AT&T for procurement of products or services (e.g., they would have to terminate all CPE procurement contracts with Western Electric), dissemination of technical information, facilities planning, and other services.

- The divested companies (seven RBHCs) would be able to provide basic services (as defined by *Computer Inquiry II*) only and would be prohibited from providing interexchange telecommunications services,[120] information services,[121] or any type

---

1983). *See* also Kellogg (1992).

[120] Section II (D)(1) of the 1982 decree prohibits RBHCs from providing "interexchange telecommunications services." "Interexchange" transmissions are transmissions between LATAs; "telecommunications" are electromagnetic transmission of customer information; and "services" are transmission offered to customer for hire. Taken together, these definitions describe the common carrier

of nontariffed services. Services would be confined to specified Local Access and Transport Areas (LATAs).

A number of modifications resulted from the Judge Greene's reviews, including the amended decision that the divested local operating companies (that is, seven RBHCs) would be allowed to provide, but not manufacture, CPE. The RBHCs would be allowed the right and the financial means to produce and distribute telephone directories. The RBHCs would be permitted to provide interexchange service and manufacture equipment, if they could show evidence that their entry into the market would not stifle competition. AT&T would have to relinquish virtually all rights to the "Bell" name and logo to the RBHCs.[122]

AT&T and the Justice Department agreed to Judge Greene's modification of terms, and the antitrust suit was subsequently dismissed on August 24, 1982. In September 1982 NARUC announced that seven state commissioners had been appointed to a committee to serve as a liaison between state regulatory agencies and the Justice Department, FCC, and AT&T while the reorganization plan (of AT&T) was being ironed out. The committee was formed to provide a means for state regulators to participate in the plan's development. The divestiture plan was filed in December 1982 and approved on August 5, 1983. It called for the BOCs to be divested effective January 1, 1984.

---

business of carrying customer messages between LATAs. Inevitably, however, these seemingly straightforward terms precipitated endless controversy. *See* Kellogg (1992: 295-314).

[121] The information services were found to encompass data processing, electronic publishing, voice answering services, electronic mail, videotex, electronic versions of Yellow Pages directories, E911 emergency service, and directory assistance services provided to customers of nonassociated independent telephone companies. However, there were substantial controversies in attempting to understand the scope of the information services. For instance, despite its origins, the information services restriction was not interpreted to be identical to the FCC's "enhanced services." *See* Kellogg (1992: 315-327).

The Reorganized AT&T

The antitrust suit filed by the U.S. Justice Department was an attempt to enhance competition for terminal equipment and long-distance service by separating the 22 BOCs from the more competitive segments of AT&T business. Before this separation, AT&T subsidized competitively threatened products and services with regulated (and profitable) products and services. AT&T thus charged artificially high rates for some services and artificially low rates for others (e.g., it 'subsidized' local telephone service by charging higher than necessary long-distance rates). This is what the divestiture was all about--to force AT&T to charge its costs where they occurred.

The divested AT&T is approximately one-fifth its original size. The company, under the terms of the divestiture agreement, originally was required to offer network services and CPE through 'separate' subsidiaries, but the FCC has since removed this restriction. As a result, AT&T in mid-1986 began consolidating its long-distance and network operations unit (*AT&T Communications*) with its equipment unit (*AT&T Information Systems*). Because of the divestiture, AT&T is now free to enter nearly any competitive market it chooses. Under the 1982 Consent Decree, however, the company was prohibited form being involved in the information services and electronic publishing industries until August 25, 1989.

The 22 BOCs that existed prior to divestiture are now grouped into seven RBHCs (that is, *NYNEX*, *Bell Atlantic*, *Bell South*, *Ameritech*, *Southwestern Bell*, *US West*, and

---

[122] United States v. Western Elec. Co., 569 F. Supp. 1123-1124.

Pacific Telesis).[123] The RBHCs are completely disassociated from AT&T and are free to deal with any equipment and facilities vendor they choose, whether AT&T or any of its competitors. The RBHCs can sell but not manufacture CPE. They have retained their Yellow Pages service, along with their local exchange and exchange access service, and have diversified into many new areas including real estate service, computer retail operations, software development, and local area network (LAN) design and installation. It is in these unregulated markets that the RBHCs see significant opportunities for growth.

The *Modification of Final Judgement* (MFJ) (or the 1982 Divestiture Decree)[124] dictated that long-distance services would continue to be provided by *AT&T Communication*, while the 22 BOCs that together form the 7 RBHCs would provide local exchange service within subdivisions called Local Access and Transport Areas (LATAs). An LATA was defined in Section IV(G) of the 1982 decree as one or more continuous local exchange areas serving common social and economic purposes, even if these LATAs overrun municipal or other local government boundaries. Every area served by a RBHC within a state must be included in a LATA, but LATAs are not allowed to cross state boundaries or include two 'standard metropolitan statistical areas' (SMSAs) unless approved by the courts. The two principal services provided by RBHCs after divestiture would be "transport" among end users within a LATA and "access" to long-distance

---

[123] A *RBHC* consists of some local telephone companies: *NYNEX* consists of New England Telephone and New York Telephone; *Bell Atlantic* consists of Pennsylvania Bell, New Jersey Bell, Diamond State Telephone, and C&P Telephone Company; *Bell South* consists of Southern Bell and South Central Bell; *Ameritech* consists of Michigan Bell, Ohio Bell, Indiana Bell, Illinois Bell, and Wisconsin Telephone; *Southwestern Bell* consists of itself only; *US West* consists of Northwestern Bell, Mountain Bell, and Pacific Northwest Bell; and *Pacific Telesis* consists of Nevada Bell and Pacific Telephone.

[124] The '1982 Divestiture Decree' broke up the Bell System into AT&T Corp. and the seven RBHCs. It is also referred to as the 'Modification of Final Judgement' (MFJ) since it is technically a "modification" of

carriers. LATAs were not, however, intended to separate "local" from "toll" calls; the RBHCs could continue to provide toll service within individual LATAs.[125]

2-2. U.S. GOVERNMENT'S KEY TELECOMMUNICATIONS REGULATORY POLICES IN THE POSTDIVESTITURE ERA

❑ Regulatory Policy through MFJ Triennial Reviews

In the eight years since divestiture, there had been hundreds of new motions, complaints, and other requests by various interested parties to enforce, modify, or interpret the 1982 Consent Decree. According to the requirements imposed by Judge Greene on the Modified Final Judgment (MFJ), he had to review that ruling every three years after reading a report on the state of the industry prepared for him by the Justice Department. Hence, most decree issues were processed by a small staff of lawyers within the Justice Department, then by Judge Greene, then by the Court of Appeals (Kellogg 1992: 344-345).

The first triennial review in 1987 upheld the ban on BOCs (now RBHCs) from entering long-distance service business, manufacturing, and enhanced services except for "low-level gateway functions." In making the judgment, Judge Greene stated that the RBHC's monopolies had not been broken and that competition still required protection. Judge Greene also aimed jabs at the FCC, accusing it of not fulfilling its obligation to

---

the consent decree entered against Western Electric and AT&T in 1956.
[125] United States v. Western Elec. Co., 569 F. Supp. 995.

regulate effectively and siding unfairly with monopoly forces of AT&T and RBHCs.[126]

Judge Greene changed his tune during the second triennial review in 1991 after the D.C. Circuit Court of Appeal requested that he review the information services ban using a more lenient standard. So on July 25, 1991, Greene lifted the MFJ's ban prohibiting RBHCs from offering information services, including electronic publishing, long-haul services, and cable television systems in the RBHC's local service areas. However, the RBHCs did not rejoice in their triumph for long, since Greene issued a stay, stopping the companies from entering the new information service market until all the appeals were heard. However, three months later (in October 1991), the D.C. Circuit Court of Appeals lifted the stay, classifying it an "abuse of discretion."[127] Long-distance carrier MCI Communications, newspaper publishing groups, and other information service providers filed appeals, claiming the separated Baby Bells would create unfair competition, immediately brought the matter to the U.S. Supreme Court, asking the Court to reinstate the stay until the appeals are heard. Despite the appeals and heavy lobbying, reinstatement was denied.

❑ Policy for Equal Access and Access Charge

Before the MFJ in 1983, there had been many conflicts regarding equal access matters between the Bell System and OCCs. As part of the MFJ, all RBHCs with the technical capability that serve a market with at least 10,000 access lines must offer equal access to all common carriers. The 1982 divestiture decree contained equal access and

[126] United States v. Western Elec. Co., 673 F. Supp. 525.

nondiscrimination provisions specifically addressing competition in the long-distance market. The purpose of this ruling was to allow customers to choose a primary common carrier for their long-distance calls and enable them to use that carrier simply by dialing 1, the area code, and the telephone number, and thus ultimately prevent favoritism between AT&T and competing providers of long-distance and information services.[128]

The 1982 decree thus requires RBHCs to provide "exchange access" and "exchange services for such access" to all interexchange carriers on equal terms. An interexchange carrier must establish one or more points of presence in any LATA it wishes to serve. Each RBHC then acts as the local collector and distributor of calls to and from those points of presence. The RBHCs are required to provide exchange access "on an unbundled, tariffed basis that is equal in type, quality, and price to that provided to AT&T."[129] The decree likewise requires RBHCs to provide "information access" to information service providers "that is equal in type, quality, and price to that provided to AT&T"[130]

Customers still bear the responsibility for contracting with the primary carrier of their choice. Equal access has provided a number of benefits to users. Customers making a long-distance call--across a LATA--can use the services of as many long-distance carriers as they wish. For customers who do not choose a primary carrier, calls

---

[127] Order at 1, United States v. Western Elec. Co., No. 91-5363 (D.C. Cir. Oct. 7, 1991).
[128] United States v. AT&T, 552 F. Supp. 142, 195-197, and 209. Information
[129] Modification of Final Judgment (MFJ) Section II (A), *cited in* United States v. AT&T, 552 F. Supp. 225-232.
[130] Information access is defined as the provision of specialized exchange telecommunications services by a RBHC in an exchange area in connection with the origination, termination, switching, forwarding or routing of telecommunications traffic to or from the facilities of a provider of information services, whether they are local or long-distance, landline or mobile, whether they are transmitting voice or videotex, facsimile or data. Such services include the provision of network control signaling ("signaling service"), operator service, 700/800/900 services, automatic calling number identification, testing and maintenance of facilities, and the

are allocated to the interexchange carriers (IXCs) in a percentage basis, determined by the number of customers already committed to each carrier. Before the MFJ order of 1983, many BOCs were selecting AT&T only as the long-distance carrier of default. Hence, accusation by MCI and OCCs of such unfair default to AT&T led to the FCC's decision in 1985, which described this practice 'unreasonable and discriminatory' and ordered that the RBHCs must use an allocating procedure to assign carriers to their customers.[131]

The 1982 decree not only permitted but required RBHCs to recover the costs of providing access through access tariffs.[132] The decree further required that RBHCs' access prices be "unbundled" such that no interexchange carrier need "pay for types of exchange access that it does not utilize;" charges for each unbundled element of service be "cost justified;" and tariffs "shall not discriminate against any carrier or other customer."[133] In practice, however, these ambiguous, vaguely defined demands had been given no coherent or consistent content at all. For instance, the "cost justified" requirement meant nothing; access charges could subsidize local telephone service (Kellogg 1992: 268). In addition, the decree's demands for nondiscriminatory pricing proved equally empty. Judge Greene had declared that access charges may be averaged and regulators may engage in "value pricing" of access services that required AT&T to pay a premium for superior access regardless of underlying costs. The 1982 decree itself incorporated a clause that equalized access rates notwithstanding the lower costs of providing service to AT&T. This clause was intended to neutralize the cost advantages

---

provision of information necessary to bill customers ("billing service"). *See* Id. § II(B), 552 F. Supp. 227.
[131] "FCC to end BOC's practice of routing default traffic to AT&T," *Communications Week*, 27 May 1985, pp. 1-37; "FCC to telcos: don't send default traffic to AT&T," *Communications Week*, 3 June 1985, pp. 1-47.
[132] MFJ Appendix B, 552 F. Supp. 233.

that AT&T would otherwise have enjoyed as a result of its legacy of sharing arrangements and co-location with the RBHCs. In 1983 the FCC ordered that AT&T's "carrier's carrier" charge was to be maintained at a "premium" above the charge paid by the OCCs.[134] The AT&T premium clause expired by its own terms in September 1, 1991, but the FCC again intervened to protect competitors, if not competition, and kept the discriminatory arrangements in place.[135]

In May 1991 the FCC had proposed regulations that would facilitate the interconnection and substitution of alternate access facilities with the RBHCs, GTE, United Telephone, and other major 'local exchange carriers' (LECs), which also restructured the access charges. In September 1992 the FCC acted on its proposal and opened the special access market to competition at the interstate level and mandated co-location. The special access ruling requires the RBHCs and other independent telcos to allow 'competitive access providers' (CAPs) to interconnect with their switching and trunking equipment and thus with the long-distance network at reasonable rates. A special access surcharge applies to each voice grade channel that terminates at a customer's PBX or equivalent equipment that is capable of connecting with the local telephone company switch. This special access surcharge, which had led to higher rates for local service (for access to the long-distance service), had caused many businesses to consider telco bypass alternatives. The co-location mandate states that a CAP will be permitted access to the LEC's central office to maintain and monitor its terminating network lines. As expected, several LECs had asked the courts to issue a stay, stating that

---

[133] *Id.*
[134] *Access Order*, 93 F.C.C.2d 241 (1983).
[135] *MTS and WATS Market Structure*, Transport Rate Structure and Pricing, 6 F.C.C. Rec. 5341 (1991); *see*

the ruling allows for illegal seizure of property (Datapro 1993: 10-11).

❑ 1986-1992: *Computer Inquiry III* Order

On June 16, 1986, the FCC released the *Computer Inquiry III* Order and Supplement Notice for Proposed Rule-Making (NPRM), which was a policy-making for removal of structural separation requirement for enhanced services.[136] In this ruling, the Commission voted to substitute nonstructural safeguards for existing *Computer Inquiry II* subsidiary rules. In lifting the structural separation requirements from AT&T and the RBHCs, however, the FCC imposed new rules requiring these companies to offer enhanced services based on a new *Open Network Architecture* (ONA) standard. AT&T and the seven RBHCs were required to submit, by Feb. 1, 1988, ONA plans that, according to the Commission, "satisfy *comparably efficient interconnections* (CEI) requirements and additional unbundling requirements through a set of basic service elements that support enhanced services offered by both carriers and their competitors."[137] Thus, the ONA standard, which was referred to as CEI when it related to specific services, was implemented, according to the FCC, "to control potential discrimination against competitive enhanced service providers."[138] On December 22, 1988 the Commission approved their ONA plans in substantial part but flagged a number

---

"The Little Guys of Long-Distance are Mighty Nervous," *Business Week*, June 3, 1991, p. 29.

[136] Amendment of § 64.702 of the Commission's Rules & Regulations ("Third Computer Inquiry"), Report and Order, 104 F.C.C.2d 958 (1986) ("Phase I Order").

[137] RBHCs and AT&T must provide competitors with access to basic services "comparable in quality" to the access they use themselves in supplying enhanced services of their own. *See* Phase I Order, 104 F.C.C.2d. 1027.

[138] *Id.*

of areas for revision.[139]

The decision by the FCC to adopt nonstructural safeguards for providing enhanced services was based on the view that structural separation requirement hindered enhanced services competition. The Commission declared that the costs of structural separation were proving to be greater than initially believed. Protocol conversion, voice messaging services, and innovative routing and switching functions had all been inhibited by structural separation requirements, and both the BOCs (or RBHCs) and AT&T had been discouraged from designing innovative enhanced services that used the public switched network.[140] Especially, on its reconsideration of the *Computer Inquiry III* Order, even though the Commission recognized that AT&T was still sufficiently dominant in interexchange markets that it might otherwise engage in various forms of discrimination against competitors, it decided AT&T would be allowed to rely on service-specific CEI plan, reasoning that market restraints on AT&T's ability to act anticompetitively were sufficient to make complete ONA/CEI requirements unnecessary.[141] At any rate, indicating information services as a significant part of the enhanced services industry, the FCC claimed that the 1982 consent decree prohibiting AT&T and the RBHCs from offering information services prevented this *Computer Inquiry III* Order from fulfilling a completely competitive marketplace. Lifting the structural separation rule for AT&T, the FCC came to allow AT&T jointly to market communication services and equipment. The *Computer Inquiry III* and ONA also freed

---

[139] *Filing and Review of Open Network Architecture Plans*, 4 F.C.C. Rec. 1. The FCC proceeded a series of further amendments to the RBHCs' already-approved ONA plans in 1989 and 1990 successively. See Filing and Review of Open Network Architecture Plans, slip op. FCC 90-135 (May 8, 1990) ("Phase II Order"); and Filing and Review of Open Network Architecture Plans, Docket No. 88-2 (Dec. 19, 1991).
[140] *Phase I Order*, 104 F.C.C.2d. 985-1009.

the RBHCs from having to form separate enhanced service subsidiaries.[142]

The Commission again applied its preemptive powers in issuing the *Computer Inquiry (CI) III* Order.[143] That is, the Commission sought to preempt state regulation inconsistent with the Commission's own ONA/CEI and other nonstructural safeguards applicable to AT&T and the RBHCs.[144] Many states disagreed with the Order and fought to overturn it. In June 1990 the Ninth Circuit Court of Appeals in San Francisco overturned the *CI III* Order on behalf of the State of California, ruling that the FCC did not justify its substitution of nonstructural safeguards for structural separation and that it overstepped its bounds in attempting to regulate *intrastate* enhanced services.[145] While it did not dispute the validity of *CI III* goals and ONA/CEI benefits for enhanced services, the court did not believe that accounting controls were enough to prevent the RBHCs from cross-subsidizing enhanced (unregulated) services with basic (regulated) services.[146]

The 1990 court ruling effectively wiped out half a decade of regulatory effort, placing the FCC and the telephone industry as a whole in a state of turmoil. However, the FCC did not choose to fight the appeals court ruling. In line with the Supreme Court's mandate, it proposed to preempt only state regulation of intrastate communications that would necessarily thwart or impede federal regulation. In addition, because the ruling did not specifically prohibit or discourage ONA tenets, however, the Commission attempted

---

141 *Phase I Reconsidered*, 2 F.C.C. Rec. 3042-3043.

142 "FCC unleashes AT&T from Computer II Structured Separation Rules on CPE," *Telephone Engineer and Management*, 15, October 1985, p. 17.

143 In its 1980 *Computer II* Order, the FCC had preempted inconsistent state regulation of enhanced services. It had barred states from eliminating the structural separation requirements imposed on AT&T, even in connection with intrastate services.

144 *Phase I Order*, 104 F.C.C.2d. 1125-1126.

145 The appellate court stated that the Commission's attempt to preempt contrary state rules was beyond the scope of its authority. *See* California v. FCC, 905 F.2d 1217 (9th Cir. 1990).

146 *Id.* pp. 1232-1233.

to reinstate those aspects of ONA/CEI relating to unbundling AT&T and RBHC services and allowing AT&T to offer enhanced services through its telephone unit. Also in 1990 the FCC adopted CC Docket 90-132 for a rule-making, advocating streamlined regulation of AT&T, the dominant long-haul carrier. The Congress also strongly opposed future regulation of AT&T (Datapro 1993: 12).

❑ Policy regarding Cross-Subsidization recurring in the Post-Divestiture Era

In the years after *Smith v. Illinois Bell Tel. Co.* in 1930, AT&T had recovered local plant costs allocated to the interstate jurisdiction by boosting per-minute charges for long-distance calls. If it had chosen to return those revenues to local telcos in proportion to the amount of interstate traffic they generated, smaller and poorer telcos would have fallen steadily behind, since they usually generated little long-distance traffic. Instead, AT&T placed the revenues in an interstate "pool" and divided them with each local telephone company in proportion to its investment. This was called the "division of revenues" process and was required to be ended upon divestiture of the Bell System.[147]

Pooling remained necessary even after the FCC's 1983 line charge reforms. The FCC had largely corrected one fundamental problem--the problem of *traffic-sensitive* (TS) prices being used to cover *nontraffic-sensitive* (NTS) costs. However, price-averaging was still a sacred principle of telecommunications because the FCC could not prescribe uniform, average costs. Access-charges revenues still had to be pooled nationwide, and then distributed back to individual telcos in proportion to their

contribution to the aggregate interstate rate base. When the FCC first decided to recover local NTS subscriber plant costs through subscriber line charges, it proposed to help out rural and high cost areas with a carrier-supported Universal Service Fund.[148] The subsidy was to be maintained through a "high cost factor" in separations formulae applied to local NTS plant. Basically, high-cost telcos get to continue playing the Ozark game, pretending that more of their plant is used for interstate service than is really the case. All revenues extracted from long-distance carriers through this resurrected Ozarkian accounting are allocated to the Universal Service Fund.[149]

Divestiture, however, destroyed the industry consensus that made voluntary pooling possible. Several of the BOCs and 11 bigger telephone companies including AT&T began to oppose revenue pools, while others passionately supported them as essential to universal service.[150] To enforce continuation of pooling, the FCC established an exchange carrier association--soon to become the National Exchange Carrier Association (NECA),[151] and thus lower cost telcos would contribute to the maintenance of nationwide averaging.[152] In 1987 the carriers agreed upon "Unity 1-A," which created a revised universal service fund to target assistance to those telcos with the greatest needs. This established the basis for ending mandatory pooling, and then carriers were permitted to opt out of the pool for loop-related plans beginning in April 1989.[153]

The decades of the 1980s witnessed a rapid, historically unprecedented decline in

---

[147] NARUC v. FCC, 737 F.2d at 1104; *Access Order*, 93 F.C.C.2d 280; and Second Supplemental Notice, 77 F.C.C.2d. 224, 226-228 (1980).
[148] *Access Order*, 93 F.C.C.2d 244.
[149] *Id.* p. 282.
[150] *Id.* p. 281.
[151] *Id.* p. 333.
[152] *LEC Price Cap Order*, 5 F.C.C. Rec. (1991) 6819.
[153] 47 C.F.R. § 69.612.

the price of interstate telephone calls, as interstate calling volumes grew dramatically. However, in absolute terms, the size of the transfer payments from long-distance carriers to local companies did not decline; the percentage allocation had been frozen, but that percentage was applied to a steadily rising base of investment. As of 1991, access charges still accounted for 25 percent of local telco revenues but almost half of the cost of a long-distance call.[154]

❑ 1990s: Regulation of Dominant and Nondominant Carriers via *Competitive Carrier* Rule-Making Proceedings between 1979-1985

Competition had increased in the interexchange market since 1972 and thus, during the period from 1979 to 1985, the FCC launched a series of *Competitive Carrier* rule-making proceedings to reduce many of the barriers to effective competition in the long-distance service market place related to the share and resale of MTS, WATS, private line services, which were still dominated by AT&T.[155] In this period, the united Bell System still towered over other independent phone companies and the other common carriers (OCCs).

The FCC's 1979 rule-making divided the world into the markets for *dominant* and

---

[154] *1991 U.S. Industrial Outlook.* pp. 29-2, 29-3 (1991).

[155] *Competitive Carrier*, Notice of Inquiry and Proposed Rule-making, 77 F.C.C.2d 308 (1979); First Report and Order, 85 F.C.C.2d 1 (1980) ("First Report"); Further Notice of Proposed Rule-making, 84 F.C.C.2d 445 (1981); Second Report and Order, 91 F.C.C.2d 59 (1982), *recon.*, 93 F.C.C.2d 54 (1983) ("Second Report"); Second Further Notice of Proposed Rule-making, 47 Fed. Reg. 17,308 (1982); Third Further Notice of Proposed Rule-making, 48 Fed. Reg. 28,292 (1983); Third Report and Order, 48 Fed. Reg. 46,791 (1983) ("Third Report"); Fourth Report and Order, 95 F.C.C.2d 554 (1983) ("Forth Report"); Fourth Further Notice of Proposed Rule-making, 96 F.C.C.2d 992 (1984); Fifth Report and Order, 98 F.C.C.2d 1191 (1984) ("Fifth Report"); Sixth Report and Order, 99 F.C.C.2d 1020 (1985) ("Sixth Report"), *reversed and remanded sub nom.*, MCI Telecommunications Corp. v. FCC, 765 F.2d 1186 (D.C. Cir. 1985).

nondominant carriers; thereafter, the FCC would stop regulating "nondominant" carriers entirely.[156] Nondominant carriers were defined to be those unable to raise price, curtail overall output, or engage in predatory or discriminatory pricing—in short, those firms that lacked market power.[157] In the following years, the FCC systematically dismantled most regulatory demands imposed on nondominant carriers.

In 1981 the FCC announced a policy of permissive "forbearance" in its regulation of nondominant carriers: it would simply refrain from subjecting these carriers to various procedural requirements.[158] In 1982 the Commission announced it would forbear from applying the tariff filing requirements of Section 203 and exit requirements of Section 214 of the *1934 Communications Act* to resellers of terrestrial services;[159] a year later the Commission extended forbearance to specialized common carriers and all remaining resellers,[160] and in 1984, to all remaining domestic nondominant carriers.[161]

In 1985 the Commission resolved to eliminate tariffs of nondominant carriers root and branch; these carriers would instead deal with their customers through ordinary, bilateral contracts.[162] In the same year, however, the D.C. Circuit Court of Appeals ruled that the Communications Act of 1934 leaves the Commission with "no statutory authority to prohibit the filing of tariffs that, by statute, every common carrier (dominant or

---

[156] *Competitive Carrier*, Notice of Inquiry and Proposed Rule-making, 77 F.C.C.2d 308 (1979).
[157] *First Report*, 85 F.C.C.2d 10-21 (1980). All specialized common carriers and resellers were classified as nondominant carriers while AT&T, local telephone companies, and domestic satellite carriers and resellers of satellite transmission facilities were considered dominant carriers.
[158] *Further Notice of Proposed Rule-making*, 84 F.C.C.2d 471 (1981).
[159] *Second Report*, 91 F.C.C.2d 73 (1982).
[160] *Fourth Report*, 95 F.C.C.2d 557 (1983).
[161] *Fifth Report*, 98 F.C.C.2d 1193, 1209 (1984).
[162] Forbearance was now mandatory, not permissive. See *Fourth Further Notice of Proposed Rule-making*, 96 F.C.C.2d 923-924 (1984); *Sixth Report*, 99 F.C.C.2d 1030-1032 (1985).

nondominant) 'shall' file."[163]

The "dominant" side of the market remained more confused. Before divestiture, the Bell System was indisputably "dominant" wherever it operated: the Justice Department and the FCC agreed on that. The 1982 divestiture decree had been built on the bedrock assumption that divestiture would quickly eliminate market power in the long-distance market. However, AT&T was to bear no special burdens, although the RBHCs implemented equal access to all long-distance carriers and the OCCs deployed new facilities. The FCC had continued to subject not only the Bell System to full-bore regulation under Title II since the 1960s, but by the early 1990s, AT&T remained dominant in the FCC's eyes, as do all local operating companies in their home territories, including GTE, its subsidiary, Contel, and independent telephone companies.[164]

❑ 1989-1993: Price Regulation Policy via *AT&T Price Cap Order* of 1989

An extremely controversial issue is the FCC's determination to change the way regulated telephone companies can earn profits, from a system of "rate of return" (ROR) regulation to one of "price caps." Under ROR regulation, the FCC set the carrier's allowed rate of return on investment, and telcos were prohibited from earning above a predetermined, across-the-board rate of return. Under *Price Caps* regulation, where the regulator focuses on rates charged rather than the profits of the carrier, a telco is given a tariff "cap" above which rates cannot rise, and a price "floor" under which rates cannot drop. Price caps allow telcos to earn higher rates of return as long as tariffs stay within

[163] MCI v. FCC, 765 F.2d 1186.

price cap boundaries, lessening the amount of regulation to which dominant carriers such as AT&T are subjected. Understandably, regulated telcos (especially AT&T) praised price cap plans and have pushed for their implementation (Brenner 1992: 5).

The fact that AT&T remained dominant perhaps justified a continuing need for regulation. It was important for the FCC to prevent AT&T from crushing the long-distance competition, but simultaneously the FCC wanted to prevent an army of accountants from stifling innovation and efficiency within AT&T. Hence, the FCC planned to turn to price-cap regulation.[165] On July 1, 1989, the FCC put in place a new price-cap regulatory scheme.[166] The new tariffs were to divide AT&T's services into three "baskets": residential and small business services, 800 services, and all other business services.[167] The plan would make use of AT&T's existing rates as a starting point but required annual price-cap tariff filings to demonstrate that proper price adjustments to the price-cap index for each basket were being made.[168]

In recognition of the still dominant role played by AT&T in the long-distance service arena, the FCC argued that its existent ROR regulation encouraged the Bell System to "cross-subsidize" unregulated services (e.g., long-distance services) and keep service prices artificially high, and it discouraged modernization and cost-cutting efforts. Instead, the FCC believed that its new *Price Cap* system would lead AT&T to cut costs

---

[164] Policies and Rules Concerning Rates for Dominant Carriers, 6 F.C.C. Rec. 4819 (1991)

[165] For a description of the transition from rate-of-return regulation to price-cap regulation, *see* Levitz (1987).

[166] *Policy and Rules Concerning Rates for Dominant Carriers*, 4 F.C.C. Rec. 2873, 3094 (1989) ("AT&T Price Cap Order").

[167] *Id.* pp. 3051-3053. Basket 1 services are generally 'plain old telephone services' (POTS) plus 'international message telephone service' (IMTS), Reach Out America (ROA) service, and operator-assisted and credit card calling services; Basket 2 services are related to 800 "toll-free" services; and Basket 3 services include ProAmerica, WATS, Megacom, Software-Defined Network (SDN), voice-grade private lines, wide-band private-line services, and other switched services.

and to realize significant savings, which in turn would be passed on to residential and business users and thus would operate efficiently in order to respond to competitive initiatives by other common carriers. The FCC also expected that its separation of AT&T services would prevent the cross-subsidy of more competitive services with less competitive services.[169] This FCC view was opposed by several user groups, legislators, and state regulatory commissions, who questioned the price caps' perceived flaws and the elimination of telco earning scrutiny. User groups and state regulators were not at all certain that telco savings would be passed on to users or that AT&T as the only dominant carrier would be prohibited from engaging in anticompetitive (predatory) pricing (Shields 1991).

On March 16, 1989 the FCC ratified price cap regulation for AT&T and proposed similar regulation for local telcos.[170] Despite protest from angry users and alternative carriers, condemning AT&T rates based on price caps, the FCC implemented price caps for many but not all LECs. The FCC claimed its formula was fair and combated discrimination. Opponents feared the RBHCs could use price caps to unfairly price 'basic service enhancements' (BSE). The FCC, however, believed that requiring the carrier to identify the BSE would discourage discrimination. Congress reportedly opposed price caps, making regulating more difficult for the FCC. The Commission, however, continued to propose additional price cap safeguards. In April 1993 the U.S. Court of Appeals in Washington, DC, upheld the FCC's decision to reduce the rate of return from 12% to 11.25% (Shields 1991).

---

[168] *Id.* p. 3093.
[169] *Id.* pp. 2893, 2964-2965, 3052.
[170] On January 1, 1991, the FCC finally shifted the largest LECs (the seven RBHCs and GTE) from a "cost-

❑ **1987-1990s: Price Regulation Policy regarding Private Contract Tariffs (AT&T's Tariffs 12, 15, and 16)**

Throughout the two decades (1970s and 1980s) that competition infiltrated the long-distance market, AT&T attempted to meet the competition's flexible, one-on-one, business grabbing deals, while also adhering to its obligation to provide service under *tariff*--a public statement of terms and conditions of service. As competition became firmly rooted, and telecommunications systems more sophisticated, complex, and variable, this became impossible. In 1987 AT&T finally attacked the problem head on, filing a *One-Customer Tariff* ("Tariff 12") that was to permit AT&T to supply a private network to the General Electric Telecommunications Network (GETN).[171] What the tariff did was to integrate a variety of separately tariffed services into a single contract or "option" and set a single five-year price for the whole.[172] MCI and Sprint rushed in to protest, pointing out that an integrated service offering under a privately negotiated contract was discriminatory, thereby precluding any fair competition between AT&T and the other long-distance carriers.[173] In response to MCI and Sprint's petitions on Tariff 12, AT&T deleted the explicit reference to General Electric and stated that the service in question would be made available to any taker.[174] The FCC ultimately ruled that a bundled package of services is not "like" an "aggregation of [its] component services

---

plus" system to an incentive-based price cap system. *See* LEC Price Cap Order, 5 F.C.C. Rec. 6787.

[171] *AT&T Request for Waiver of Rules Regarding Proposed Custom-Designed Integrated Service*, 2 F.C.C. Rec. 3915 (1987) ("Custom-Designed Integrated Service").

[172] As of January 1991, AT&T had 77 such integrated contract service packages filed under Tariff 12. *See* AT&T, Revisions to Tariff F.C.C. No. 12, 6 F.C.C. Rec. 740, 741 (1991).

[173] *Custom-Designed Integrated Service*, Comments of MCI Tele. Corp. ("MCI Petition") and Petition for

purchased individually" but ordered AT&T to revise the tariff to "make the custom-network services more 'generally available' to 'similarly situated' customers."[175] AT&T made the change and then the FCC approved the first four revised Tariff 12 contracts.[176]

AT&T followed with Tariffs 15 and 16 in 1988. Tariff 15 was designed to give AT&T some flexibility when seeking large customers, allowing them to meet competitive pressure through the use of Competitive Pricing Plans.[177] Although customers welcomed AT&T's new proposals, competitors grew increasingly frantic. MCI and many OCCs claimed that AT&T would be allowed to target special discounts to specific customers and to bundle unregulated services with regulated services to sweeten 'the deal.' AT&T nonetheless resolved to continue to file Tariff 15s whenever it finds its competitors making customer-specific offerings in the interexchange marketplace, to challenge its competitors' customer-specific tariffs and thus to press for broader regulatory relief.[178] Meanwhile, Tariff 16 is the equivalent for Tariff 12 but for "government or government supported customers."[179] Section 201(b) of the Communications Act allows for a separate pricing classification for services provided to governments.[180] AT&T first proposed Tariff 16 in 1988, after winning a competitive bid for a contract solicited by the Department of Defense.[181] In 1989 it became the "umbrella tariff" under which AT&T

Rejection or in the Alternative Suspension and Investigation ("U.S. Sprint Petition") (May 7, 1987).
[174] *AT&T*, Tariff F.C.C. Nos. 10 and 12, 2 F.C.C. Rec. 5493.
[175] *AT&T*, Revisions to Tariff F.C.C. No. 12, 4 F.C.C. Rec. 4932, 4934 ("Tariff 12 Order"); *recon. denied*, 4 F.C.C. Rec. 7928 (1989).
[176] *AT&T*, Revisions to Tariff F.C.C. No. 12, Custom-Designed Integrated Services, 4 F.C.C. Rec. 5430 (1989).
[177] Revisions to Tariff F.C.C. No. 15, Competitive Pricing Plans--Holiday Rate Plan, 4 F.C.C. Rec. 7933, 7934 (1989); *recon. denied*, 5 F.C.C. Rec. 1821 (1990).
[178] "Users Get Network Answers," *Communications Week*, Oct. 30, 1989, pp. 1, 86.
[179] *AT&T*, Tariff F.C.C. No. 16, 4 F.C.C. Rec. 2231 (1989).
[180] 47 U.S.C. § 201(b).
[181] *AT&T*, Tariff F.C.C. No. 16, 4 F.C.C. Rec. 2231 (1989); *AT&T*, Revisions to Tariff F.C.C. No. 16, 5

provides 60 percent of the world's largest private network--the Federal Telecommunications System 2000 (FTS-2000)--to federal government agencies.[182]

However, in 1990 the D.C. Circuit ruled on the first major challenge to a contract-specific offering and overturned the FCC's approval of Tariff 12.[183] The court conceded that one way or another the FCC would "undoubtedly permit AT&T to compete effectively against its competitors in the large user market" but required that the Commission "do so by turning square corners of administrative law."[184] On remand, as predicted, the FCC again approved Tariff 12 in AT&T's favor.[185]

In August of 1990, with the initiation of AT&T's new price-cap tariff regulation and the soaring criticism over customer-specific tariffs, the FCC invited comments on yet another package of reforms for interexchange competition. The FCC concluded that competition had increased sufficiently to allow a gradual lifting of many of the constraints now binding AT&T's provision of interstate long-distance services, so streamlined regulation for AT&T might be appropriate.[186] On September 16, 1991, the Commission affirmed that steadily rising competition in interstate business services made further deregulatory initiatives appropriate. The high-end of the long-distance market was still not perfectly competitive, the Commission conceded, but it was competitive enough. The Commission concluded that excess capacity (from OCCs like MCI and Sprint) in interstate business services was imposing on AT&T's prices, so the public interest would be best served by more limited advance review of AT&T business service

---

F.C.C. Rec. 468 (1990).
[182] *AT&T*, Tariff F.C.C. No. 16, 4 F.C.C. Rec. 2231 (1989).
[183] MCI v. FCC, 917 F.2d. 30-34.
[184] *Id.* p. 42.
[185] *AT&T*, Revisions to Tariff F.C.C. No. 12, Docket No. 87-568, F.C.C. 91-333 (Nov. 22, 1991).

filings.[187] Thus, all of AT&T Basket 3 services and all services not originally placed in one of the three price-cap baskets[188] were exempted from traditional advance screening by the Commission.[189] Interexchange carriers could thereafter provide these services by way of individually negotiated contracts so long as the contracts remained generally consistent with the Communications Act's policy of service as reasonable rates and without unreasonable discrimination.[190]

❑ 1991: Policy for "800" and "900" Long-Distance Service

In the 1991 *Report and Order* the FCC ordered the implementation of *800 Portability*, perhaps one of the most important decisions made in telecommunications since the 1984 divestiture of AT&T. To simplify a very complex concept, *800 Portability* means that 800 long-distance service customers will be able to change carriers and keep the same 800 number or to divide calls on the same number between two or more carriers.[191] The FCC had expected that competition in the provisions of 800 long-distance services would be vigorous enough to inflict AT&T's market power once these changes were implemented[192] in 1993.[193] However, the 800 long-distance service market

---

[186] *Interexchange Competition*, 5 F.C.C. Rec. 2627-2628.
[187] *1991 Report on Interexchange Competition*, 6 F.C.C. Rec. 5881-5882.
[188] Not included in the 1989 price-cap decision was any of AT&T's customer-specific plans--Tariff 12, 15, and 16--or private-line channels obtained by AT&T from other telcos under Tariff 11. Tariff 11 was excluded from the plan because the LEC special access prices which form the bulk of the tariff's costs are beyond AT&T's control. *See* AT&T Price Cap Order, 4 F.C.C. Rec. pp. 3033-3037.
[189] *Id.* 5893.
[190] *Id.* 5902-5903. In 1990 the D.C. Circuit had held that the Communication Act of 1934 allows the filing of contract-based tariffs. *See* MCI v. FCC, 917 F.2d 37-38.
[191] *Competition in the Interstate Interexchange Marketplace*, 6 F.C.C. Rec. 5880-5905 (1991) ("1991 Report on Interexchange Competition").
[192] *Provision of Access for 800 Service*, 6 F.C.C. Rec. 5421 (1991) ("800 Access"). The price of a call is

still was reflecting the predivestiture legacy of AT&T dominance. As of 1993, the long-term dominant carrier still held 80% of the 800 market, even if it stood to lose 10% to 20% (approximately $1.3 billion) of that market share to its main competitors, MCI and Sprint.[194]

No one disputed that *800 Portability* would eventually mean lower prices for customers. The competition for customers would no doubt cause numerous price wars and "special incentives," especially stemming from AT&T, trying to keep its customers. The LECs were also involved. They had to modify their networks to accommodate the new routing procedures. In order to recover the cost of the modification, the LECs filed access tariffs that raised the rates at their location.

There are several side issues that will also affect the outcome of *800 Portability.* At this point, interested parties should adopt a wait-and-see attitude before making any final decision on the feasibility of this action. If handled correctly, it could prove to be a great boost for the telecommunications industry. If handled incorrectly, those involved can look forward to frustration stemming from both the carriers and customers.

By contrast, 900 long-distance services, which had only been offered since 1988 and are much more competitive and are thus qualified for maximum streamlined regulation along with the rest of AT&T's business services.[195]

---

routed back to the caller either directly (with the 900 services) or indirectly (in the price of the sweater purchased from *Land's End* over an 800 number).

[193] The *800 Portability* was scheduled to begin on May 1, 1993. *See* 1991 Report on Interexchange Competition, 6 F.C.C. Rec. 5905 (1991).

[194] *Id.*

[195] *Id.* p. 5894.

SUMMARY

So far, laying out the basic political, economic, and legal history of the FCC, I showed that the FCC and its Commissioners took a number of policy actions (that is, 'orders' through "adjudicative rule-making decisions") indicating continuing commitment to competition in the various segments of telecommunications market. However, at the heart of the various telecommunications matters was the concern that the FCC was moving too quickly to implement a national, unregulated, and competitive telecommunications environment without establishing effective safeguards to protect user groups and prevent future market domination by AT&T and the RBHCs in specific market areas. Hence, the U.S. government's telecommunications policies, especially regarding the long-distance service market matters, were the products of political interactions among the various interest parties--which tried to pursue the more competitive regulatory setting on the one hand and sustain the monopolistic status on the other hand--that is, the federal agency itself, the U.S. government, the courts, the public interest groups, other common carriers, and the long-term dominant firm the federal regulators regulated, that is, AT&T.

Here, in the following **Table 1**, I summarize a chronological view of major U.S. federal telecommunications policies after the FCC was found in 1934, which led various political and economical actors to involve in the FCC's policy-making and caused long-distance service market setting changes.

Table 1. U.S. Federal Regulatory Policies regarding AT&T in the Long-Distance Telecommunications Service Market Setting (after 1934).

Date	Main Regulatory Policy or Event	Effects on the Regulatory Settings
1934	**Communications Act and Foundation of the Federal Communications Commission (FCC)**	Consolidated the regulation of all interstate and international communications. The Federal Communications Commission (FCC) found as independent government agency charged with regulating interstate and foreign communications by radio, television, wire, satellite and cable.
1956	**Consent Decree** (between Department of Justice and AT&T)	Left Bell's vertically integrated channel structure intact and restricted the dominant carrier offering to regulated common carrier services.
1956	**Hush-A-Phone** (allowed customers to attach a device to a telephone although prohibited attachment to the network)	Opened competition, amending the monopolistic vertically integrated channel.
1959	**Above 890** (permitted private ownership of microwave networks)	Beginning of competitive long-distance telecommunications network channels.
1968	**Carterfone** (permitted customer-owned equipment to be connected to the phone network)	Initiated competition in the physical channel, particularly for the business customer.
1969	**MCI** (authorized Microwave Communications, Inc. between Chicago and St. Louis)	The first duplicate network channel competitive with the public network.
1970 thereafter	**Ozark Plan and Cross-Subsidization** (revised the manual regarding the division of costs between interstate and intrastate jurisdictions by the FCC and the *FCC-NARUC Joint Board on Jurisdictional Separations*)	Initiated agency policies to control cross-subsidization practices of AT&T; FCC policies against cross-subsidization of AT&T continued after the divestiture of AT&T.
1971 ~1978	**Specialized Common Carriers (SCCs)** (authorized SCCs but limited them to providing private line services)	Separate new channels competitive with AT&T's long-line channels that fall under the name of OCCs. The specialized common carrier proceeding was continued until 1978.

1971	**Computer Inquiry I** (allowed unregulated computer service through separate subsidiaries, although AT&T remained barred)	Beginning of VAN channels.
1977	**Execunet** (allowed SCCs to offer ordinary long-distance telephone service to the public in competition with AT&T)	Opened the door for price competition in long-distance channels.
1979 ~ 1985	**Competitive Carrier Policy** (FCC's rule-making proceedings continued until 1985)	Pursued to reduce many of the regulatory barriers to effective competition in the long-distance services; targeted the share of resale of MTS, WATS, and private line services of AT&T.
1979 thereafter	**Dominant and Nondominant Carrier Regulation**	In 1979, divided the common carriers into 'dominant' and 'nondominant', continued to regulate AT&T as a dominant carrier; in 1981, adopted a policy of 'forbearance' in the regulation of nondominant carriers; but, often confused to apply the 'dominant' term.
1980	**Computer Inquiry II** (started with AT&T's tariff regarding data communications equipments in 1976; separated basic common carrier services form customer premise equipment and enhanced service)	Limited telephone company network channels to transmissions not on customer premises.
1982	**Dismissal of US Justice Department's Antitrust Suit (started in 1974) against AT&T/ Modification of the 1956 Consent Decree (= 1982 Consent Decree; Modified Final Judgment [MFJ])** (BOCs filed FCC consolidated application under Section 214 and 310(d)—Communications Act to transfer interstate lines and radio licenses: FCC adopted rules for access charges)	Physical channel structure to be reorganized. AT&T barred for seven years from new channels of electronic publishing. Reorganization of long-distance and exchange channels.
1983	**Break-up of the Bell System** (under the settlement between AT&T and the US Justice Department, reviewed by US District Court Judge	The Bell System divested itself of 22 Bell Operating Companies (BOCs) that provided exchange access and local exchange services; the divested

	Harold H. Greene, effective on 1 January 1984)	companies grouped into 7 Regional Bell Holding Companies (RBHCs) that must provide equal access to all interexchange carriers; RBHCs not permitted to discriminate in favor of AT&T for procurement of products or services, etc.
1984 thereafter	**Equal Access Proceedings** (continued after MFJ)	Pursued to facilitate equal access and nondiscrimination provisions in the long-distance market.
1986	**Computer Inquiry III and Open Network Architecture (ONA)** (substituted nonstructural safeguards of Computer Inquiry II)	Lifted the structural separation requirements for providing enhanced services from AT&T and RBHCs; but, required AT&T to offer enhanced services under a new standard called ONA or CEI (comparably efficient interconnections).
1989 ~ 1993	**AT&T Price Cap Order** (substituted "rate-of-return" price regulation with "price caps" regulation)	Divided AT&T's long-distance services into three 'baskets'; allowed the dominant carrier to earn higher rates of return as long as tariffs stay within price cap boundaries; expected the price cap system to prevent the cross-subsidization activities of AT&T; but continuously opposed by other business/public interest groups.
1991	**800 Portability and 900 Long-Distance Service Regulation** (through *800 Portability* policy, customers allowed to change carriers and keep the same number or to divide calls on the same number between two or more carriers)	Expected competition in the provision of 800 long-distance services to harm AT&T market power and to bring lower prices to customers; applied streamlined regulation to 900 long-distance services.
1996	**Telecommunications Act of 1996** (facilitated a new competitive telecommunications regulatory setting)	Allowed long-distance carriers, local phone companies and cable industry to enter each other's arena.

Chapter 4

FCC POLICY-MAKING THROUGH RULE-MAKING AND ADJUDICATION

In this chapter, general discussions of comparative processes and political contexts of both rule-making and adjudication, and then specific discussions of FCC policy decisions (that is, adjudicative rule-making decisions) are provided.

1. AGENCY POLICY-MAKING THROUGH RULE-MAKING AND ADJUDICATION IN GENERAL

Public administration agencies like the FCC today, as a result of broad delegation of both rule-making and adjudication powers, have the legal authority to make rules or the public policies that govern socioeconomic and political activities in the United States. The federal agencies promulgate public rules or policies through rule-making or/and adjudication, and frequently a combination of the processes is employed to make and fine-tune agency policies.

While rule-making is a quasi-legislative process, adjudication is a quasi-judicial process. In technical terms, when a public agency engages in rule-making the result is generally a rule; when the agency employs adjudication, the product is usually an order. In addition, a rule means the whole or part of an agency statement of general or particular applicability and future effect designed to implement, interpret, or prescribe law or policy or describing the organization, procedure or practice requirements of an agency and includes the approval or prescription for the future of rates, wages, corporate or financial

structures or reorganization thereof, prices, facilities, appliances, services or allowances thereof or valuations, costs, or accounting, or practices bearing on any of the foregoing. In contrast, an order means the whole or a part of a final disposition, whether affirmative, negative, injunctive, or declaratory in form, of an agency in a matter other than rule-making but including licensing (Heffron and McFeeley 1983; Warren 1996).[196]

Agency policy decisions may grant or deny benefits of the interested parties (e.g., permit an industry or a regulated firm to operate or not operate under certain conditions; grant or deny a license to a business or an individual; grant or deny a welfare recipient, farmer, or veteran a benefit). Whether benefits are given or taken away, agency actions are ideally supposed to be guided by due process considerations. In agency rule-making, due process may mean allowing all interested parties ample opportunity to respond to a proposed rule, while in an agency adjudication it may mean allowing a person in a termination hearing sufficient time to examine and respond to allegations of misconduct.

1-1. RULE-MAKING

According to the *Administrative Procedure Act* (APA 1946), "rule-making" means an "agency process for formulating, amending, or repealing a rule," and the act defines a "rule" as "the whole or part of an agency statement of general or particular applicability and future effect designed to implement, interpret or prescribe law or policy or describing the organization, procedure or practice requirements of an agency."[197] In simple language, a rule is made in an administrative agency. When an administrative

[196] *See* also APA. 1964. 5 U.S.C. § 554.

agency engages in rule-making, it is legislating policy. As the definition indicates, rules are not clearly distinguishable from other types of administrative activity. Although rule-making has been called "the distinctive administrative process" and "one of the greatest inventions of modern government" (Davis 1977: 241), many administrative scholars (see, e.g., Robinson 1970; Heffron and McFeeley 1983; Madaj 1990; Warren 1996) indicate that there is no agreed upon definition of what a rule is and there is no clear line between rule-making and adjudication. Agencies maintain their own distinctive terminologies: some agencies like the FTC and the FCC often call rules or regulations "orders;" the Treasury Department calls its rules "decisions;" and others, such as the Civil Aeronautics Board, call rules "policy statement" regulations. "Standards," "guidelines," "opinions," "final reports," and "orders" may in fact be rules depending on the agency that issues them.

Rule-making is that part of the administrative process which most resembles the legislative process, while adjudication most resembles the judicial process. As such, rule-making is a flexible process which allows maximum public input and participation and is normally concerned with establishing future standards for required conduct that are of general applicability. It is proactive and may be initiated by the agency before harm or injury has occurred to individuals or the general public. Rules or regulations may be stated in general terms, based on general facts, and made generally, rather than specifically, applicable. Rules are the essence of due process since they make known in advance of prosecution the standards of behavior that are expected of affected parties. Particularly in situations where legislative standards are vague, meaningless, or absent,

---

[197] APA. 1964. 5 U.S.C. § 551 (4).

rules are an excellent means of structuring administrative discretion and ensuring equal treatment under the law (Lorch 1980; Heffron and McFeeley 1983; Kerwin 1994; Warren 1996).

The general characteristics which distinguish rules from other types of agency action are their future orientation, the process by which they are formulated, the agency's perception or the nature of action, and the reviewing court's perception of that action. Although the facts on which a rule is based may result from past or present behavior or situations (as adjudicative decisions also do), a rule is concerned with prescribing future conduct and not with judging the legality of past behavior. Further, for an action to be properly classified as a rule, it must have been properly formulated through a statutorily defined rule-making process, and the agency must generally recognize the outcome as a "rule" binding on itself and affected parties. Finally, for the action to be classified as a legitimate rule, reviewing courts must accept it as such. Any administrative action that possesses all, most, or some of the above characteristic is a "rule," regardless of how it is labeled (Lorch 1980; Heffron and McFeeley 1983; Kerwin 1994; Warren 1996).

1-2. ADJUDICATION

When a regulatory agency like the FCC adjudicates (or judges), the agency issues an order that represents a judgment in favor of one party (e.g., AT&T) or the other(s) in a dispute. Adjudication (often called 'order-making') is designed to deliberate adjudicative facts, not legislative facts. Just as Supreme Court decisions establish policies to be followed, agency orders also set policies and establish precedents that commonly have the

impact of laws. The need of agency adjudication arises normally when a dispute touches on a case in a policy area (e.g., long-distance telecommunications service regulation) within the regulatory jurisdiction of a particular public agency (e.g., the FCC). Thereby, adjudication (or order-making) is frequently referred to as the "case-by-case approach" to formulating regulatory policies. When an agency is considering adjudicative facts during adjudicative proceedings, either informal or formal, it is concerned with determining who did what to whom and for what reasons in order to settle a dispute between specific parties. The dispute may be between the agency and a private party (e.g., the FCC and a long-distance service carrier), between private outside parties (e.g., two common carriers such as AT&T and MCI) seeking new policies or policy clarifications affecting operations in their industry, or between an intervenor or "party of interest" (in a hearing involving an agency) and a regulated company (e.g., a consumer group such as the *Consumer Federation of America* intervening in a hearing involving the FCC and AT&T).

The APA defines an "order" as the "whole or part of a final disposition,...of an agency in a matter other than rule-making but including licensing." This is immediately qualified by the definition of "adjudication"--"agency process for the formulation of an order."[198] "Fair hearing," "evidentiary hearing," "contested case," "trial-type hearing," and "hearing on the record" all refer to an adjudicative hearing. As with rules, the crucial determinant of whether an action is an adjudicative proceeding is not what an agency calls it, but the actual procedure the agency was required to follow in taking the action.

Actual adjudicative procedures are subject to considerable variation ranging from

relatively informal oral proceedings up through highly formalized hearings that involve most of the procedural aspects of a trial. Such hearings involve at a minimum the presentation of evidence and the provision of an opportunity to rebut that evidence. Like trials, adjudicative hearings are best suited for determining the specific facts of an individual case, what Kenneth Davis (1975) has called "adjudicative facts." The essential fairness of these procedures which allow an individual who has been accused of violating a specific law or regulation to counter those claims in an open and adversary proceeding is vital to the continued legitimacy of the administrative process. Congress has increasingly required agencies to provide some kind of hearing even in rule-making, too. Through hearings, the agency shall give all interested parties opportunity for the submission and consideration of facts, arguments, offers of settlement, or proposals of adjustment when time, the nature of the proceedings and the public interest permit. Once notice has been served, the agency is more or less obligated to allow interested parties opportunity to make an offer for negotiated settlement (Heffron and McFeeley 1983: 256-272).

There are some arguments against adjudications. Adjudications are generally retrospective in focus, which means that agency adjudicative actions are aimed at trying to settle unresolved 'past' conflicts between specific parties. In addition, because participation is limited only to those parties involved in the agency's adjudicative proceedings, adjudication may not be supposed to lead to the development of broad public policies for the future. However, such criticisms may be wrong (as explained in the comparison between rule-making and adjudication), and in reality some regulatory

[198] APA. 1964. 5 U.S.C. § 552 (6) & (7).

agencies such as the NLRB, the FTC, and even the FCC have preferred to employ order-making to make prospective agency orders of general applicability (Warren 1996: 296).

In the adjudications, the role of the presiding office is important. In the majority of adjudicative hearings the presiding office tends to be an administrative law judge (ALJ). After all of the evidence has been presented, the hearing draws to a close and if the case was heard before an ALJ, he or she "shall initially decide the case unless the agency requires, either in specific cases or by general rule, the entire record to be certified to it for decision." Even of the latter instance, the ALJ "shall first recommend a decision." If one or more members of the main body that comprises the agency (e.g., commissioners), or the agency head (e.g., the FCC Chairman), presided at the hearing, this initial decision becomes the agency's final decision. Similarly, if the presiding officer is not the agency head (but the ALJ), the presiding officer shall render an initial order which becomes a final order unless appealed to, or reviewed on the motion of the agency within time provided by rule (Heffron and McFeeley 1983: 278).

In the majority of cases the initial or tentative decision of the ALJ is usually appealed by either the party or the agency and often rejected by the agency's main body. The agency's main body (that is, commission or board), upon its own motion, may, and upon appeal by any party, shall, review an initial order; or it authorizes one or more persons to review the initial order, subject to further review by the agency's main body. What happens at that point varies tremendously from agency to agency, since each agency establishes its own internal appeals procedures. The FCC has a two-step appellate process: Initial decisions of the ALJ may be appealed to a Review Board of staff officials and that decision may under certain circumstances be appealed to the Commission

consisting of all five Commissioners (Heffron and McFeeley 1983: 280).

The final decision of the agency in a contested case normally includes the agency's findings of fact, conclusions of law, policy reasons for the decision if it is an exercise of the agency's discretion, and the order entered, including the remedy prescribed and, if applicable, the action taken on all aspects for stay of effectiveness. The order is the agency's determination as to what subsequent action is required by or in respect to the affected party. It also includes the sanction imposed or relief granted. To withstand judicial challenge, the order must be reasonably related to the findings upon which it rests and "must state with reasonable specificity the acts which the respondent is to do or refrain form doing." The order must also include a statement of the available procedures and time limits for seeking reconsideration or other administrative relief (Heffron and McFeeley 1983: 282).[199]

Once an order has been entered it is immediately enforceable unless an appeal is filed and a stay granted. The agency may at its discretion grant a stay while an appeal is pending or the court may grant a stay.[200] If no appeal is filed, the order becomes enforceable. Failure to comply with a valid administrative order is in many instances a felony punishable by fine and/or imprisonment. This requires that a criminal enforcement action to be taken to the court; initiation of such actions may be by the agency, an aggrieved party, or the Justice Department (Heffron and McFeeley 1983: 285).

A final note is that policy-making through adjudications has been emphasized by

---

[199] *See* also APA. 1964. 5 U.S.C. § 557(c).

[200] For a court to grant a stay, it will generally insist that four separate standards be met. It must be satisfied that (i) the case is likely to prevail on its merits; (ii) the petitioner has shown that without a stay it will suffer irreparable injury; (iii) other interested parties would not be substantially harmed by a stay; and (iv) the "public interest" would not be adversely affected by a stay. *See* Heffron and McFeeley (1983: 285).

many administrative scholars (see, e.g., Heffron and McFeeley 1983; Schwartz 1984; Breyer and Stewart 1985 & 1992; Meacham 1987; Kinney 1990; Toubman 1990; Graham 1991; Lubbers 1994; Timony 1994; Warren 1996). Especially, Warren (1996) indicates that it would be a mistake even to lose sight of the immediate and chief purpose of agency adjudications: to reach disputes, but it must also be remembered that in agency hearings where final adjudicative decisions resolve disputes, important public policy decisions are often developed as well. This dual purpose in administrative adjudications undoubtedly causes some ALJs to pay more attention to creating public policies they consider worthwhile than to resolving disputes in the most fair manner (Warren 1996: 324).

1-3. COMPARING RULE-MAKING WITH ADJUDICATION

Definitive guidelines to determine when issues appear appropriate for the rule-making or adjudicative procedures simply do not exist. There are several, but unclear, differences between rule-making and adjudication.

First, the rule-making procedure is legislative in character, and adjudication is judicial in nature. While rule-making typically involves the notice and comment approach, adjudication procedure is supposed to be trial-like, meaningfully reflecting procedures followed in regular court trials. Thus, unlike rules, hearing orders impose penalties and rewards directed at particular parties involved in the hearing proceedings (Heffron and McFeeley 1983; Warren 1996).

Second, hearing decisions must be based wholly on the hearing record, while final rules do not have to be based on the varied information and argument submitted to the

rule-makers as a response to publication of a proposed rule in the *Federal Register*.[201] Specifically, this means that administrative law judges (ALJs) who preside over agency hearings must root their orders in evidence presented at the hearings. The bulk of hearing evidence results from written and oral testimony and cross-examination involving specific questions pertaining to a particular dispute (Heffron and McFeeley 1983; Warren 1996).

Third, rule-making tends to be future-general, while adjudication tends to be past-specific in the content and procedure. Rule-making procedures are designed primarily to produce broad, sweeping regulatory policies that are not particularly sensitive to individual cases or problems. In contrast, adjudication, which utilizes the case-by-case approach, has the advantage of developing policies incrementally over time by addressing individual cases. Therefore, the real strength in the adjudicative order-making approach lies in its emphasis on tailoring decisions (policy outputs) to special circumstances. In this sense, adjudication is more compassionate than rule-making, at least for the individual parties involved. In fact, adjudicative procedures are much more elaborate than rule-making procedures simply because sincere efforts have been made to promote administrative due process during adjudication so that the rights of individuals are protected. The obvious disadvantage, however, is that this case-by-case approach may cause agency policies to fluctuate in an unpredictable manner over time, preventing the development of a stable and uniform policy climate for the regulated, who naturally prefer agency reliability to agency unreliability (Heffron and McFeeley 1983; Warren

[201] Unlike the notice of proposed rule making (NPRM), notices of adjudicative proceedings are not required by the FOIA to be published in the Federal Register. The FCC only requires licensees to publicize license renewal proceedings.

1996).

Finally, in the rule-making process, all interested parties are at least afforded the opportunity to provide input and given advance notice of agency intentions in a specific policy area, which can lead to the alteration of the proposed rule (and allows judicial review of it) before it becomes final and binding. Meanwhile, the order-making process tends to fail to provide these advantages to affected parties (Heffron and McFeeley 1983; Warren 1996).

However, it is not easy to differentiate between adjudication and rule-making, nor is it easy to judge when adjudication or rule-making should be employed to promulgate regulatory policies. Hence, the legislative rule-making and judicial adjudication functions in administrative agencies are frequently juxtaposed in practice without clear distinction. FCC's policy-making is the very case. The majority of FCC's 'orders' such as *Memorandum Opinion and Orders* and *Report and Orders* (what I am calling "adjudicative rule-making decisions" in this study) accompany amendments or changes of rules or regulations as in typical rule-making decisions (that is, *Notice of Proposed Rule Making* and *Notice of Inquiry*), but are also actually case-by-case adjudicative decisions. Edwin J. Madaj (1990) has insisted that trying to differentiate between the two processes often turns out to be a futile academic exercise. Rather, closer scrutiny of the two processes tends to diminish their differences.

First, agency policies almost never tend to be wholly past-specific or future-general in content or application. The distinction between the future impact of rules or regulations and adjudicative orders is not all that clear since decisions in many adjudicative cases are aimed primarily at prescribing future conduct. A *cease and desist*

order, for example, imposes no immediate punishment for past behavior and results in sanctions only if it is violated subsequent to its issuance. In addition, similar to adjudicative orders, some rules may be of very limited (particular) applicability (Heffron and McFeeley 1983; Warren 1996).

Second, although the *Notice of Proposed Rule-Making* (NPRM) is announced to the public by being published in the *Federal Register*, and this in theory makes rule-making more public than adjudication, the visibility of that publication is not high and actual public awareness of rule-making proceedings may be no greater than is true of adjudications. In reality, rules or regulations are often promulgated by a variety of informal and formal methods where participation by affected parties is not involved or limited and where trial-like hearings are conducted. Most agencies also now permit rather extensive public participation in adjudicated cases (Heffron and McFeeley 1983; Warren 1996).

Third, when formal rule-making is considered, the procedural advantages of rule-making over adjudication are substantially diminished (Heffron and McFeeley 1983: 227).

Finally, another point of note is that although there is some difference in the extent of political influence over the two "procedures," the effects of political influence upon the "final outcomes" (that is, policy decisions with the forms of 'rules' or 'orders') through both rule-making and adjudication may not be largely different, as represented in detail later. The general expectation that the effect of political control over the adjudicative procedure may be weak has not been assessed empirically by any scholars, and political control over agency policy decisions through adjudication has been proved

significant by many political scientists such as Weingast and Moran (1983), Moe (1985), Fox (1987), and Barton (1979). Especially when the ALJs' tentative decisions through adjudication are reviewed or reversed by the head or commission of the agency, such political influence over adjudicative decisions is equally substantial as in rule-making decisions. In reality, agency leaders like the FCC Chairman and Commissioners frequently have decided to choose either rule-making or adjudication procedures to promulgate agency policies, not because one procedure may be appropriate, but because one process may be perceived as more convenient by the agency officials. The NLRB is a classic example of an administrative agency which has eschewed its rule-making authority to rely on policy making through adjudication regarding labor-management conflicts. Prior to 1969, the NLRB had never used its rule-making authority to establish policy, choosing instead to make and change broad policy decisions on a case-by-case basis (Heffron and McFeeley 1983: 282).

1-4. POLITICAL CONTEXT OF RULE-MAKING AND ADJUDICATION

It should be understand that administrative agencies, boards, and commissions are not politically neutral institutions. Their leaders are political appointees and they serve, to a greater or lesser extent, political causes.

American Presidents have sought to monitor and control agency activities, especially agency rule-making, since rules often constitute major public policies. Realizing the great impact agency rule-makers have on public policy formation, the Presidents, starting with President Nixon, have issued a series of Executive Orders

designed to give the White House more control over the rule-making procedures in an effort to try to make agency rules more consistent with presidential policy goals. Overall, such efforts have met with modest success from the standpoint of White House control over regulatory agency actions. As the White House has realistically only been able to "micromanage" a tiny fraction of the regulatory activities of agencies, given the rapid growth of the administrative state since the 1930s, the Presidents' control power of agency rule-making seems substantial to the extent that many scholars argue that presidential oversight would go too far by politicizing the rule-making proceedings too much, thus undermining professional rule-making practices. Rule-making also tends to facilitate congressional guidance and input into the administrative process since members of Congress and congressional committees are allowed to intervene freely in the rule-making procedures. Hence, Congress can function properly in its vital watchdog role if agencies use rule-making methods to draft 'general' agency policies. If objections to proposed agency rules are in conflict with the desires of legislators, Congress can employ various tactics to block proposed agency action. In addition, the influence of powerful interest groups on the rule-making is substantial. Social scientists, especially the interest group theorists, indicated that agency rule-making practices have, in fact, mostly favored the powerful interests (e.g., AT&T) at the expense of the weaker interest groups and the general citizenry (see, e.g., Lorch 1980; Kent 1982; Strauss and Sunstein 1986; Thomas, Wildeman and Brown 1987; Pierce 1995; Warren 1996).

Political control over agency adjudications has been noted by political scientists, too, as in the agency rule-making. In her study of the FCC's 'adjudicative' decisions on broadcasting licenses, Margaret F. Barton (1979) found evidence of interest group

influence on the FCC adjudicative policy-making procedures, indicating that there is little difference between the decision functions of initial decision-making by ALJs and review level decision-making by the Review Board and the Commission (399-411).[202] As previously indicated, Weingast and Moran's (1983) study on the correlations between the FTC policy decisions and the ADA ratings of federal legislators has shown that congressional control was significant over the FTC's 'adjudicative' decisions, since ALJ-stage decisions were finally reviewed and judged by the FTC commissioners. Eleanor M. Fox (1987) also acknowledges the political nature of agency adjudications in her study of two very different political personalities who chaired the FTC: Michael Pertschuck and James C. Miller, III. Chairman Pertschuck, President Carter's appointee and a liberal who tended to side with the underdog and believed that government should do its best to protect individuals from abuse, especially from big business, reached decisions in agency adjudications that reflected clearly the President's philosophical perspective. Chairman Miller, on the other hand, was President Reagan's appointee and a conservative who sided with the successful, believed that government tended to be the enemy of big business, and felt that governmental intrusion in the private sector only tends to protect the inefficient and weaken society. It is important to stress that Fox's study serves to acknowledge the political realities of agency decision-makers, even those serving in a quasi-judicial capacity. Recently, Ronald Harris' (1996) study of the Interstate Commerce Commission's (ICC) motor carrier entry decisions also showed significant political influence over a federal agency's 'adjudicative' licensing decisions to simply

[202] Based on data collected from FCC dockets for 97 applicants in 38 cases, she estimated models for ALJ's initial decisions and for a pooled sample (#26 cases were appealed to the Review Board and # 6 cases to the Commission) of review level decisions by the Review Board and Commission, and then compare the logit

grant or deny operating authority of a carrier. Emphasizing that bureaucratic autonomy, congressional dominance, and special interest group theories can be unified to predict motor carrier entry under the subgovernment theory, he showed that simultaneous political influence by political and economic actors including the dominant industry cartel, the federal agency (ICC), and Congress was very significant over the ICC's motor carrier entry 'adjudicative' decisions, from 1935 to 1980. His logistic regression revealed that the ICC's case-by-case 'adjudicative' decisions are best explained by the interactions between number of protestants from the cartel, partisanships of the ICC commissioners, ADA scores of federal legislators, and even partisanships of the Presidents.

In addition, the APA's provisions suggest congressional control over the adjudication. Section 557(c) of the APA specifically requires that the record should "...show the ruling on each finding, conclusion, or exception presented." The Section also requires that "all decisions including initial, recommended, and tentative decision are part of the formal written record and include a statement of (i) findings and conclusions, and the reasons or basis therefore, on all the material issues of fact, law, or discretion presented on the record; and (ii) the appropriate rule, order, sanction, relief, or denial thereof." These APA provisions are quite specific and demanding, but evidently the intent of Congress is to force adjudicators to act responsibly in making hearing decisions. Specifically, by compelling ALJs to justify in detail the factual and legal reasons of their findings, Congress in effect is forcing hearing officials to think seriously about their hearing decisions.

Finally, as previously indicated, it must be stressed that ALJs do not make final

---

models for the different decision levels.

decisions for the agency. Agency heads have the authority to make "institutional decisions" for their particular agency or bureaucracy by overruling the decision reached by an ALJ. This is a legally sanctioned agency right and it is considered legitimate because agency heads, almost always political appointees, have the obligation of promoting policies that are consistent with the administration's view (i.e., the presidential administration on the federal level). As a consequence, an ALJ's decision technically constitutes only a tentative decision or an advisory opinion subject to being overruled by the agency chief. In other words, adjudicative decisions, which are politically sensitive, are finally confirmed or may be reversed by the agency head to make agency policy consistent with the administration's policy. Hence, as agency heads or/and the agency main body such as the commission, today, casually review the tentative decisions reached by ALJs, often rejecting those decisions that staffers recommend should be changed to suit administrative policy, ALJs are cognizant of the political reality that agency chiefs can overrule their adjudicative decisions if their decisions are blatantly contrary to agency policies and goals (Lorch 1980; Warren 1996).

2. THE CASE OF THE FCC

Throughout its history, the FCC as a federal agency has made public policies through both rule-making and adjudicative decisions. Although the rule-making process is generally considered to be the better approach for agencies to employ when making public policies, administrators in some agencies like the FCC and the FTC find adjudicative decisions very important, especially when they feel that it is desirable to

make policies gradually and cautiously on a case-by-case basis (Warren 1996: 348).

The FCC as a regulatory commission tends to shape public policy through "adjudicative orders," which they apply as general rules or regulations. Actually, through many orders, the FCC made its policies and furthermore rules or regulations. Before I introduce FCC's rule-making and adjudication procedures, it must be recognized that in case of the FCC, there is no evident line between rule-making and adjudication. Both rule-making and adjudication proceedings actually generate "adjudicative orders" as determinants of the Commission's decisions and the two are often interweaved in FCC policy-making. The FCC's book on *Rules and Regulations* (Volume I, Part 1) includes a section called "Practice and Procedure,"[203] which addresses rule-making and adjudicative procedures, but does not clearly classify both procedures. The section is dealing with the *Notice of Proposed Rule-Making (NPRM)* and *Notice of Inquiry (NOI)* in the subparts of the rule-making proceedings. In addition to *NPRM* and *NOI*, the *Memorandum Opinion and Order (MO&O)* and *Report and Order (R&O)* are also determinants of the rule-making proceedings (Hilliard 1991). In reality, according to the *FCC Reports* and *FCC Records*, a majority of final decisions by the Commission have been issued under the terms of *Memorandum Opinion and Order (MO&O)* or *Report and Order (MO&O)*. A small number of remnant decisions come under the terms of just *Order*, *NPRM*, or *NOI*. Such orders as *MO&Os* or *R&Os* are related to the rule-making proceedings, but are substantially closer to adjudicative decisions, since the procedures begin with petitions (regarding rules or regulations) by a complainant(s) against a defendant(s) and, in the

[203] The *Rules and Regulations* are contained in what called *Title 47 of the Code of Federal Regulations* (CFR), and consist of five separate volumes. Each volume covers a general area of FCC responsibility, and is divided into parts covering the services regulated. *See* 47 C.F.R. 88-168.

final step, the FCC Commissioners adjudicate (judges)--grant or reject--the petitions by issuing the orders. That is to say, the orders are not only decisions that direct to change or amend some rules or regulations over times but also decisions that judge (or adjudicate) petitions by granting or rejecting them.

Hence, considering the FCC's book on *Rules and Regulations* and the real contents of FCC decisions, in this study I term the Commission's decisions such as the *Notice of Proposed Rule-Making (NPRM)* and *Notice of Inquiry (NOI)* as the FCC's general "rule-making decisions," and the Commission's orders such as the *Memorandum Opinion and Order (MO&O)* and *Report and Order (MO&O)* as the FCC's "adjudicative rule-making decisions." The latter adjudicative orders (i.e., "adjudicative rule-making decisions") are employed as FCC policy decisions for my study.

Following the FCC's *Rules and Regulations* and Robert Hilliard's (1991) explanation, I introduce FCC policy decisions through rule-making and adjudicative proceedings and then their relationships and political contexts as follows.

2-1. FCC POLICY DECISIONS THROUGH RULE-MAKING[204]

New or amended FCC rules and regulations have been initiated from many sources, including individual citizens. Any person, group, or organization may petition the FCC to *enact*, *amend*, or *repeal* a specific rule or regulation regarding any telecommunications matters. The petition (which must be formally submitted to the FCC Secretary as an original with 14 copies) details the reason for the recommended rule and

[204] *See* 47 C.F.R. 162-168; and Hilliard 1991: 71-73.

states the specific language desired for the rule. Over the years there have been a number of occasions when a petition for rule-making initiated by an individual resulted in a new rule.

When the FCC receives a petition for rule-making, it is sent to the bureau (e.g., the Common Carrier Bureau or CCB) under whose jurisdiction the particular subject falls.[205] In addition, any interested parties can file petitions about tariffs or complaints against violations of the rules or regulations by carriers, requesting the FCC to amend or repeal the rules or regulations. If that bureau decides that the petition is meritorious--that is, is not frivolous and establishes a reasonable need for the proposed change--it can request that the FCC Dockets office assign it a *Rule Making (RM)* number. Rarely does a bureau decide on its own to take this step, but clears it first with appropriate higher offices, specifically those of the FCC Commissioners and FCC chairman. The same procedure holds true for changes initiated from sources other than the public, such as other arms of government or the FCC itself. Once the process is under way, with a *RM* number assigned, the petition or proposed rule-making generated internally is listed along with all others on a weekly *Public Notice*. The public has 30 days in which to submit *statements* in support of or in opposition to the petition for rule-making prior to Commission action. Any other interested person has another 15 days in which to file a *reply* to statements in support of or in opposition to the petition for rule-making prior to Commission action. Following reception and analysis of the statements and replies, the FCC develops it as agenda item to be considered by the Commission (so-called, at the initial agenda meeting). The bureau (e.g., CCB) that prepares the item usually

recommends that the Commission issue one of four determinants: (i) a *Notice of Inquiry (NOI)* in which the FCC issues a statement describing the problem regarding a specific rule(s) and asking for public comments on how the problem should be solved; (ii) a *Notice of Proposed Rule Making (NPRM)*, in which the Commission states exactly how it proposes to changes the rules; (iii) a *Memorandum Opinion and Order (MO&O)* granting or denying the petition or ending any further action on the item; or (iv) a *Report and Order (R&O)* as a final order, thus terminating the proceeding, granting or denying the petition and simultaneously amending the rules or regulations related to the petition, which at this stage of the process is limited to changes in the editorial content of rule or regulation, but not changing its substances in any material way.

If an *NOI* or *NPRM* is issued, it must be accompanied by a docket number that follows that particular item until it is finally resolved. An *NPRM* must be published in the *Federal Register* (FR). After an *NOI* or *NPRM* is issued, the Commission affords interested parties an opportunity to participate in the rule-making proceedings through submission of written data, views, or arguments, with or without opportunity to present the same orally in any manner. A reasonable time will be provided for submission of comments in support of or in opposition to proposed rules, and then, after all the comments are in, another reasonable time will be provided for submission of reply comments. Comments may come from the public at large; usually, of course, they come from parties especially interested in the particular rule change, principally from industry, professional associations, and concerned citizen/consumer groups. If the FCC doesn't receive enough comments to make an informed decision, it may issue further *NOI* or

---

[205] The FCC has four Bureaus which report directly to the Commission, conducting the principal FCC

NPRM with opportunity for parties and other interest persons to submit comments and reply comments.

Following evaluation of comments and reply comments on an *NOI*, the Commission may issue an *NPRM*, continuing the matter, or an *MO&O* as a final decision, concluding the inquiry. With an *NPRM* the next step is a Commission decision, in which it issues a *R&O* stating what the new or amended rule or regulation is, or in which it decided not to adopt or change the rule or regulation, thus terminating the proceeding, either in whole or in part. If in part, work on the item continues, and the FCC may issue a number of succeeding *Reports and Orders* (*R&Os*), each one disposing by termination or adoption a part of the item.

A further step in the process may occur. Following the issuance of an *R&O*, any number of the public may, within 30 days, file a *Petition for Reconsideration* of the final Commission's action. Following the petition's filing the public is given a specified period of time (15 days) in which to submit oppositions to the petition, and then, after all the oppositions are in, another period of time (10 days) in which to submit reply comments to the oppositions. The Commission reviews all the petitions and then may issue an *MO&O* that would modify its *R&O* in part or whole in accordance with the *Petition for Reconsideration* or deny the petition.

An *MO&O* or *R&O* as the Commission's final decision shall contain: (i) Findings of fact and conclusions, as well as the reasons or basis thereof, upon all the material issues of fact, law or discretion presented on the record; (ii) Rulings on each relevant and material exception filed; and (iii) The appropriate rule or order and the sanction, relief or

---

operations. These are the: Mass Media, Common Carrier, Private Radio, and Field Operations Bureaus.

denial thereof.

In any rule-making proceeding, if a party appeals or complains about a Commission action or decision (i.e., *R&O* or *MO&O*) or on the Commission's own initiative, the Commission may hold an oral argument meeting, that is, an *Adjudicative Hearing*, in which interested parties are invited to present their viewpoints in person. As a determinant of the hearing, the Commission issues a *MO&O*. In this point, the FCC's rule-making proceedings are interweaved with its adjudicative decision-making procedures (see the *FCC's Policy Decision through Adjudication* in the next part).

In relation to rule-making proceedings, the Commission directs the *Enforcement Division* of the *Common Carrier Bureau* (CCB) to analyze tariff petitions or complaints about rules or regulations, conduct investigation, and afterwards enforce compliance with requirements of the Commission decision. The Commission also directs the *Adjudication Division* at *the Office of the General Council* to analyze all FCC's proposed *Memorandum Opinions and Orders (MO&Os), Report and Orders (R&Os)*, other final decisions, and the testimony and documents pertaining to hearings to determine if the decisions are consistent with the FCC's *Rules and Regulations*.[206]

Finally, a petitioner has further recourse by appealing the Commission's final decision to the federal courts such as the District of Columbia Court of Appeals. Under Section 401(a) of the 1934 *Communications Act*, a federal district court also has jurisdiction over FCC enforcement actions which allege that "any person" has failed to comply with "any" provision of the Act.[207] Section 401(b) of the Act provides for enforcement in district court of "any order of the Commission" by either the United States

or "any party injured thereby."[208] That is, private parties may seek injunctions (court orders) only to enforce specific orders of the Commission.

I have outlined this FCC's rule-making proceedings as shown in the following **Figure 2**.

[206] 47 C.F.R. 156.
[207] 47 U.S.C. § 401(a).
[208] 47 U.S.C. § 401(b).

Figure 2. FCC Policy Decisions through Rule-Making

Petition for Rule-Making
Petition re Tariff
Complaint re Rule or Regulation
(= petitions for the issuance, amendment, or repeal of a rule or regulation)
:
CCB
:
(Rule-Making (RM) number by the Docket Office)
:
Public Notice, Statements/Replies
:
The Commission's Agenda Setting
(= the body of all Commissioners making up the FCC)
:
Decision
= *Notice of Inquiry (NOI)*,
***Notice of Proposed Rule Making (NPRM)*,**
***Report and Order (R&O)*, or**
Memorandum Opinion and Order (MO&O)

.....

:
Petition for Reconsideration
:
The Commission
:
Oppositions/Replies
:
The Commission
:
Decision
= *Memorandum Opinion and Order (MO&O)*
(granting or rejecting the *Petition of Reconsideration*)

.....

:
Adjudicative Hearing
(on the Commission's own initiative or if a party appeals)
:
The Commission
:
Decision
= *Memorandum Opinion and Order (MO&O)*
(granting or rejecting the Petition of Reconsideration)

.....

:
appeal
:
Courts

.....

:
CCB's Enforcement Division's Enforcement Activities

2-2. FCC POLICY DECISIONS THROUGH ADJUDICATION

In administrative areas where the primary goal is regulation, such as the FCC's regulation of telecommunications, adjudicative procedures are frequently necessary, fair, and effective methods for accomplishing that goal (Heffron and McFeeley 1983: 285).[209] The real regulatory situation frequently involves adversarial relationships between regulator and regulatee and/or between regulatees, and adjudicative order-making procedures serve to formalize and regularize those relationships in relation to specific rules or regulations. The individuals moved against in this type of situation are usually dominant businesses (e.g., AT&T) who are not easily intimidated and who can well afford to retain expert legal counsel (Heffron and McFeeley 1983).

The FCC orders or decisions through adjudications (such as forcing a common carrier to carry out corrective practices) almost always shape FCC policy toward certain business practices. Throughout its history, the FCC has relied on adjudication to resolve disputes (regarding many telecommunication rules or regulations) between AT&T and other common carriers, between customers and common carriers, or between public or government organizations and common carriers--entities such as local and long-distance telephone companies that provide interstate communication services for hire. In many instances, the FCC orders or decisions via adjudicative procedures established its policies in rules or regulations that businesses dare not overlook. To avoid future and costly complications, the purpose of a normal adjudication procedure is to bring company

[209] Meanwhile, in administrative areas such as welfare and educational administration where the regulatory aspect of the programs is a secondary function undertaken to assist in the accomplishment of some primary nonregulatory goal, excessive judicialization may well be counterproductive.

policies in line with current FCC thinking regarding questionable business practices (Anderson 1993).

The Commission may commence any adjudicative proceeding within its jurisdiction against any common carrier by serving upon the carrier an order to show cause. Any party is permitted to file *complaints* or *applications* against common carriers for actions or omissions that violate either the act itself or an FCC rule or order promulgated under the act.

Complaints may be filed against carriers regarding rule or regulation violations under Section 208 of the *Communications Act of 1934* either informally or formally, with format rather than content being the distinction. The Commission will forward informal complaints to the appropriate carrier for investigation. The carrier will, within such time as may be prescribed, advise the Commission in writing, with a copy to the complainant, of its satisfaction of the complaint or of its refusal or inability to do so. If the complainant is not satisfied by the carrier's response and the Commission's disposition, it may file a formal complaint with the Commission.[210] Formal complaint proceedings are generally resolved with a written record that consists of a complaint, answer, and reply, and usually also includes other written submissions, such as briefs and written interrogatories. All written submissions must confirm to FCC standards and requirements in regard to form and content. Inside the *Enforcement Division*, the *Formal Complaints and Investigations Branch* investigates complaints from the public, federal agencies, and common carriers concerning rule violations, including those related to CATV pole attachments and common carrier mergers. It participates in litigation matters,

arranges audits, prepares cases for hearing, and participates in oral arguments. Meanwhile, the *Informal Complaints and Public Inquiries Branch* handles all kinds of informal complaints and inquiries, including those from the public, Congress, and the industry, and recommends rule-making based on complaint trends. It publishes information bulletins from time to time designed to inform the public on matters about which it has received many inquiries (Hilliard 1991: 48).

In addition, all *applications* (e.g., for authority of discontinuance, reduction, or impairment of service; for authority of consolidation or acquisition of telephone companies; for public correspondence radio stations; for authority of construction, extension, acquisition, or operation of lines; and for cable landing licenses such as submarine cable) shall be filed with the CCB, and then forwarded to the Commission. If the petitions against the applications are filed by interested parties, the Commission judges them and issues final decisions.[211]

These complaints or applications may or may not be designated for hearings by the Commission. It must be understood that "without hearings," adjudicative orders may be issued upon motion of the Commission. Hearings are held if any of the parties desires to be heard or if the Commission determines that hearings should be held.[212] Hearings are conducted by the *Presiding Officer* who may be the Commission itself, by one or more commissioners including the FCC Chairman, or by an administrative law judge (ALJ) designated pursuant to Section 11 of the *Administrative Procedure Act* (APA).[213]

Where the adjudicative proceeding is terminated, the Presiding Officer shall

---

[210] 47 C.F.R. 157; 51 F.R. 16039, Apr. 30, 1986.
[211] 47 C.F.R. 162.
[212] *Id.*

prepare an *Initial or Recommended Decision* with the form of 'order' which shall be transmitted to the Secretary of the Commission. The Secretary will make the decision public immediately and file it in the docket of the case. Each *Initial and Recommended Decision* shall contain: (i) findings of fact and conclusions, as well as the reasons or basis therefor, upon all the material issues of fact, law, or discretion presented on the record; (ii) the appropriate rule or order, and the sanction, relief or denial thereof; and (iii) recommendations as to what disposition of the case should be made by the Commission. The authority of the Presiding Officer over the adjudicative proceedings shall cease when he or she has filed his or her *Initial or Recommended Decision.*[214]

At the conclusion of the hearing or within 20 days thereafter, all parties to the proceeding may agree to waive an *Initial or Recommended Decision* of the Presiding Officer, and may request that the Commission issue a *Final Decision or Order* in the case. The Commission may in its discretion grant the request, in whole or in part, if such action will best conduce to the proper dispatch of business and to the ends of justice.[215] In addition, within 30 days after the date on which public release of the full text of an *Initial Decision* is made, or such other time as the Commission may specify, any of the parties may appeal to the Commission by filing exceptions to the *Initial Decision*, and the Commission may on its own initiative provide, by order adopted not later than 20 days after the time for filing exceptions expires, that an *Initial Decision* shall not become a *Final Decision*, and that it shall be further reviewed or considered by the Commission. In the case that the Commission decides to review the *Initial Decision* of the Presiding

---

[213] 47 C.F.R. 136.
[214] 47 C.F.R. 143.
[215] 47 C.F.R. 143-144; 28 F.R. 12425, Nov. 22, 1963, as amended at 62 F.R. 4171, Jan. 29, 1997.



Officer (especially the ALJ), the *Initial Decision* may be appealed first to the Review Board or directly to the Commission; and a Review Board's review decision may in turn be appealed to the Commission.[216] Oppositions to an appeal and replies to oppositions shall be filed and served in the same manner as the appeal. If no appeals are filed, the Commission may order that the *Initial Decision* shall become effective (that is, a *Final Decision or Order*) and that an appropriate notation to that effect shall be entered in the docket of the case, and then a "*Public Notice*" thereof shall be given by the Commission. In any adjudicative decision, with hearings or without hearings, after opportunities before the Presiding Officer (Commissioners in most cases) or the Commission itself have been afforded for the filing of proposed findings of fact and conclusions, exceptions, supporting statements, and briefs, the Commission will finally issue a *Final Decision or Order*.[217]

A further step in the adjudicative procedure may occur, too, as in the rule-making proceedings. Following the issuance of a *Final Decisions or Order*, any party may appeal by filing *a Petition for Reconsideration*, stating the specific grounds upon which relief is requested. The Commission shall render a written order denying the petition, granting the petition and dissolving or modifying the *Final Decisions or Order*, or granting the petition and setting the matter for further proceedings. The petition may be granted, in whole or in part, only if the Commission states, in a written order, findings of facts, conclusions of law, and policy reasons for the decision if it is an exercise of the agency's discretion, to justify the decision (Heffron and McFeeley 1983: 451).

---

[216] To provide for an orderly completion of cases, exceptions and related pleadings filed after March 1, 1996, shall be directed to the Commission and will not be acted upon by the Review Board. *See* 47 C.F.R. 143; 62 F.R. 4171, Jan. 29, 1997.

As in the rule-making proceedings, challenges to these FCC's adjudicative decisions may even be carried beyond the Commission to one of the circuit courts of appeals (e.g., the *Court of Appeals for the District of Columbia*) pursuant to 28 U.S.C. §2342.[218] Challenges to FCC orders may initially take the form of a request for reconsideration by the FCC itself, but a petition for reconsideration by the FCC is required only if the party seeking judicial review was not a party to the original adjudicative proceeding or relies on questions of fact or law on which the FCC had no opportunity to pass.[219] Judicial review is according to the usual standards specified in the Administrative Procedure Act.[220]

Finally, a point of note is that the Commission's power over the adjudicative policy-making procedure is substantial. It is the Commission that decides adjudicative hearings before the Presiding Officer and that orders that the *Initial Decision* of the Presiding Officer or the review level decision of the Review Board shall become a *Final Decision or Order* by confirming, modifying, reversing them, or that directly makes a *Final Decision or Order* without hearings.[221] In short, the Commission is a powerful main body of all Commissioners making up the FCC which finally judges petitions and issues a final adjudicative order in every adjudicative procedure.

I have outlined this FCC's adjudicative proceedings as shown in the following **Figure 3**.

---

[217] 47 C.F.R. 144-145; 28 F.R. 12425, Nov. 22, 1963, as amended at 41 F.R. 14873, Apr. 8, 1976.
[218] 47 U.S.C. § 402(a).
[219] 47 U.S.C. § 405(a).
[220] APA. 1964. 5 U.S.C. § 706.
[221] 47 C.F.R. 143-145.

Figure 3. FCC Policy Decisions through Adjudication

Complaint or Application
(e.g., Formal/Informal Complaint against Carrier Action; Application for Licensing; Application for Authority of Discontinuance, Reduction, or Impairment of Service)

:

CCB

:

The Commission
(= the main body of all Commissioners making up the FCC)

:

Final Decision or Order

.....

:

Designation of Hearing
(on the Commission's own initiative or if a party appeals for hearing)

:

Presiding Officer's Adjudicative Hearing
(presided by an ALJ or Commissioner(s))

:

Initial or Recommended Decision

:

Review Board's Adjudicative Hearing

:

Review Decision

:

The Commission

:

Final Decision or Order
(confirming, modifying, or reversing the Presiding Officer's initial decision or the Review Board's review decision)

.....

:

Petition for Reconsideration

:

The Commission

:

Final Decision or Order

.....

:

appeals

:

Courts

.....

:

CCB's Enforcement Division

:

Enforcement Activities

2-3. THE POLITICAL CONTEXT OF FCC RULE-MAKING AND ADJUDICATION

The political influence over FCC policy decisions through rule-making or/and adjudication appears to be significant since many political and economic actors have directly initiated or amended its rules or regulations and orders and participated in its rule-making and adjudicative procedures.

First, the FCC, as authorized by Congress in the *Communications Act of 1934*, is responsible directly to Congress. The FCC *Rules and Regulations* containing 'rule-making' and (unorganized) 'adjudication' provisions may be mandated by legislation. Any time Congress amends the Act of 1934, the language of the amendment may include specific regulations to be implemented by the FCC (Hilliard 1991).

Second, the degree and nature of regulation, determined by the Commission's final decisions (e.g., *MO&Os* or adjudicative orders), varies with the philosophy of the President of the United States and the party in power at any given time. For example, the pro-consumer attitudes of the John F. Kennedy and Lyndon B. Johnson appointees to the FCC resulted in strong regulation for the public interest for many years, while the marketplace theories of the Ronald Reagan appointees resulted in deregulatory policies that eliminated many FCC regulations and diminished others. In addition, the Executive Branch frequently is responsible for new rules and adjudicative orders. Although the White House ostensibly stays at arm's length from independent government agencies such as the FCC, special committees, other departments, agencies and offices under the Executive Branch, and individuals serving directly under the President may informally let

the FCC know of their interests in seeing a new or changed rule and order. Such suggestions are always given serious consideration by the Commission and frequently are acted on (Hilliard 1991; Brock 1994).

Third, the third branch of government, the Judiciary, is also responsible for initiating or amending rules and orders. This comes about as a result of court decisions, usually in challenges to an existing FCC rule or order, that find it necessary to eliminate, clarify, or strengthen a rule or order. The federal court decisions have added to or upheld, or reduced or abolished FCC's responsibilities and authority contained in rules and orders (Hilliard 1991; Brock 1994).

Fourth, the FCC itself may initiate rule or order changes. Any bureau in the Commission may prepare a rule or order change, drawing up a draft of the rule-changing document or a petition for reconsideration of order, clearing it through the appropriate bureau chief, and then testing it out with the commissioners, a majority of whom may decide to put it on the official weekly agenda. Sometimes such internal rule-making or adjudicative procedures are initiated from a commissioner's office. The Chairman of the FCC is the key figure, with the strongest influence in this procedure (Hilliard 1991).

Finally, political influence from many interest groups such as the industry firms including AT&T and OCCs, public organizations, and government institutions has been substantial enough for the Commission to make and change policy decisions through rule-making or/and adjudication in regard to many telecommunications matters.

As previously indicated, the Commission is the only substantial decision-maker who finally concludes all FCC's rule-making and adjudicative procedures. Even in the adjudicative decision-making, it is the Commission that orders that the *Initial Decision* of

the Presiding Officer shall become a *Final Decision or Order* as well as that directly makes a *Final Decision or Order*, with or without hearings. Hence, there may be little difference between the FCC's adjudicative and rule-making decisions in the aspect of political control by Congress, the Presidents, the courts, or interest groups. Margaret F. Barton's (1979) study of the FCC adjudicative decisions on broadcasting licenses has indicated the evidence of interest group influence on the FCC adjudicative policy-making process. Her conditional logit analysis estimated the FCC's revealed preferences (granting or rejecting the broadcasting license) as a function of the policy related characteristics of the applicants, that is, as a function of interest groups power variables, such as diversification of ownership, integration of ownership and management, etc. She indicated that no major differences were found between initial and review decision levels in terms of the most important variables or the magnitudes of coefficients indicating interest group influence; the differences were of degree, not substance.

In sum, the FCC's *Memorandum Opinion and Orders* (*MO&Os*) or *Report and Orders* (*R&Os*), which I am employing as the dependent variable for my study, are final decisions that the FCC Commissioners not only reviewed and decided to enact, modify, repeal, or represcribe specific "rules or regulations" related to the petitions filed by the interest parties, but also simultaneously "adjudicated"--granted or denied--the petitions. Hence, a point of note is that the rule-making procedures resulting in *MO&Os* and *R&Os* contain characteristics of adjudication and thus such *MO&Os* and *R&Os* are different from the typical rule-making decisions such as *NOIs* or *NPRMs* that just order to enact or amend rules or regulations. Thereby, in this study I term those *MO&Os* and *R&Os* as the FCC's "adjudicative rule-making decisions." In other words, the FCC's adjudicative

rule-making decisions come from general rule-making proceedings, but also are very closely related to the decisions through adjudication. By issuing a large amount of those orders over the regulatory period from 1965-1995, the Commission granted or denied AT&T's petition(s) regarding long-distance service matters. In my study, political economic control over FCC policy decisions (i.e., *MO&Os* and *R&Os*) through adjudicative rule-making is assessed.

Chapter 5

RESEARCH METHOD AND STATISTICAL MODEL: VARIABLES AND HYPOTHESES

In this study, the central research question is: "What accounts for the FCC's long-distance service policy decisions that favored or rejected the interest of the dominant regulated firm, AT&T, over the period from 1965-1995?" That is, "What kinds of political economic conditions permitted AT&T to get what it wanted from the FCC's regulatory policy-making?" and "Under what conditions, did AT&T's competitors and the American public obtain what they pursued from FCC policy decisions?"

Given the research question, in order to determine whether and to what extent FCC policy decisions regarding the U.S. interstate long-distance service industry and market are explained especially by interest group power, institutional influences, and contextual factors, I estimate a statistical model that characterizes the conditions under which the FCC made policy decisions for or against AT&T as a plaintiff or defendant. To test theories of regulation, I use 31-year data for dependent and independent variables and employ annual measures of the relevant explanatory variables indicating interest group power, the roles of political institutions, and the impacts of other contextual factors. Data were systematically extracted from the governmental documents such as *FCC Reports* and *FCC Records* and other relevant private and governmental literature as indicated later.

In this study, FCC policy decisions through adjudicative rule-making for and

against AT&T regarding specific U.S. long-distance service regulatory matters are estimated as a function of the interaction of interest group power, the roles of political institutions, and the impacts of other contextual factors as follows:

- **FCC's Adjudicative Rule-Making Policy Decisions**
  = f (Interest Group Power, Political Institutions, Contextual Factors)

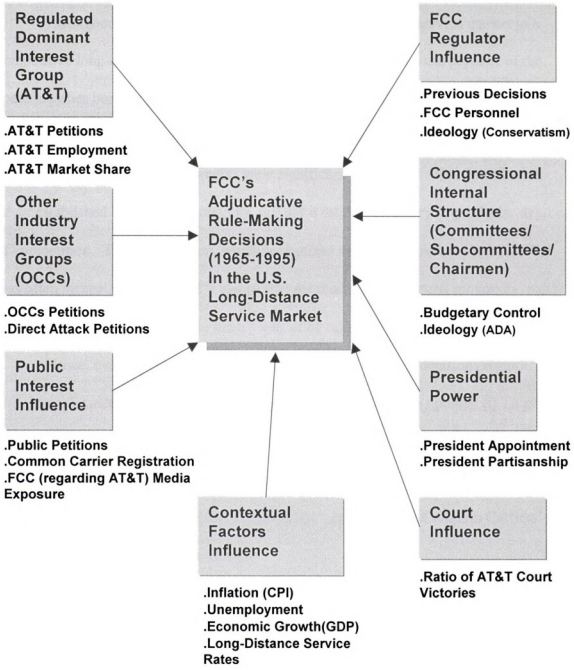
I ultimately assess the relative and simultaneous effects of each theory of regulation on the FCC's adjudicative rule-making policy decisions regarding AT&T in the arena of U.S. long-distance service market over the 31-year period from 1965 to 1995. The effects are statistically analyzed by employing the 'logistic regression,' depending on the characteristics of the real data on the FCC's adjudicative rule-making decisions for and against AT&T during the regulatory period as indicated below.

- **STATISTICAL MODEL: Logistic Regression**

After I explain the dependent variable for the study, I formulate and operationalize appropriate independent variables and indicators to measure the main factors regarding interest group power, the roles of political institutions, and other contextual impacts for this study. Then, according to the selected variables, I build some primary hypotheses to be tested. A substantial body of literature on the empirical testing of theories of regulation, as previously presented, was helpful for me to formulate and operationalize appropriate variables and indicators to measure their impacts on the FCC's adjudicative

rule-making decisions for and against AT&T regarding the U.S. interstate long-distance service regulatory matters. The empirical testing of both dependent and independent variables on federal long-distance service policy-making is executed in the statistical model of 'logistic regression' as explained below. For the study, the estimated determinants of FCC's long-distance telecommunications policy decisions favoring or rejecting AT&T's interests are illustrated in the following **Figure 4**.

Figure 4. Determinants of the FCC's Adjudicative Rule-Making Decisions For or Against AT&T (1965-1995)



1. DEPENDENT VARIABLE: FCC'S ADJUDICATIVE RULE-MAKING POLICY DECISIONS ON AT&T'S PETITIONS

Throughout the evolution from a monopoly long-distance service market to a competitive long-distance service market, the FCC was largely a passive judge of the specific issues brought before it by the parties. Both OCCs/the American public's and AT&T's frequent and extravagant claims about the harms of competition made it difficult to determine which party's arguments were significantly preferred. The Commission never established a policy on monopoly, nor did it establish a policy of particular degrees of competition. The Commission, which recognized market domination by AT&T but was often sympathetic to AT&T's claims that the market was a natural monopoly, partly accepted AT&T's views or made them a part of its rules (Brock 1994: 145-146).

Hence, over the regulatory period 1965-1995, FCC policy decisions regarding the U.S. long-distance service market matters can be classified by two options: (i) To protect the monopoly of AT&T by granting its petition(s) or complaint(s), or (ii) To remove or reduce many of the barriers to effective competition for other common carriers or the American public by denying AT&T's petitions (or granting Other Common Carriers' [OCCs'] or/and the public's petitions).

I have chosen to use the FCC's adjudicative rule-making policy decisions about rules or regulations governing "long-distance service rates or tariffs related to interconnection or access," which were the most significant, but inseparable, telecommunication issues confronting the FCC, as my indicators of FCC decision-making regarding AT&T as a plaintiff or a defendant in the U.S. interstate long-distance service

market matters.[222] I use a total of **699** of adjudicative rule-making decisions (i.e., *MO&Os* and *R&Os*) the Commission made over the period from 1965 to 1995, in which AT&T, OCCs, and other public interest parties filed petitions against carriers' violations of rules or regulations governing service rates or tariffs related to interconnection or access. In the petitions, OCCs/public interest groups and AT&T as well requested the Commission to: (i) reject, or suspend and investigate carriers' tariff offerings or revisions adjusting rate or charge schedules unlawfully or discriminatorily; (ii) allow interconnection for (switched or special) access or with services or facilities; (iii) reject tariffs blocking equal access services or raising access interconnection charges unlawfully or discriminatorily; or (iv) eliminate tariffs restricting the resale and shared use of carriers' (in most cases, AT&T's) core long-distance services/facilities.

All the Commission's decisions granting or denying these petitions about "rules or regulations governing service rates or charges related to interconnection or access" were made under the regulatory purpose of reducing or eliminating entry barriers to effective competition in the interstate long-distance service market where AT&T's virtual monopoly was sustained for several decades.

In long-distance telecommunications regulation, telecommunications items of *service rates or tariffs*, *access charges*, *interconnection or access* are inseparable, fundamental issues in the Commission's policy implementation and interpretation.

Theoretically, carriers' interstate toll revenues (or rates of return) are derived from

---

[222] In general, the interstate 'long-distance' (or 'interexchange') services refer to interstate switched-voice and data long-distance services (i.e., transmission, storage, and transformation of voice messages and data), dedicated private-line services to large users, and interconnecting services for radio and television broadcasting.

long-distance service rates or prices that are made up through the imposition of interstate access charges on long-distance carriers by the local exchange carriers (LECs) and also adjusted according to the carriers' interconnection qualities. Because the rate of return is one component of an access charge or service rate and the rates or charges prescribed must properly reflect the allowable rate of return, the prescription of a rate of return must be fully consistent with the prescription of long-distance service rates or access charges.[223]

By employing a microeconomic model, Crandall (1991) shows that the relationship between interstate toll rates and access charges is interwoven. The reduction in the interstate toll rate is caused by the reduction in carrier access charges, increasing total interstate usage. That is, the demand for toll services depends on the number of subscribers on the system and, therefore, on the price charged to business and residential subscribers for access to the network; similarly, the demand for access is a function of the price of interstate toll usage.

Actually, these interdependent, inseparable relationships among interstate service rates, access charges, and interconnection frequently appeared in long-distance regulatory history. Commission decisions to mandate new forms of interconnection with AT&T's

---

[223] Every long-distance telephone call originates on the lines of a local telephone company (Local Exchange Company, or LEC), is switched onto the lines of a long-distance carrier (Interexchange Carrier, or IXC), and finally terminates on the lines of the LEC serving the recipient. Three telephone companies are thus used for each long-distance phone call, and local lines are necessary components of a long-distance call. That is, to make a long-distance call, local exchange carriers must provide access to long-distance carriers. Here, there were discriminatory actions of 'cross-subsidization' taken by AT&T, and cross-subsidization were often one of main items in the petitions against AT&T filed by competitors (OCCs) with the Commission. It is clear that long-distance lines are used solely for long-distance traffic, and it follows that the costs of building and maintaining the lines are paid by long-distance callers. A large majority of the traffic on local lines is local traffic, though the long-distance proportion has been steadily increasing. Nonetheless, AT&T's long-distance traffic historically paid disproportionately more for the local lines than

monopoly facilities and allow resale and sharing of AT&T's core services such as MTS and WATS were crucial to the development of competition in the rates and kinds of services. Because AT&T's competitors (OCCs) typically had lower quality interconnections than AT&T, access rates for OCCs were usually regulated to set at a level below that paid by AT&T to the local exchange carriers (LECs) for interconnection or access of long-distance services or facilities. Thereby, increased interstate access competition lowered the price of services subject to competition. In turn, competition in the provision of interstate long-distance services led to sharply reduced service rates or access charges, a larger variety of service options, and more rapid deployment of new technologies such as fiber optics and digital switching (Brenner 1992: 169-215).

In addition, in FCC policy-making, the implementation of interstate access charges included considerable (often inconsistent) judgments in interpreting the rules and estimating demands and costs, and required translating the general rules and cost allocation requirements of the access charge plan into specific tariffs--detailed contracts setting out terms, conditions, and rates for specific long-distance services and for interstate interconnection arrangements. The expert agency entrusted with federal telephone regulation, the FCC, often could not successfully arbitrate disputes between the incumbent dominant carrier, AT&T, and its challengers. The Commission had to grant or deny individual petitions, based on its perception of the fairness of telecommunications items (i.e., service rates, access charges, or/and interconnection activities) (Brock 1994: 195-196).

---

has local traffic. *See* Susan Edelman 1997: 537-553.

Both common carriers and individual citizens have a legal right to file petitions about telecommunications issues. The common carrier provisions of the *1934 Communications Act* permit any party to file petition(s) or complaint(s) that challenge the lawfulness of schedules of service rates or charges, and classifications, practices, and regulations affecting such charges (hereafter referred to as "tariff petitions").[224] In response to such tariff petitions, the Commission was authorized by the Act to judge--to grant or deny--the petitions."[225] In addition, whenever a carrier initiates a tariff revision, the Commission, upon a petition(s) or complaint(s) or its own motion, may investigate its lawfulness and suspend the revised tariff.[226]

The FCC's tariff regulation is based on the following legal provisions: (i) Common carrier services are offered pursuant to tariffs filed with the FCC before the service is offered;[227] (ii) Tariffed rates and conditions for such services must be just and reasonable and not unreasonably discriminatory;[228] and (iii) Rates are generally based on costs and should be based on the carrier recovering a reasonable rate of return, at least in theory. Common carriers have to file and justify in detail specific numerical values of rates or rate ranges. Such rates must be supported by cost data submitted to the FCC when the tariff is submitted.[229] In its long-distance telecommunications regulation history, the Commission frequently adjudicated each case of the tariff petitions about service rates or charges related to interconnection or access, affirming that any

---

[224] 47 U.S.C. § 208; 47 C.F.R. § 61.38.
[225] 47 U.S.C. § 205(a).
[226] 47 U.S.C. § 204.
[227] 47 U.S.C. § 203.
[228] 47 U.S.C. § 201.
[229] 47 C.F.R. § 61.38.

discrimination must be justified in accordance with applicable Commission rules or orders. An example of a tariff petition is when a long-distance telephone company (e.g., MCI) alleges that the dominant common carrier's (that is, AT&T's) rates of interstate communications services are unlawful in regard to tariff regulations prescribed by the Commission. In most cases, tariff petitions by OCCs or AT&T are filed with the FCC under the names of "applications for special tariff permission" and "petitions seeking investigation, suspension, or rejection of a new or revised tariff filing or any provision." Such tariff petitions shall specify the filing's FCC tariff number and carrier transmittal number, the items against which protest is made, and specific reasons why the protested tariff filing warrants investigation, suspension, or rejection under the Communications Act.[230]

According to the FCC documents (i.e., the *FCC Reports*, *FCC Reports 2nd Series*, and *FCC Records*), over the regulatory period from 1965-1995, AT&T (as a plaintiff) frequently filed various tariff petitions to propose, change or revise its tariff schedules (in the terms such as tariff offerings, tariff revisions, rate changes, or rate adjustments) for the purposes of improving its interstate rate of return, blocking interconnection to OCCs or American citizens, raising access or interconnection charges for OCCs or the public, or restricting resale and sharing of its interstate long-distance telecommunications services and facilities. The ultimate purpose of AT&T activities on such tariff offerings or revisions was to construct entry barriers to effective competition in the long-distance telephone service market where AT&T's virtual monopoly was sustained for several

[230] 47 C.F.R. § 167.

decades. In most cases, OCCs and the public interest groups filed petitions against AT&T's petition(s).

In addition, OCCs, individual customers or companies, public organizations including universities, government organizations (e.g., the U.S. *Department of Defense* and *General Service Administration*), and other telecommunications carriers such as cable companies and computer firms, who all were directly or indirectly using AT&T's services or/and facilities, competed against AT&T in the long-distance service market, filing petitions against AT&T (as a defendant) regarding the terms, conditions, and schedules of service rates or access charges for specific long-distance services and for interstate interconnection arrangements, and the rules or regulations governing the rate structure or revenue plan. Of course, in most cases, AT&T filed opposite petitions, and it also filed petitions against OCCs' unlawful tariff violation.

Then, the Commission--a main body composed of all the FCC Commissioners--frequently ordered AT&T or OCCs either to demonstrate the lawfulness of the alleged discriminatory rates or charges and behaviors regarding access or interconnection or to eliminate them. As a result, the Commission reviewed and adjudicated (judged) such petitions and then granted or denied the petitions by both parties and other interested parties in the final orders (via rule-making procedures) such as *Memorandum Opinion and Orders* (*MO&Os*) and *Report and Orders* (*R&Os*), often quoting previous court decisions or opinions on the issues.

As previously presented, a *MO&O* grants or denies the petition or ending any further action on the item, and a *R&O* as a final order terminates the proceeding, granting or denying the petition and amending the rules or regulations related to the petition,

which at this stage of the process is limited to changes in the editorial content of rule or regulation, but not changing its substances in any material way. These FCC's adjudicative rule-making policy decisions (that is, *MO&Os* or *R&Os*) were made 'for' the monopolistic interest of AT&T in some cases or 'against' AT&T in other cases, although the FCC always expressed that they made all policy decisions under the purpose of promoting more competition and protecting the public interest in the U.S. long-distance service market.

Again, it must be noted that the FCC's adjudicative rule-making decisions (i.e., *MO&Os* or *R&Os*) come from the 'rule-making' proceedings for enactment, amendment, and repeal of rules or regulations and also contain the characteristics of 'adjudication,' and thus are different from typical rule-making decisions such as *NOIs* and *NPRMs* just for enactment or modification of rules. In this study, these FCC's adjudicative rule-making policy decisions (i.e., *MO&Os* or *R&Os*) about "rules or regulations governing service rates or charges related to interconnection or access" in the interstate long-distance service arena are used as the dependent variable for my statistical model.

Here, I emphasize that while most of the telecommunications literature repeatedly focuses on several historical telecommunications events (e.g., the AT&T break-up effective in 1984, *AT&T Price Cap Order* in 1989, *Specialized Common Carriers* decision in 1971, *Computer Inquiry I, II & III* decisions), my study deals with the FCC's adjudicative rule-making decisions with 'case-by-case adjudication' related to schedules of long-distance service rates or access charges, interstate interconnection or access arrangements, or the rules or regulations governing the rate or access charge structures and its arrangements, which other telecommunications studies have not touched. In those

cases, the long-term dominant carrier AT&T was sometimes a main petitioner (*plaintiff*), who actively participated to get what it wanted, or the very key interest party (*defendant*), whom OCCs and other interest groups attacked, and thus the relationships of political influence among other important private or public interest parties and key political institutions were formulated.

These FCC's adjudicative rule-making policy decisions (i.e., *MO&Os* or *R&Os*) which were made during the period from 1965 through 1995, can be classified in nine combinations of policy-making as follows:

- [granting AT&T's petition, granting OCCs/public];
- [granting AT&T's petition, denying OCCs/public];
- [granting AT&T's petition, no decision/comment on OCCs/public];
- [denying AT&T's petition, granting OCCs/public];
- [denying AT&T's petition, denying OCCs/public];
- [denying AT&T's petition, no decision/comment on OCCs/public];
- [no decision/comment on AT&T's petition, granting OCCs/public];
- [no decision/comment on AT&T's petition, denying OCCs/public]; and
- [no decision/comment on AT&T's petition, no decision/comment on OCCs/ public].

These policy combinations were summarized in the following **Figure 5**.

Figure 5. Nine Combinations of FCC Policy Decisions and Coding Mode

Petitions Filed By (Against)		Other Common Carriers (OCCs) & Public Organizations		
		Grant (+)	Deny (–)	No Decision
AT&T	Grant (+)		1	1
	Deny (–)	0		0
	No Decision	0	1	

For the analysis, I exclude three combinations of FCC decision-making presented in a diagonal line (shaded in gray color) in the table: [+AT&T, +OCCs/public], [–AT&T, –OCCs/public], and [no-AT&T, no-OCCs/public]. These decisions correspond to the cases where the FCC simultaneously made the same decision for each party by granting, denying, or making no decision or comment on both parties' petitions. The reason why I excluded those combinations of policy-making is that it is difficult to assign dichotomous numerical values (1, 0) to them, that is, it is difficult to decide whether such decisions were made in favor of AT&T alone or OCCs/public only. According to the available data, the number of such vague or ambivalent decision cases is relatively small (**18** cases), compared to the total policy decision cases (**717** cases). In addition, no cases of [no-AT&T, no-OCCs/public] indicating that the FCC made no decision or comment on any party's petition were found over the regulatory period of 1965 through 1995. Accordingly, it is unlikely that the exclusion of such vague decisions would undermine my primary findings. Meanwhile, the Commission issued **36** general rule-making decisions (i.e., *NPRMs* or *NOIs*) regarding long-distance service matters over the period 1965-1995.

Hence, excluding the **18** vague decision cases and **36** typical rule-making decisions (i.e., *NPRMs* or *NOIs*), this study is using a total of **699** cases,[231] which all were printed as *MO&Os* or *R&Os* by the Commission over the period from 1965 to 1995, for the dependent variable in my study.

In other words, all the FCC's adjudicative rule-making decisions (i.e., *MO&Os* or

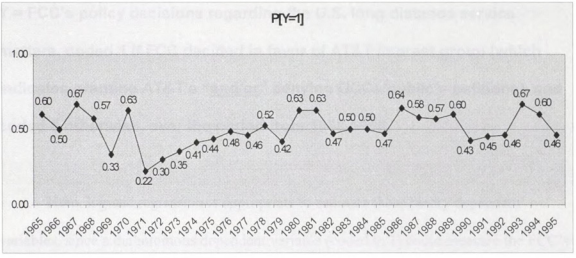
[231] All these data were obtained from the following main FCC documents: *FCC Reports*. Vol. 28 (1960)

R&Os) for or against AT&T regarding the U.S. interstate long-distance service matters over the period 1965-1995 are used to construct a dichotomous dependent variable for the statistical model. All the FCC decisions granting AT&T's petition(s) "**and/or**" denying OCCs/public's petitions, which indicates that AT&T got what it wanted, are considered to be "**in favor of AT&T interest**." Such decisions favoring AT&T are "**coded 1**" and the other cases are coded 0, as already presented in **Figure 5**. Actually, over the period, about **50.1** percent of all the FCC decisions were decided in favor of AT&T Corp. and its affiliates, demonstrated in the following **Figure 6**. The historical mean of FCC's decisional balance between pro-AT&T and pro-OCCs/public is exactly **0.501**. This indicates that, on average, the Commission was equally likely to grant (or deny) the petitions (regarding the long-distance service matters indicated above) by AT&T and by OCCs or/and the public over the period 1965-1995.

---

through Vol. 38 (1965); *FCC Reports, Second Series*. Vol. 1 (1965) through Vol. 104 (1986); and *FCC Records*. Vol. 1, No. 1 (1986) through Vol. 11, No. 6 (1996).

Figure 6. Ratio of FCC Policy Decisions Favoring AT&T over OCCs/Public



Hence, for the study, the dependent variable of the statistical model is:

Y = FCC's policy decisions regarding the U.S. long distance service matters, coded 1 if FCC decided in favor of AT&T interest group (which indicates granting AT&T's "and/or" denying OCCs/public's petitions), and coded 0 otherwise, over the period from 1965-1995.

Here, logistic regression is appropriate to estimate these binary dependent variables, since a dichotomous dependent variable (coded 0, 1) could measure the FCC's adjudicative rule-making policy decisions. Thus, in the statistical model for this study this dependent variable means the probability that the FCC will favor AT&T in its policy-making.

Especially, FCC's favoring AT&T in its policy-making means that AT&T could sustain an effective monopoly on long-distance telecommunications, although not a total monopoly, as key political and economic factors influenced the federal agency to make decisions in ways consistent with AT&T's interests. Throughout the history of long-distance telecommunications service regulation, competitive long-distance market settings were dependent upon battles among long-distance companies regarding interconnection arrangements with the monopoly AT&T facilities and structures of access charges and service prices. In other words, the types or arrangements of interconnection and the structures or systems of access charges were central issues in the long-distance telecommunication market and thus in the FCC telecommunications regulatory policy. AT&T always resisted the entry of new competitors into its formerly monopoly markets

through pricing changes and interconnection limitations and its tiny competitors sought continued restrictions on AT&T's pricing patterns and interconnection arrangements. That is, both sides (AT&T and its competitors or public interest groups) expected the FCC's resolution of the most critical (inseparable) issues (that is, interconnection arrangements, access charges, and service prices) in the arena of long-distance telecommunications, which my study is employing as indicators of FCC policy decisions. The FCC deeply involved in managing regulated competition between AT&T and its tiny competitors, but never adopted a formal government policy in favor or against AT&T monopoly, partly because there was inadequate or limited information on such inseparable critical issues. Accordingly, the fact that AT&T is favored by the Commission's decisions in the competitive disputes regarding those critical, inseparable issues in the long-distance telecommunications means the sustenance of AT&T's effective control over the overall long-distance telephone communication and simultaneously the existence of institutional factors favoring AT&T's interests, although the federal agency pursues long-distance telecommunications policy for various forms of competition.

The following figures (**Figure 7, 8, 9 and 10**) are excerpts from some adjudicative rule-making decisions (i.e., 'orders' such as *MO&Os* or *R&Os*) issued by the FCC (that is, the Commission), employed in my study, with which I provide my coding scheme for the dependent variable.

Figure 7. Excerpt from a MO&O regarding AT&T's Petition for Declaratory Ruling re Interconnection, issued by the FCC in 1978[232]

In the Matter of
Petition of AT&T
For a Declaratory Ruling and Expedited Relief
FCC 78-142

MEMORANDUM OPINION AND ORDER
(Adopted: February 23, 1978)

By the Commission: Chairman Ferris Issuing a Separate Statement;
Commissioners Fogarty Dissenting and Issuing a Statement

PART I

We have before us a "Petition for a Declaratory Ruling and Expedited Relief" filed by the American Telephone and Telegraph Company (AT&T), which stated that AT&T will not provide any additional connections to local exchange services to "Other Common Carriers" (OCCs) for their use in the provision of interstate service offerings which are not private line services and AT&T believes such a course of conduct does not violate the cease and desist order in *Bell System Tariff Offerings*, 46 FCC 2d 413 (1974). The petition requested that we issue a declaratory ruling affirming that AT&T has "no present obligation to provide additional connections to local exchange service to OCCs for their use in the provision of long-distance service offerings which are not private line services."

Oppositions to AT&T's request for such a declaratory ruling have been filed by six OCCs (i.e., MCI, SPCC, SBS, ASC, Telenet, and ARINC) and one government organization (i.e., Department of Justice).

PART II

(This section provides Contentions of the Parties and Discussions on Background, Prior Section 201 Orders, Other Interconnection Obligations and Affirmative Action.)

PART III

We conclude that our prior the Communications Act's Section 201(a), 202(a), and 203 orders do not direct the petitioner to provide interconnection of facilities or services to any specialized common carrier to enable such a specialized common carrier to provide any interstate service which is substantially equivalent to MTS or WATS. We also conclude that the Court of Appeals mandate in *MCI v. FCC*, 561 F.2d 365 (D.C. Cir. 1977) has no effect upon the scope of the petitioner's interconnection obligations.

Accordingly IT IS ORDERED, That the petition for a Declaratory Ruling, filed by AT&T, IS GRANTED to the extent indicated herein.

[232] 67 F.C.C.2d 1455-1486.

In this first example of *MO&O*, presented in the **Figure 7**, the Commission issued an order to grant AT&T's petition for a declaratory ruling to request the FCC to affirm that AT&T has no obligation to provide interconnection to other interstate carriers. The order was evidently issued in AT&T's favor, so this decision case is coded "1".

Figure 8. Excerpt from a MO&O regarding AT&T's Tariff Revision, issued by the FCC in 1980[233]

In the Matter of
AT&T and the BOCs
Charges for Interstate Service
FCC 80-297

MEMORANDUM OPINION AND ORDER
(Adopted: May 29, 1980)

By the Commission: Commissioners Fogarty, Quello, and Jones

PART I

We have before us tariff revisions filed by the American Telephone and Telegraph Company (AT&T) and the Bell Operating Companies (BOCs) which proposes a 10.5 percent increase in rates for most of the carrier's interstate services including Message Telecommunications Service (MTS), Wide Area Telecommunications Services (WATS), Private Line Service, TELPAK, and facilities provided to other common carriers (OCCs). Also before us are numerous petitions, filed by eleven OCCs (including MCI, SPCC, and USTS) and eleven public organizations, to reject or suspend and investigate the AT&T tariff revisions. We find that the rates increase violates prescription of overall 9.5 percent rate increase in effect since 1976, and thus the proposed revisions, if permitted to take effect, would result in AT&T's earning a return in excess of the outstanding lawful rate prescribed by this Commission. Accordingly, we reject the revisions.

PART II
(This section provides Background and Carrier Justification, and Discussion.)

PART III
Accordingly IT IS ORDERED, That the captioned tariff revisions filed by AT&T and the BOCs ARE REJECTED.
IT IS FURTHER ORDERED, That the petitions for rejection or suspension and investigation ARE GRANTED to the extent indicated above.

In this *MO&O*, the Commission issued an order to reject AT&T's tariff revisions to increase the rates of its all interstate long-distance services and simultaneously grant the petitions, filed by twenty two OCCs and consumer/public organizations, to request the Commission to reject or suspend and investigate AT&T's tariff revisions. Accordingly, the order is evidently against AT&T, so this decision case is coded "0".

Figure 9. Excerpt from a MO&O on Reconsideration regarding AT&T's Tariff Filings, issued by the FCC in 1986[234]

In the Matter of
AT&T Communications
Revisions to Tariff F.C.C. Nos. 1, 2, 9, and 10
FCC 86-511
CC Docket No. 85-326

MEMORANDUM OPINION AND ORDER ON RECONSIDERATION
(Adopted: November 12, 1986)

By the Commission: Commissioner Dennis not participating

PART I

By MO&O adopted October 31, 1985, we denied to reject or suspend AT&T's Megacom and Megacom 800 tariff filings. Megacom is a distance and usage-sensitive outward dialing service in which calls are billed individually at rates that are lower than those for MTS, and Megacom 800 provides the same service for inward dialing. Neither of the Megacom services includes the costs of local access to an AT&T network. MCI and US Telecom, Inc. have filed petitions for reconsideration of our Megacom Order. For the reasons discussed in the following paragraphs, we dismiss or deny the petitions for reconsideration.

PART II

In their reconsideration petitions, MCI and US Telecom as well contend that the Megacom offering enable AT&T to "unfairly leverage" its 800 Service monopoly to gain an unfair competitive advantage in offering WATS services. They explain that high capacity access lines used for the closed end of Megacom services can be bundled together and used interchangeably. Therefore, customers with a need for both 800 Service and a WATS-type service can realize access cost savings by subscribing to both Megacom

[233] 78 F.C.C.2d 661-673.
[234] 1-5 F.C.C. Rec. 930-931.

services rather than subscribing to a competitive WATS-type service offered by MCI.

Accordingly, MCI and US Telecom argue that this constitutes an unjust and unreasonable practice in violation of Section 201(b) of the Communications Act, and ask us to require AT&T to provide the OCCs with access to the AT&T 800 Service data base so that they may develop competitive 800 Services.

PART III

Our view of these petitions indicates no issues requiring further investigation at this time. Especially, MCI's concerns of AT&T's monopoly in WATS-type service market appear to be true; however, it is not relevant to our investigation of Megacom rates. The Megacom investigation is not addressing the development of alternative 800 Services for the OCCs. Moreover, a determination of whether the Megacom offerings are just and reasonable should not be joined with further analysis of the competitive impact of AT&T's advantages in offering 800 Service. They have offered no new facts or arguments regarding the lawfulness of AT&T's Megacom tariffs and their petitions therefore are denied.

PART IV

Accordingly IT IS ORDERED, That the petitions for reconsideration filed by MCI and US Telecom, Inc. regarding the Megacom Order ARE DENIED and DISMISSED.

In this *MO&O*, the Commission issued an order to deny the petitions for reconsideration filed by two OCCs (MCI and US Telecom, Inc.), although it recognized AT&T's monopolistic advantage in 800 long-distance service offerings. Accordingly, the order was issued evidently in AT&T's favor, so this decision case is coded "1".

Figure 10. Excerpt from a MO&O regarding AT&T's Tariff Revisions, issued by the FCC in 1995[235]

In the Matter of
AT&T Communications
Revisions to Tariff F.C.C. No. 15
Competitive Pricing Plans 4 and 5
FCC 95-30

MEMORANDUM OPINION AND ORDER
(Adopted: January 26, 1995)

[235] 10-5 F.C.C. Rec. 2331-2332.

By the Commission:

PART I

On May 2, 1990, AT&T has filed Transmittal No. 2265 to introduce a credit plan for customers of Competitive Pricing Plans (CPPs) 4 and 5. CPPs were designed to respond to discounts offered by competing carriers: they provide discounts on long-distance Software Defined Network (SDN) services. Then, the Common Carrier Bureau (CCB) rejected the tariff offering on the ground that it did not supply sufficient economic information to support the tariff matter and thus violated Section 61.38 of the Commission's Rules.

This time, AT&T filed an application for review of the CCB's rejection. The Competitive Telecommunications Association (CompTel), the National Telecommunications Network (MTN), US Sprint Communications Company Limited Partnership (Sprint), and MCI Telecommunications Corporation (MCI) filed oppositions to AT&T's application for review, and then AT&T filed its reply. For the reasons discussed below, this time we grant AT&T's application for review.

PART II

We find that although AT&T resubmitted the same cost support figures that it originally filed with CPP 4 and 5, it also explained in the transmittal letter why the proposed credits had no economic impact and did not change the original projections of demand, cost and revenues. Because AT&T technically complied with Section 61.38 of the rules, the tariff revision was not patently unlawful. Therefore, we conclude that the CCB improperly rejected the tariff and its decision should be reversed.

PART III

Accordingly IT IS ORDERED, That the application for review filed by AT&T IS GRANTED.

IT IS FURTHER ORDERED, That the opposition petitions filed by CompTel, MTN, Sprint, and MCI ARE DENIED.

In this *MO&O*, the Commission also issued an order to grant AT&T's petition and simultaneously deny the opposition petitions filed by four OCCs (CompTel, MTN, Sprint, and MCI), reversing the CCB' previous decision against AT&T. Hence, the order was issued by the Commission in favor of AT&T interest. Accordingly, again this decision case is coded "1".

The data sets for these dependent and independent variables (as shown in the next

part) as well for the analysis consists of information were collected by the "document research" method. That is, the data sources for the analysis range over the FCC documents and microfilms (e.g., ***FCC Reports and FCC Records***), journal articles, books, archival records or graphs, published statistics, news papers (i.e., ***The New York Times***), and other (governmental and non-governmental) publications, which provide real data on FCC policy decisions and also valid and reliable indicators of dependent and independent variables for interest group power, the roles of political institutions, and other contextual impacts (*see* **BIBLIOGRAPHY**).

2. INDEPENDENT VARIABLES AND HYPOTHESES

In this section, several sources of potential 'patterns of influence' over FCC's regulatory policy decisions were selected. Such patterns or conditions of influence thus were identified, measured, and operationalized as independent variables. I developed measures of the relevant concepts for interest group power, the roles of political institutions, and the contextual impacts.

The following three sets of independent variables are developed: (i) Interest Group Power Variables; (ii) Political Institutions Variables; and (iii) Contextual Impact Variables.

2-1. INTEREST GROUP POWER VARIABLES

The following three subsets of interest group power variables that are expected to

emerge from interest group theory are considered to estimate whether some patterns of interest group influence are derived from the FCC's adjudicative rule-making decisions regarding AT&T interest in the U.S. long-distance service market: AT&T Interest Variables, Other Common Carriers Interest Variables, and Public Interest Variables. The following **Table 2** shows the mean, standard deviation, and number of observations for these interest group power variables in all three time periods.

❑ AT&T INTEREST VARIABLES

The regulated special interest group itself traditionally was considered as the most significant interest group having strong impacts on regulatory decision-making. Consistent with the capture theory, the regulated dominant interest group(s) will engage in monitoring behavior to insure that the bureaucracy will perform according to its legislative mandate. In the history of U.S. long-distance telecommunications regulation, AT&T was the largest and most important economic actor that the federal government regulated during the study period 1965-1995. To the extent that the regulated dominant interest group (AT&T Corp. and its 22 affiliates) puts pressure upon the federal regulator (the FCC), it would get what it wanted from the federal long-distance service policy-making.

➡ **<u>General Hypothesis I.A</u>[236]: AT&T interest variables are significant predictors of**

[236] 'I' stands for interest group variables and 'A' for AT&T interest variables.

the FCC's adjudicative rule-making decisions in U.S. interstate long-distance service regulation.

Table 2. Interest Group Power Variables

Time Period I (1965-1995)

Interest Group Power Variable	Mean	St.Dv.	N
AT&T's Petitions	1.190	0.020	699
AT&T Employment$_t$	469390.3	114287.6	699
AT&T Market Share$_t$ (%)	65.628	16.096	699
OCCs' Petitions	3.109	5.279	699
Direct Attack on AT&T Dummy	0.595	0.519	699
Public Interest Groups' Petitions	1.911	4.399	699
Number of Common Carrier Registration$_t$	225.597	136.353	699
New York Times Index	12.242	6.719	699

<Note> $_t$ = each year

Time Period II (1965-1983)

Interest Group Power Variable	Mean	St.Dv.	N
AT&T's Petitions	1.144	0.023	284
AT&T Employment$_t$	545799.9	69730.1	284
AT&T Market Share$_t$ (%)	83.035	8.047	284
OCCs' Petitions	2.426	4.368	284
Direct Attack on AT&T Dummy	0.609	0.489	284
Public Interest Groups' Petitions	3.042	5.512	284
Number of Common Carrier Registration$_t$	87.074	39.548	284
New York Times Index	12.282	7.421	284

Time Period III (1984-1995)

Interest Group Power Variable	Mean	St.Dv.	N
AT&T's Petitions	1.222	0.030	415
AT&T Employment$_t$	343537.1	31645.2	415
AT&T Market Share$_t$ (%)	53.714	6.509	415
OCCs' Petitions	3.576	5.779	415
Direct Attack on AT&T Dummy	0.586	0.539	415
Public Interest Groups' Petitions	1.137	3.222	415
Number of Common Carrier Registration$_t$	320.393	90.032	415
New York Times Index	12.214	6.204	415

X1 = AT&T's Petitions

The influence of AT&T's dominant interest can be directly measured from the data on the FCC's adjudicative rule-making decisions (i.e., *MO&Os* or *R&Os*). AT&T Corp. and its affiliates as well as OCCs and/or other public organizations initially filed some petitions or complaints against each other's activities in the long-distance telecommunications service market. The AT&T's petition variable measures the monitoring activities of AT&T as the very long-term dominant interest group in the U.S. long-distance service market, which fought against the petitions or complaints filed by other common carriers (OCCs) and other public/consumer interested parties to prevent damage to the AT&T Corp. The mean, standard deviation, and number of AT&T's petitions or applications filed with the Commission are calculated annually to assess the influence of the regulated dominant AT&T's interests on FCC policy-making.

The number of petitions filed by the AT&T interest group in each policy case may be political pressure on the FCC to grant its petitions, which is evidence of capture by the regulated dominant interest group rather than a response to public or consumer demand. Hence, there may be a positive relationship between AT&T's petition drives and granted petitions of AT&T in FCC policy decisions over the full time period (1965-1995).

➧ **<u>Hypothesis I.A1</u>: An increase in the number of AT&T's petitions against OCCs' or public organizations' activities in the U.S. long-distance service market is more likely to result in an increased probability that AT&T's petitions are**

granted by the FCC.

X2 = AT&T's Personnel Power: AT&T Employment$_t$

AT&T's employees may have interests in promoting their firm's dominant position and limiting activities against them by other common carriers and other interested parties in the U.S. long-distance telecommunications market. Data for the AT&T employment were obtained annually from the AT&T Corp. These AT&T employment data include both AT&T's labor force and managerial employees, and the manager-level employees correspond to its board of directors including the chairman. Alternatively, the ratio of AT&T's employees to the total number of all common carrier employees in the long-distance service industry may be another indicator of AT&T personnel power in FCC policy-making.

For this study, I used the number of total AT&T employees for each year, not separating it into lower-level labors and manager-level staffs, because AT&T Corp. and other common carriers could not provide data on their classified employment.[237]

Over the 31-year period (1965-1995), if the number of AT&T's employees (including both labor force and manager-level employees) increases, then the federal regulator is expected to respond to political pressure from AT&T's members who want to actively protect AT&T's interests in the long-distance service market, thus more likely

[237] I contacted an AT&T main branch in Chicago which exercises jurisdiction over the Great Lakes region, but the company's policy did not allow me to use such data and actually they do not have such classified data. In addition, the number of AT&T Board of Directors including AT&T Chairman was the same (around 12) over the period explored in this study, so it is impossible to statistically assess its impact on the

granting AT&T's petition(s).

➡ **<u>Hypothesis I.A2</u>: If the number of AT&T's employment increases in the long-distance service market, then the probability that the FCC will grant the petitions requested by the AT&T interest group is expected to increase, because AT&T personnel (including both labor force and manger-level employees) could place political pressure on the federal bureaucrats to protect AT&T's interests in the long-distance service market.**

X3 = AT&T's Market Share: Ratio of AT&T's Revenue to Total Long-Distance Service Revenue$_t$

AT&T's high market share may be a significant predictor of FCC policy-making regarding long-distance telephone regulation matters, even if market share alone is clearly not a measure of market power. The higher market share of AT&T relative to the total market share of all common carriers is expected to influence the FCC's adjudicative rule-making decisions in the U.S. long-distance service market, because the financial health of AT&T can bring it an ability to effectively place more political pressure (e.g., lobbying) on the FCC to produce positive outcomes for them. That is to say, an increase in AT&T's market share (i.e., 'Ratio of AT&T's share in the total long-distance service revenues') is more likely to result in an increased probability that the federal regulator (FCC) grants the petition(s) filed by AT&T. Conversely, if the market shares of competing OCCs under

---

FCC's policy-making.

jurisdiction of the FCC increase, then the probability that their requests or petitions against AT&T would be granted should increase to allow the long-distance service industry to become more competitive and beneficial to their interests.

The market shares of AT&T and OCCs under FCC jurisdiction were measured by annual revenue corrected for inflation. For each year, the data were obtained from the FCC (1996). The AT&T market share items were converted to the percentage of the total market revenues (that is, total long-distance service revenues) to allow comparison between AT&T and OCCs. Thereby, for example, the decline in market share for OCCs would coincide with a rise in market share for AT&T. In reference, throughout the history of long-distance service competition between AT&T and OCCs, the issues and disputes usually devolve into charges of differential tariffs or rates (regarding interconnection or service access rule and regulations) and allegations of 'cream skimming' behavior of AT&T. This is because AT&T and its affiliates were able to gain market share in differentiated high priced long-distance services and products. Given this fact, a positive (+) relationship is expected between gains in AT&T's financial statistics (in terms of relative long-distance service revenues) and AT&T's petition(s) granted by the federal regulator (i.e., FCC), while a negative (–) relationship is expected between the financial statistics of AT&T and competing OCCs' petition requests granted.

➧ **<u>Hypothesis I.A3</u>: An increase in AT&T's market share is more likely to result in an increased probability that the FCC will grant the petition(s) filed by AT&T, because the AT&T interest group with dominant position in the market can put some political pressure upon the FCC to get what it wants.**

However, we can also expect that decreased market share for AT&T may result in greater success at the FCC. During the regulatory period from 1965 to 1995, AT&T's market share was decreasing every year although it still sustained monopolistic position in the long-distance service market. In addition, the data on the FCC's adjudicative rule-making decisions in **Figure 6** show that the FCC was still ruling in favor of AT&T at the same rate as favoring OCCs/public (even after the AT&T break-up effective in 1984) over the 31-year period. That is to say, even when AT&T's market share was decreasing, the FCC was still granting AT&T's petition(s) against OCCs. This may indicate that AT&T was still a powerful actor which did put some political pressure upon the FCC because it still sustained its dominant position in the market. Hence, such federal regulator's protective behavior is consistent with the traditional producer protection hypothesis and may provide more sound evidence of "capture" by the regulated dominant AT&T interest group. Accordingly, a different causal connection between financial size and political influence at the FCC can be hypothesized, consistent with real data, as follows.

➡ **<u>Hypothesis I.A4</u>: A decrease in AT&T's market share is more likely to result in an increased probability that the FCC will grant the petition(s) filed by AT&T, consistent with the traditional 'capture theory,' if the AT&T interest group can put substantial political pressure upon FCC policy-making to obtain what it wants, even when its market power is decreasing.**

Another different relationship between AT&T's financial size and its political influence on FCC policy-making can be hypothesized, too. In its regulatory history, the FCC always acted in the public interest by promoting competition in the long-distance telecommunications service market. The fact that AT&T continues to earn higher long-distance service revenues than other common carriers may be a sign of AT&T's on-going market domination and low competition in the market. Thus, the federal regulators are more likely to rule against AT&T in its policy-making when AT&T's market share is high.

➡ **<u>Hypothesis I.A5</u>: An increase in AT&T's market share is more likely to result in a decreased probability that the FCC Commissioners will grant the petition(s) filed by AT&T, because the FCC pursues its policy of promoting competition and protecting public interest and thus does not want AT&T's domination of long-distance service market.**

❑ OTHER COMMON CARRIERS INTEREST VARIABLES

The other common carriers (OCCs) or interexchange carriers (IXCs) excluding AT&T can be considered as powerful competitors seeking to enter and break the ongoing long-distance service monopoly activities by AT&T. Long-distance business interest variables except AT&T variables were derived from the very FCC policy decisions denying or rejecting petitions filed by OCCs, which seek to object or reject AT&T's activities that they believe are unlawful or discriminatory regarding specific

telecommunications matters (that is, its behaviors to violate rules or regulations of rates or charges related to interconnection or/and access in this study) in the U.S. long-distance telecommunications service market. Below are the important long-distance service industry interest variables that may influence the total number of FCC's adjudicative rule-making decisions (**699**) in the 31-year samples.

➧ **General Hypothesis I.O[238]: Indicators of OCCs interest group power are significant predictors of the FCC's adjudicative rule-making decisions regarding the long-distance telecommunications service matters.**

X4 = OCCs' Petitions

The number of observations for OCCs' petitions in each policy case is used to assess the effect of other long-distance industry interest groups (except AT&T) on FCC policy decisions. The data were obtained directly from the data on the FCC's adjudicative rule-making decisions (i.e., *MO&Os* or *R&Os*). OCCs such as MCI, Sprint, Telecom U.S.A., Allnet, and USTS are other powerful interest groups and competitors in the long-distance telecommunications service market which put political pressure upon the FCC to get more competitive long-distance service setting beneficial to their interests as much as AT&T. Through their petition drives, OCCs pursued to dispel the monopolistic activities of AT&T in the long-distance service market over the 31-year

[238] 'I' still stands for interest group variables and 'O' for OCCs interest group variables.

period (1965-1995).

➡ **<u>Hypothesis I.O1</u>: An increase in the OCCs' petitions is more likely to result in a decreased rate in FCC decisions favoring AT&T. Conversely, a decrease in the OCCs' petitions increases the likelihood of FCC decisions favoring AT&T.**

X5 = OCCs' Direct Attack on AT&T Dummy

According to the *FCC Reports* and *FCC Records*, over the regulatory period, a number of OCCs filed their petitions (that is, petitions for tariff offerings or revisions regarding rules/regulations of interconnection or access services) to request the Commission to 'directly' reject or 'indirectly' investigate AT&T's monopolistic behaviors by just complaining about AT&T's activities in the market. The former is considered as an indicator of OCCs' "direct attack" on AT&T's interests. That is, as another indicator of OCCs interest power, the *OCCs' Direct Attack on AT&T Dummy* can be operationalized as whether OCCs (or other IXCs) filed petitions 'directly' rejecting AT&T's suspicious activities or petitions 'indirectly' investigating or suspending AT&T's discriminatory activities. For each policy case, the former is coded 1 and the latter coded 0. The petitions filed by OCCs to 'directly' reject AT&T's monopolistic behavior may leave great damage to AT&T's monopolistic interests if they are granted by the FCC. If the FCC continues to pursue the goal of promoting competition, it could not disregard the presence of powerful petition drives by OCCs.

➡ **Hypothesis I.O2: When OCCs filed strong petitions to request the FCC to 'directly' reject AT&T's petition(s), the FCC Commissioners are less likely to favor AT&T in FCC policy decisions. Conversely, if OCCs' petitions are just to complain against AT&T's monopolistic activities, the likelihood of favoring AT&T in FCC policy-making will increase.**

Especially, these strong petitions filed by OCCs to 'directly' reject AT&T's monopolistic behavior is expected to put more negative influence on FCC policy-making favoring AT&T during the subperiod (1984-1995) after the break-up of AT&T than during the subperiod (1965-1995) before the event. It may be because AT&T's economic and political power was strong enough to nullify such strong petitions in FCC policy-making processing for the period before its break-up, while the FCC acted more positively to promote competition in the long-distance service market after the divestiture of AT&T and thus could respond to OCCs' powerful petitions against AT&T as AT&T's economic and political power was weakening for the later period. Accordingly, the following hypothesis indicating a difference between the influence of strong petitions on FCC policy-making before and after the break-up of AT&T is also to be estimated.

➡ **Hypothesis I.O3: It is more likely during the subperiod (1984-1995) after the divestiture of AT&T that the FCC Commissioners are less likely to favor AT&T in their policy-making as OCCs filed strong petitions to request the FCC to 'directly' reject AT&T's petition(s). Meanwhile, this negative influence of strong petitions on FCC policy-making favoring AT&T is less significant for the**

subperiod (1965-1983) before the break-up of AT&T.

❑ PUBLIC INTEREST VARIABLES

Over the regulatory period, except for OCCs or other IXCs, many consumer user groups, even individuals, and public/governmental entities, representing the public interest, also filed some petitions or complaints against AT&T monopolistic behavior. The number of petitions raised by the consumer or/and public organizations may constitute political pressure on the FCC to reject AT&T's petition(s), partly as a response to public or consumer demand. In addition, many 'common carriers' relative to 'private carriers' requested the Commission to grant their licenses. The growth in the number of (big and small) common carriers may indicate at least potential public interest influence upon FCC decision-making, because most of them were getting more--directly or indirectly--involved in fights with AT&T regarding key telecommunications matters and furthermore key parts of them with competitive market power were putting their petitions against AT&T in front of the Commission every year.

➡ **<u>General Hypothesis I.P</u>[239]: Public interest variables are significant predictors of the FCC's adjudicative rule-making decisions in the U.S. long-distance telecommunications service market.**

[239] 'I' still stands for interest group variables and 'P' for public interest group variables.

X6 = Public Interest Groups' (Non-OCCs') Petitions

The influence of public interest is also measured from the data on the FCC's adjudicative rule-making decisions. A number of petitions were filed with the FCC by various public interest or consumer user groups such as Ad Hoc Telecommunications Users Committee (AHTUC), Consumer Federation of America (CFA), National American Telecommunications Association (NATA), press or news media groups, bank coalitions, government organizations and state public service commissions, educational institutions like universities, and even individual American citizens. In their petitions against AT&T, they all requested the Commission to rule that AT&T's activities were unlawful or discriminatory and make more fair decisions to remove the monopolistic activities of AT&T in the long-distance telecommunications service market. Such petitions may indicate political pressure on the FCC as a response to public interest or consumer demand.

Thus, if the number of non-OCCs' petitions (excluding OCCs' as well as AT&T's petitions) regarding long-distance service matters increases, then the number of the decision cases by the FCC favoring AT&T is more likely to decrease, in part as a response to consumer demand or public interest. Hence, the number of observations for non-OCCs' petitions or applications in each policy case is used to assess the influence of public interest on FCC policy decisions over the 31-year period from 1965-1995.

➡ **<u>Hypothesis I.P1</u>: An increase in the petitions filed by public or/and consumer organizations (except for OCCs or IXCs) in the long-distance service market is**

more likely to result in a decreased rate in AT&T's petition(s) granted by the FCC, if the regulatory bureaucracy continues to pursue the protection of public interest defined as consumer protection. Conversely, a decrease in the non-OCCs' petitions increases the likelihood of FCC's decisions favoring AT&T.

X7 = Number of Common Carrier Registrations$_t$

The public demand for more competitive long-distance or interexchange services also applies political pressure on the regulatory agency (i.e., the FCC). According to the *1934 Communications Act*, most of the long-distance service companies have been defined and regulated as "common carriers," which refer to communication companies that hire out their specific authorized services (e.g., telephone, telegraph, and some satellites) to the public. Meanwhile, there are large private users which could build private networks from their own microwave circuits, terminal equipment, or private satellite dishes if common carriers could not offer the services they required at rates equal to their own potential costs, or they could augment common carrier services with some of their own equipment. Airline reservation systems, large banking networks, and private networks connecting several large office buildings or even a multitude of retail outlets are some examples of "private carriers." In general, the common carriers must serve every consumer or the American public, while the private carriers tend to only serve private companies.

I consider the variable 'Number of Common Carrier Registrations' (or Ratio of Common Carrier to Private Carrier Registrations) as one of the Public Interest Variables,

rather than one of Other Common Carriers Interest Variables that are directly related to petitions against AT&T filed by OCCs with the Commission. It is because not all (big or small) 'common carriers' filed petitions against AT&T, but the presence of common carriers in the market may indicate at least potential public interest power. Actually, they were directly or indirectly involved in the telecommunications matters where AT&T still sustained monopolistic power, and thus every year, some of them raised opposite opinions and filed petitions against AT&T with the Commission.

Hence, the increase in the number of 'common carrier' registrations (relative to the number of 'private carriers') may indicate the more services for the public and the potential damage to the AT&T Corp. as well. That is, the more the long-distance service common carriers enter the long-distance telephone market, the bigger the possibility to raise the petitions against AT&T's monopolistic behavior exists. This in turn may mean the presence of more competitive market in favor of public/consumer interest. Conversely, a decrease in the number of common carrier registrations may indicate the increased number of AT&T's petitions granted by the FCC. The data on common carrier registrations are available from the FCC (1996).

➡ **<u>Hypothesis I.P2</u>: The presence of large number of other common carriers in the long-distance service market puts some potential political pressure upon the federal regulators to facilitate a more competitive market favoring the American public by rejecting AT&T's petition(s). Conversely, a decrease in the long-distance service common carrier registrations increases the likelihood that the FCC will make decisions in AT&T's favor by granting its petition(s), because it**

may indicate the disappearance of potential pressure from other common carriers which pursue the protect of public interest in the long-distance market.

X8 = Agency Media Exposure: New York Times Index (NYTI)

The regulatory process is often insulated from public influence. Lack of mass media exposure may indicate that the federal regulators are insulated from public scrutiny. The extent of isolation from public scrutiny in the process of FCC policy decisions can be determined by using 'content analysis' to measure newspaper articles about the federal agency (i.e., the FCC). For the study, this content analysis is used to determine whether and to what extent media exposure representing public interest influences the FCC's adjudicative rule-making decisions regarding AT&T.

This media exposure of the FCC regulator is expected to either follow or trigger a reaction by AT&T and OCCs and also trigger public scrutiny of FCC policy-making proceedings. In addition, perceptions of media exposure or coverage (whether true or false) are expected to precipitate a response by the legislators, that is, increased oversight of the agency by Congress. This is because the federal legislators regarding long-distance telecommunications service matters must pay attention to issues in the media, since media coverage can affect their chances for reelection. Thus, the finding of influence from media exposure may mean that FCC policy-making process is open to public scrutiny.

From all *The New York Times* editions over the period of 1964-1995, I found that a large number of articles on the FCC regarding AT&T activities in the long-distance

service market were mentioning AT&T's monopolistic behavior although they were sometimes showing AT&T accomplishments in the market.[240] Hence, the increased mentions of the FCC regarding AT&T's activities in the newspaper are likely to result in negative outcomes against AT&T in FCC policy-making. It may be because the American public's general tendency of disliking AT&T's monopolistic activities was reflected in the newspaper as the regulated dominant carrier was still enjoying much more political and economic benefits rather than OCCs and consumer/public organizations representing American citizens. It is also because the federal regulators had to recognize political signal from Congresspersons who must pay attention to the media for their reelection and political support from the U.S. citizens.

In general, mass media's messages are rapid in that they reach large audiences within a relatively short time or even instantly. This public, rapid character of media suggests its openness for public surveillance and thus potential public interest power in its impacts (Wright 1975: 4-7). Accordingly, in order to examine the influence of public interest reflected in the mass media on FCC policy-making in the study, I constructed *New York Times Index* (NYTI) as the number of times the FCC (regarding AT&T's activities) was mentioned in *The New York Times* during the two months leading up to each FCC decision.[241] I hypothesize that as articles on FCC actions regarding AT&T accumulates, the Commission is expected to deny AT&T's petition(s) when making decisions.

---

[240] Accordingly, I could not correctly decide whether the articles in *The New York Times* mentioned the FCC activities 'for' or 'against' AT&T interest.

[241] The selection of the period of two months before the FCC policy-making, although admittedly arbitrary, has the virtue of reflecting the mass media effect's rapid and instant character.

➧ **<u>Hypothesis I.P3</u>: Public exposure of the regulatory agency in the mass media (e.g., newspaper articles) makes the long-distance service regulatory policy-making process more open to legislative oversight. Hence, the more media exposure (i.e., more mentions in *The New York Times*) of the FCC regarding AT&T's activities in the long-distance service market for the two months before FCC policy decision, the more negative are FCC outcomes by granting AT&T's petition(s) in FCC policy-making. Meanwhile, the less media exposure (i.e., fewer mentions in *The New York Times*) of the FCC regarding AT&T's behaviors in the market during the two months before FCC policy-making is more likely to increase the likelihood the federal regulator will make decisions for AT&T.**

2-2. POLITICAL INSTITUTIONS VARIABLES

The following four subsets of variables regarding the roles of political institutions are considered to estimate whether some pattern of political institutions' influence had some impacts on the FCC's adjudicative rule-making decisions regarding AT&T's activities in the U.S. long-distance telecommunications service matters: FCC Regulator Variables, Congressional Influence Variables, Presidential Power Variables, and Court Influence Variables. The mean, standard deviation, and number of observations for these political institution role variables in all three time periods were presented in **Table 3**.

Table 3. Political Institutions Variables

Time Period I (1965-1995)

Political Institutions Variable	Mean	St.Dv.	N
Previous adjudicative rule-making FCC Decisions$_{t-1}$ (%)	50.879	9.661	699
FCC Personnel$_t$	1914.3	178.5	699
FCC Conservatism Mean$_t$	0.447	0.111	699
Amount in Budget Appropriations$_{t-1}$	91444.5	41921.8	699
Change in Budget Appropriations$_{t-1}$	7254.02	8827.62	699
House Commerce Committee ADA Median$_t$	48.889	15.343	699
House Commerce Committee Chairmen ADA$_t$	205.648	46.516	699
House Telecom. & Finance Subcommittee ADA Median$_t$	46.974	14.219	699
House Telecom. & Finance Subcommittee Chairmen ADA$_t$	244.914	64.441	699
House Appropriations Committee ADA Median$_t$	49.423	14.705	699
House Appropriations Committee Chairmen ADA$_t$	116.378	65.165	699
House Appropriations Subcommittee ADA Median$_t$	50.053	22.155	699
House Appropriations Subcommittee Chairmen ADA$_t$	174.099	66.623	699
Senate Commerce/Science/Transportation Com. ADA Median$_t$	43.520	9.404	699
Senate Commerce/Science/Trans. Com. Chairmen ADA$_t$	148.888	45.506	699
Senate Communications Subcommittee ADA Median$_t$	43.436	10.900	699
Senate Communications Subcommittee Chairmen ADA$_t$	175.833	84.259	699
Senate Appropriations Committee ADA Median$_t$	52.247	11.625	699
Senate Appropriations Committee Chairmen ADA$_t$	146.300	82.060	699
Senate Appropriations Subcommittee ADA Median$_t$	59.959	12.334	699
Senate Appropriations Subcommittee Chairmen ADA$_t$	126.172	64.808	699
Johnson Dummy$_t$	0.040	0.196	699
Nixon Dummy$_t$	0.092	0.289	699
Ford Dummy$_t$	0.077	0.267	699
Carter Dummy$_t$	0.122	0.327	699
Reagan Dummy$_t$	0.296	0.457	699
Bush Dummy$_t$	0.272	0.445	699
Clinton Dummy$_t$	0.102	0.302	699
Presidential Partisan Control Dummy$_t$	0.781	0.414	699
Ratio of AT&T Court Victories in Total Federal Court Cases$_t$ (%)	45.371	8.729	699

<Note> t = each year

Time Period II (1965-1983)

Political Institutions Variable	Mean	St.Dv.	N
Previous adjudicative rule-making FCC Decisions$_{t-1}$(%)	46.753	10.718	284
FCC Personnel$_t$	2006.9	226.3	284
FCC Conservatism Mean$_t$	0.465	0.074	284
Amount in Budget Appropriations$_{t-1}$	52814.4	20783.1	284
Change in Budget Appropriations$_{t-1}$	4246.21	2278.09	284
House Commerce Committee ADA Median$_t$	39.636	17.815	284
House Commerce Committee Chairmen ADA$_t$	167.641	42.345	284
House Telecom. & Finance Subcommittee ADA Median$_t$	43.029	18.556	284
House Telecom. & Finance Subcommittee Chairmen ADA$_t$	193.891	69.886	284
House Appropriations Committee ADA Median$_t$	34.553	10.219	284
House Appropriations Committee Chairmen ADA$_t$	57.835	48.792	284
House Appropriations Subcommittee ADA Median$_t$	26.658	14.434	284
House Appropriations Subcommittee Chairmen ADA$_t$	116.303	66.069	284
Senate Commerce/Science/Transportation Com. ADA Median$_t$	39.359	7.678	284
Senate Commerce/Science/Trans. Com. Chairmen ADA$_t$	166.183	56.261	284
Senate Communications Subcommittee ADA Median$_t$	36.461	9.268	284
Senate Communications Subcommittee Chairmen ADA$_t$	133.056	76.143	284
Senate Appropriations Committee ADA Median$_t$	42.988	10.563	284
Senate Appropriations Committee Chairmen ADA$_t$	78.940	72.966	284
Senate Appropriations Subcommittee ADA Median$_t$	47.986	11.689	284
Senate Appropriations Subcommittee Chairmen ADA$_t$	118.373	77.879	284
Johnson Dummy$_t$	0.099	0.298	284
Nixon Dummy$_t$	0.225	0.419	284
Ford Dummy$_t$	0.190	0.393	284
Carter Dummy$_t$	0.299	0.459	284
Reagan Dummy$_t$	0.187	0.390	284
Bush Dummy$_t$	0	0	284
Clinton Dummy$_t$	0	0	284
Presidential Partisan Control Dummy$_t$	0.711	0.454	284
Ratio of AT&T Court Victories in Total Federal Court Cases$_t$ (%)	46.775	13.421	284

Time Period III (1984-1995)

Political Institutions Variable	Mean	St.Dv.	N
Previous adjudicative rule-making FCC Decisions$_{t-1}$(%)	53.686	7.707	415
FCC Personnel$_t$	1850.8	93.7	415
FCC Conservatism Mean$_t$	0.435	0.129	415
Amount in Budget Appropriations$_{t-1}$	117880.5	30716.7	415
Change in Budget Appropriations$_{t-1}$	9312.4	10834.4	415
House Commerce Committee ADA Median$_t$	55.223	9.001	415
House Commerce Committee Chairmen ADA$_t$	231.658	27.444	415
House Telecom. & Finance Subcommittee ADA Median$_t$	49.673	9.356	415
House Telecom. & Finance Subcommittee Chairmen ADA$_t$	279.831	25.586	415
House Appropriations Committee ADA Median$_t$	59.599	6.139	415
House Appropriations Committee Chairmen ADA$_t$	156.441	39.649	415
House Appropriations Subcommittee ADA Median$_t$	66.063	7.265	415
House Appropriations Subcommittee Chairmen ADA$_t$	213.651	25.298	415
Senate Commerce/Science/Transportation Com. ADA Median$_t$	46.367	9.424	415
Senate Commerce/Science/Trans. Com. Chairmen ADA$_t$	137.053	31.337	415
Senate Communications Subcommittee ADA Median$_t$	48.208	9.241	415
Senate Communications Subcommittee Chairmen ADA$_t$	205.106	76.716	415
Senate Appropriations Committee ADA Median$_t$	58.583	7.247	415
Senate Appropriations Committee Chairmen ADA$_t$	192.398	82.060	415
Senate Appropriations Subcommittee ADA Median$_t$	66.469	4.893	415
Senate Appropriations Subcommittee Chairmen ADA$_t$	131.058	53.525	415
Johnson Dummy$_t$	0	0	415
Nixon Dummy$_t$	0	0	415
Ford Dummy$_t$	0	0	415
Carter Dummy$_t$	0	0	415
Reagan Dummy$_t$	0.371	0.484	415
Bush Dummy$_t$	0.458	0.499	415
Clinton Dummy$_t$	0.171	0.377	415
Presidential Partisan Control Dummy$_t$	0.829	0.377	415
Ratio of AT&T Court Victories in Total Federal Court Cases$_t$(%)	44.415	1.864	415

MICHIGAN STATE UNIV. LIBRARIES
31293018128623

THESIS
5
1999



3 1293 01812 8631

LIBRARY
Michigan State
University

PLACE IN RETURN BOX to remove this checkout from your record.
TO AVOID FINES return on or before date due.
MAY BE RECALLED with earlier due date if requested.

DATE DUE	DATE DUE	DATE DUE
0 0 2 9 0 1 DEC 0 3 2001		

1/98 c:/CIRC/DateDue.p65-p.14

THE DYNAMICS OF INSTITUTIONAL CONTROL OVER U.S. FEDERAL TELECOMMUNICATIONS POLICY DECISIONS: THE CASE OF "ADJUDICATIVE RULE-MAKING DECISIONS" REGARDING AT&T ACTIVITIES IN THE ARENA OF LONG-DISTANCE SERVICE REGULATION

VOLUME II

By

Kwangho Sim

A DISSERTATION

Submitted to
Michigan State University
in partial fulfillment of the requirements
for the degree of

DOCTOR OF PHILOSOPHY

Department of Political Science

1999

❑ FCC REGULATOR VARIABLES

In the regulatory arena of the U.S. long-distance service industry, the main regulator is the Federal Communication Commission (FCC) by which adjudicative rule-making decisions regarding long-distance telecommunications service matters are made. In this study, such policy decisions were measured with a dichotomous dependent variable as previously mentioned. Among the regulator variables measuring the influence of the federal agency itself on the decisions are: (i) Previous Adjudicative Rule-Making Decisions, (ii) FCC Personnel or Employment as a measure of the agency's resources, and (iii) FCC Conservatism Mean as a measure of bureaucratic ideological preferences.

➡ **General Hypothesis G.F[242]: The FCC regulator variables are significant predictors of the FCC's adjudicative rule-making decisions regarding AT&T activities in the long-distance telecommunications service market.**

X9 = Previous Adjudicative Rule-Making Decisions (Y_{t-1})

The FCC granted or denied the petitions or complaints filed by AT&T and/or OCCs/public to remove monopolistic or unlawful activities in the U.S. long-distance telecommunications service market. The decision to grant (coded 1) or deny (coded 0) AT&T's petition(s) was used to construct a dichotomous dependent variable (Y_t) for the

[242] 'G' stands for governmental (or political) institution variables and 'F' for the FCC regulator variables.

model as previously indicated. Risk-averse federal bureaucrats in the FCC will seldom take action much different from the decision cases precedent in the same kind of long-distance telecommunication issues explored in this study.

As decisions in favor of AT&T accumulate, the federal regulator (i.e., the FCC) is expected to narrow the range of permissible behavior for OCCs/public by granting AT&T's petitions. The annual mean of policy decisions regarding AT&T interest (or "ratio of grant to deny AT&T petitions") in the previous year was used to measure decision precedence using a lagged dependent variable (Y_{t-1}), and the following hypothesis is estimated.

➡ **<u>Hypothesis G.F1</u>: A lag on the dependent variable (Y_{t-1}) is a significant predictor of the current FCC's adjudicative rule-making decisions regarding AT&T's activities in the long-distance telecommunications service market. The presence of FCC decision precedence in favor of AT&T results in an increased probability that the FCC will grant AT&T's petition(s) in the current year, too.**

X10 = FCC Personnel$_t$ (or Employment by the FCC$_t$)

Agency resources are important because they indicate the ability of bureaucrats to carry out their public policy missions. Employment in the FCC is considered as one of agency resources. Another important agency resource that can influence the agency's policy decisions may be the amount of budget appropriated by Congress. In the study, the budget appropriation for the FCC is considered as a variable of the congressional



influence variables as later presented.

For this study, a variable of 'FCC Personnel' in the regulatory agency was measured as thousands of full-time FCC employees per year, from 1965 to 1995. Alternatively, the total number of employees in the Common Carrier Bureau (CCB) within the FCC, which is mainly in charge of long-distance telecommunications service matters, may be measured to assess its effects on the FCC's adjudicative rule-making decisions.

According to Teske (1991), higher regulatory budgets can enlarge analytical capacity by employing many regulatory staff members who are handling consumer complaints and monitoring any unfair or monopolistic services in the telecommunications market. Thus, he argued that regulators with higher employment of regulatory staffs (derived from higher budgets) tend to allow more competitive entry in the telecommunications market. Accordingly, a large number of FCC personnel may indicate that many regulatory staff members are handling consumer complaints and monitoring any unfair or monopolistic long-distance service activities of the regulated dominant firm, AT&T. Hence, the following hypothesis was derived to be estimated.

➡ **Hypothesis G.F2: A decrease in the FCC's personnel is more likely to cause an increased probability that the FCC will grant AT&T's petition(s), because the FCC may lack monitoring capacity to check unfair or monopolistic long-distance service activities by the regulated interest group, AT&T.**

X11 = FCC Conservatism Mean$_t$

Agency ideology is another important factor because it may explain why some petitions or requests filed by AT&T or OCCs/public are granted by the FCC, while other petitions or requests are denied. In the study, political conservatism was measured as the annual percentage of Republican Commissioners among the total Commissioners on the FCC from 1965 to 1995. If this measure of conservatism predicts the FCC's adjudicative rule-making decisions regarding long-distance telephone service matters, then regulator ideology may be deemed important to understanding the federal telecommunications policy-making regarding the activities of AT&T in the market. According to the case study of *Inter-University Consortium on Political and Social Research* (1984), throughout the historical period, the Democratic Party is considered liberal and the Republican Party is considered conservative.

Teske (1990) showed empirical evidence that Republicans are more likely to favor the interests of the regulated firms by opposing competition in the telecommunications industry, while Democrats are more likely to favor consumers by allowing competitive entry into the telecommunications market. However, we must recognize that it is not easy and may be irrelevant to trace a 'conservatism/liberalism' distinction among the FCC Commissioners to 'pro-business/anti-business or 'pro-regulation/anti-regulation' positions. Nevertheless, adopting Teske's argument in my study, I assume that the FCC Republican Commissioners are expected to sustain the status quo of regulation by opposing policy decisions toward more competitive entry into the long-distance telecommunications service market, thereby granting more AT&T's than OCCs'

petitions, while the FCC Democratic Commissioners are more likely to favor more competitive market setting for consumers by opposing the petitions by the AT&T Corp. which wants to sustain its monopolistic position in the long-distance telecommunications service market.

➡ **Hypothesis G.F4: The higher political conservatism among the FCC Commissioners (that is, an increase in the annual percentage of Republican Commissioners) increases the likelihood that the FCC will make decisions in AT&T's favor by granting more of AT&T's than OCCs' petition(s).**

❑ CONGRESSIONAL INFLUENCE VARIABLES

Federal legislators formally control regulatory agencies through budget appropriations. In addition, federal legislators indirectly oversee the activities of regulatory agencies through their political preferences (e.g., liberalism or pro-consumerism).

According to the *FCC Reports* and *FCC Records*, in the House and Senate, the relevant authorization and appropriation committees and subcommittees intervened in the federal long-distance telecommunications service decisions by directly conducting surveillance of the federal regulatory agency (i.e., the FCC) and indirectly pressuring federal regulators over the entire history of the U.S. telecommunications industry

including long-distance service market.[243] Hence, my general hypothesis regarding congressional influence on FCC decisions is as follows:

➧ **General Hypothesis G.C[244]: The congressional variables are significant predictors of the FCC's adjudicative rule-making long-distance service policy decisions.**

Budgetary Control

Many studies on controlling the bureaucracy have found that congressional control over agency budgets is a significant instrument of political influence in regulatory decision making (see, e.g., Weingast and Moran 1983; Bendor and Moe 1985; McCubbins 1985; Calvert, McCubbins, and Weingast 1989; Wood and Waterman 1991, 1993; Wood and Anderson 1993; and Carpenter 1996).

---

[243] In the House of Representatives, the relevant authorizations committees and subcommittees which directly or indirectly intervened in the FCC policy decisions during the period from 1965 to 1995 were: *House Interstate and Foreign Commerce Committee* (1965-1980), *House Energy and Commerce Committee* (1981-1994), and *House Commerce Committee* (1995); *House Communications and Power Subcommittee* (1965-1974), *House Communications Subcommittee* (1975-1980), *House Telecommunications, Consumer Protection & Finance Subcommittee* (1981-1986), and *House Telecommunications & Finance Subcommittee* (1987-1995). In the Senate the following authorizations committees and subcommittees intervened in the FCC policy-making: *Senate Commerce Committee* (1965-1976) and *Senate Commerce, Science & Transportation Committee* (1977-1995); *Senate Communications Subcommittees* (1965-1995). During the period from 1965 to 1995, the relevant House and Senate appropriations committees and subcommittees which appropriated the FCC's annual budgets were: *House Appropriations Committee* (1965-1995); *House Subcommittee on State, Justice, Commerce, the Judiciary and Related Agencies* (1965-1980) and *House Subcommittee on Commerce, Justice, State, the Judiciary and Related Agencies* (1981-1995); *Senate Appropriations Committee* (1965-1995); *Senate Subcommittee on State, Justice, Commerce, the Judiciary and Related Agencies* (1965-1982) and *Senate Subcommittee on Commerce, Justice, State, the Judiciary and Related Agencies* (1983-1995). *See* FCC Reports. Vol. 38 (1965); FCC Reports, Second Series. Vol. 1 (1965) through Vol. 104 (1986); and FCC Records. Vol. 1 (1986) through Vol. 11 (1996).

[244] 'G' still stands for governmental (or political) institutions variables and 'C' for the congressional

In particular, indicating that the causal mechanism of such budgetary influence in federal regulation is unclear, Carpenter (1996) tested two contrasting theories: whether budgetary manipulations influence agencies by imposing resource constraints (*resource control model*) or by transmitting powerful political signals to the agency (*signaling model*). The *resource control model* (also called the *aggregate production model*) holds that the appropriations committees can limit agency budgets to decrease the ability of agencies to respond behaviorally in the way the elected authorities do not wish and also can provide more agency budgets to boost agencies' activities in many aspects. This *aggregate production model* of budgetary influence implies that the level of agency activity can be modeled as a function of its 'current budget' and control variables. However, his analysis showed that the *resource control model* does not offer robust prediction over long periods.

Meanwhile, the *signaling model* suggests that the control over regulatory programs exercised by elected authorities through agency budget changes may best be characterized as signaling influence. That is, Carpenter shows that a positive change in the FCC's budget signals congressional approval of FCC behavior while a budget decrease signals congressional disapproval of the agency behaviors, so that the agency needs to change its approach. Thus, such congressional signaling to administrative agencies is usually represented with a *serial updating model*, in which agency activity is a function of last period's agency activity, the 'change in the budget,' and control variables.[245] This model implies that the entire impact of the signal sent by the 'budget

---

variables.

[245] This *serial updating model* may resemble my whole statistical model for my study of the FCC since I am

change' is absorbed immediately. However, the regulatory agencies may react to some weighted function of budget changes over the past several years. Thus, assuming that a continuous updating process where the weight attached to past budget changes declined exponentially over time, and noting that time required for a signal to be reflected in agency actions may depend on internal layers of hierarchy, he developed a *cascade processing model* where agency behavior is regressed on the term of the sum of 'current and past budget changes' with each term in the series weighted by the gamma function with levels of internal hierarchy.

Hence, by using data for two different FDA activities (food inspections and sampling, during 1938-90) and three different FCC activities (broadcast inspections, ship radio violation notices, and broadcasting licensing, during 1933-90), Carpenter showed that the casual mechanism by which budget appropriations affect agency policy involves signaling approval or disapproval from congressional committees to the agencies rather than resource control. He found that yearly 'budget changes' carry powerful political signals from elected authorities to the regulatory agencies, and regulatory agencies respond to the cumulative effect of signals through 'budget changes' with greater weight attached to more recent signals.[246] In short, his analysis suggests that when elected authorities transmit powerful political signals through the agency budget shifts, regulatory agencies respond to these signals in a way that might provide for political control. Especially, it was noted that a 'change in the annual budget appropriation' is an important

---

considering the FCC's previous order-making decisions (Y_{t-1}), the change in the FCC budget appropriations, and other many variables as independent variables for my study.

[246] His analysis supports his *cascade processing model*, a developed model of *signaling model* of budget control over agency.

measure of congressional approval or disapproval of agency policy making.

Likewise, for this study of the FCC, I first test the effect of "amount" of annual FCC budget appropriation in the previous year ($Budget_{t-1}$) upon FCC policy decisions to examine whether the resource control model explains FCC policy-making. Simultaneously, I consider his main finding on 'signaling' of budgetary control over the agency by testing the influence of "change" in the annual FCC budget appropriated by Congress (i.e. a change in budget from year t-1 to year t: $\Delta Budget_t = Budget_t - Budget_{t-1}$) on FCC policy decisions over the study period from 1965 to 1995 as follows:

X12 = Amount in Budget Appropriations for the FCC in the Previous Year (or $Budget_{t-1}$) (1992 = $1.00)

X13 = Change in Budget Appropriations for the FCC (or $\Delta Budget_t = Budget_t - Budget_{t-1}$) (1992 = $1.00)

Alternatively, the budget appropriation for the Common Carrier Bureau (CCB), which is mainly in charge of long-distance service industry matters within the FCC, among the total amount of FCC budget appropriation in the previous year (CCB $Budget_{t-1}$) may be measured to assess its effect on the FCC's adjudicative rule-making decisions in the current year. Simultaneously, change in the CCB budget appropriations (i.e., a change in the CCB budgets from year t-1 to year t: ΔCCB $Budget_t$ = CCB $Budget_t$ – CCB $Budget_{t-1}$) may be measured to assess its effect upon FCC policy decisions.

For the study, the FCC budget appropriations were measured in thousands of real dollars (1992 = $1.00) by fiscal year, from 1965 to 1995. The nominal dollar amounts

were available in annual reports of the FCC and the U.S. General Accounting Office and were corrected for inflation with the Consumer Price Index (CPI).

The FCC's budget is assigned by federal legislators who must express the protection of consumer interests to be reelected, and the federal agency with large budget appropriations must handle consumer complaints and monitor any unfair or monopolistic long-distance services not to be inflicted by strong oversight by Congress. Hence, the more money (+Budget) the federal regulator has in the previous year, the better protection it can provide in the current year to the competitive long-distance service market, by denying AT&T's petition(s) regarding long-distance service activities. Likewise, a positive change (+ΔBudget) in the FCC budget appropriation signals that the federal regulator needs to take its approach to remove monopolistic or unfair activities by rejecting the petition(s) by AT&T whose behaviors were always criticized as unlawful or monopolistic by many public or business interest groups in the long-distance telecommunications service market. In contrast, a decrease in the absolute amounts or changes of the FCC budget appropriation (−Budget or −ΔBudget) is more likely to result in an increased rate in AT&T petition(s) granted by the FCC.

However, in spite of an increase in the agency budget (absolute amount or change), if the FCC still serves the vested interest of AT&T by granting its petition(s), it may confirm the capture of federal long-distance service policy-making by the regulated firm. Accordingly, the following two hypotheses were considered to be estimated.

➧ **<u>Hypothesis G.C1</u>: An increase (+Budget) in the FCC's budget resources in the previous year is more likely to lead to a lower probability that the FCC will**

grant AT&T's petition(s) in the current year, because it may have increased monitoring capacity to check unfair or monopolistic long-distance service activities by the regulated interest group, AT&T. Meanwhile, a decrease (–Budget) in the FCC's budget resources is more likely to lead to a higher probability that the FCC will grant AT&T's petition(s), because it lacks monitoring capacity to check unlawful or monopolistic behaviors by AT&T in the U.S. long-distance telecommunications service market.

➧ **Hypothesis G.C2: A positive change in the FCC budget appropriation (+ΔBudget) is more likely to signal that the FCC will need to reject AT&T's petition(s), because it may have large monitoring capacity to check unfair or monopolistic long-distance service activities by the regulated interest group, AT&T. Meanwhile, a negative change in the FCC budget appropriation (–ΔBudget) is more likely to signal that the FCC may grant AT&T's petition(s), because it may also lack monitoring capacity to check unlawful or monopolistic behaviors by AT&T in the U.S. long-distance telecommunications service market.**

Political Preference of Each Congressional Subsystem

The institutional structure of Congress fragments legislative power into separate jurisdictions of authority: committees, subcommittees, and chairmen. Many legislative decisions are shaped by bargaining behind the scenes. Formal decision making by

legislatures cannot often reveal negotiation and compromise that are not expressed officially. Fortunately, the informal oversight activities of legislators can be measured through revealed 'political preferences.' The beliefs of legislators about themselves and the policy issue they stand for have an effect on their expectations of bureaucrats (Harris 1996: 205).

In order to assess the effect of Congress on the FCC's adjudicative rule-making decisions, first, the legislators' political preferences are considered at the three hierarchical subsets (except chambers): committees, subcommittees, and chairmen, because legislative influence over regulatory decisions is expected from narrow rather than wide representation in the legislature.

In the House and Senate, both relevant authorization and appropriation 'committees' are expected to have conducted surveillance of the federal regulatory agency (i.e., the FCC) over the entire history of the U.S. telecommunications industry including the long-distance telephone market. As of 1995, in the House of Representatives, the *Committee of Commerce* is the overseeing body, and in the Senate, the FCC falls under the jurisdiction of the *Committee on Commerce, Science, and Transportation.*[247]

Meanwhile, more legislators' influence over the FCC's adjudicative rule-making decisions may be expected from the 'subcommittees' rather than the committees on telecommunications, because congressional subcommittees usually have more influence on substantive decisions than standing committees. However, the ideological measures

[247] For the reference of the relevant authorizations and appropriations committees and subcommittees in the House and the Senate, *see* no. 243.

for the subcommittees correspond to those used for the standing committees in the chambers. As of 1995, in the Senate the FCC falls more specially under the *Subcommittee on Communications*, while in the House the *Subcommittee on Telecommunications and Finance* takes direct responsibility on the FCC.

In addition, the 'chairmen' of the congressional committees and subcommittees allegedly wield great influence over FCC policy process. Because of institutional fragmentation and structural characteristics, power is placed in the hands of key congressional individuals, which insulates the decision-making processes from the congressional majorities.

In this study, the legislators' political preferences are measured with an ideological index: Americans for Democratic Action (ADA: 'liberalism ratings').[248] This ideology variable was thus constructed to measure legislators' political preferences according to the three hierarchical subsets in the structure of Congress: committees, subcommittees, and chairmen. Hence, for the study, first, the 'median scores'[249] of ADA are calculated for the 'committees' and 'subcommittees' with regulatory oversight and appropriations jurisdiction in each chamber. Then, the 'raw scores' of ADA are measured for the 'chairmen' of the (authorization and appropriations) committees and

---

[248] All ADA scores for each congressperson over the study period were obtained from the data reported in Sharp (1988 & 1997), and then calculated and summed up for relevant committees, subcommittees, and chairmen.

[249] The arithmetic 'mean' and 'median' are the more commonly used measures of central tendency, a value around which the observations tend to cluster and which typifies their magnitude. The 'mean' is the arithmetic average of variates, while the median is the average of position. However, the mean is influenced by extreme values to a much greater degree than the median. Generally, the 'median' is a better measure of central tendency than the mean when there are some extremely large or small observations. I found that over the period from 1965 to 1995, the ADA ratings of federal legislators range from 0 to 100. Thus, I use the median scores of the ADA ratings to lessen influences of extreme values (e.g., 0 or 100). For the comparison between the mean and the median, *see* Lapin (1993: 65-72).

subcommittees in each chamber.[250]

For the study, the following congressional political ideology indices were considered as legislator variables that could make some impacts upon FCC policy decisions over the period from 1965-1995.

X14 = Americans for Democratic Action (ADA) Scores

Multiple ways of congressional influence over agency decisions can be measured. Indices of congressional political preferences are constructed by special interest groups (e.g., ADA, CFA, COPE, etc.), who rate the roll call voting records of legislators (Congressional Quarterly 1972-95; Sharp 1988, 1997). The research on roll call voting scores as measures of political ideology in Congress has found that the indices such as ADA and COPE are not only reliable and valid (Poole 1981), but that the indices are also highly stable over time (Herrera, et al. 1995).

Liberalism is measured by the Americans for Democratic Action (ADA). Many previous studies of congressional influence over regulatory decisions have used the ADA scores to measure political preferences of liberalism (see, e.g., Weingast and Moran 1983; Moe 1985; Calvert, et al. 1987; Rothenberg 1994; and Harris 1996). For this study, specific ADA variables were also selected as indicators of congressional influence on FCC's adjudicative rule-making decisions as follows:

---

[250] In this study, the chairmen's ADA scores are weighted three times more heavily than the committee and subcommittees medians. This weighting scheme is arbitrary, but at least gets at the importance of committee and subcommittee chairmen. Moe (1985) and Rothenberg (1994) have applied this weighting scheme to congressional committee and subcommittee chairs' ADA scores, too.

House ADA Scores

⇒ **$X_{14.1}$: House Commerce Committee ADA Median$_t$**

⇒ **$X_{14.2}$: House Commerce Committee Chairmen ADA$_t$**

⇒ **$X_{14.3}$: House Telecommunications & Finance Subcommittee ADA Median$_t$**

⇒ **$X_{14.4}$: House Telecom. & Finance Subcommittee Chairmen ADA$_t$**

⇒ **$X_{14.5}$: House Appropriations Committee ADA Median$_t$**

⇒ **$X_{14.6}$: House Appropriations Committee Chairmen ADA$_t$**

⇒ **$X_{14.7}$: House Appropriations Subcommittee ADA Median$_t$**

⇒ **$X_{14.8}$: House Appropriations Subcommittee Chairmen ADA$_t$**

Senate ADA Scores

⇒ **$X_{14.9}$: Senate Commerce/Science/Transportation Committee ADA Median$_t$**

⇒ **$X_{14.10}$: Senate Commerce/Science/Transportation Committee Chairmen ADA$_t$**

⇒ **$X_{14.11}$: Senate Communications Subcommittee ADA Median$_t$**

⇒ **$X_{14.12}$: Senate Communications Subcommittee Chairmen ADA$_t$**

⇒ **$X_{14.13}$: Senate Appropriations Committee ADA Median$_t$**

⇒ **$X_{14.14}$: Senate Appropriations Committee Chairmen ADA$_t$**

⇒ **$X_{14.15}$: Senate Appropriations Subcommittee ADA Median$_t$**

⇒ **$X_{14.16}$: Senate Appropriations Subcommittee Chairmen ADA$_t$**

As previously indicated, the case study of the *Inter-University Consortium on Political and Social Research* (ICPSR) (1984) showed that throughout the historical period, the Democratic party is considered liberal and the Republican party is considered

conservative. Terry Moe's (1985) study of the NLRB's adjudicative decisions found that congresspersons with high ADA scores tend to be pro-labor than pro-business. It may suggest that the more liberal chairs and members of the congressional committees and subcommittees with jurisdiction over the NLRB at least protected and favored more the interests of American consumers or the public than the regulated firms. Paul Teske (1990) empirically showed that conservative (Republican) congressmen are more likely to favor the interests of the regulated firms by opposing competition in the telecommunications industry, while liberal (Democratic) congressmen are more likely to favor consumers by allowing competitive entry into the telecommunications market.

In addition, according to the ADA ratings for federal congresspersons who had any prior experience of serving on the telecommunications committees or subcommittees over the study period, presented in *Directory of Congressional Voting Scores and Interest Group Ratings* (1988 & 1997), Democratic congresspersons appeared to be much more liberal that Republican congresspersons, as the ICPSR (1984) showed. The viewpoint that more liberal or Democratic congressmen would favor policy changes for American consumers and OCCs while less liberal or Republican congressmen would favor policy-making for the dominant business group (that is, AT&T) is also supported by the actual data on roll-call votes (for the period from 1965-1995) by federal congresspersons in relation to long-distance telecommunications bills, presented in *Congressional Quarterly* (for 1965-1995). The following are three actual examples. First, in 1984 a bill ("S1660") introduced by Senator Goldwater (R-Arizona) to impose an access charge on residential telephone consumers was favored by 56% of the Republicans, supporting President Reagan's position. On the other hand, only 28% of the Democrats voted for the bill while

a clear majority of 72% Democrats voted against it (Congressional Quarterly 1984: 2-S). This indicates that more liberal Democrats were favoring policy-making for American consumers. Second, in 1992 a bill ("HR3490") introduced by Representative Swift (D-Washington) to direct the FCC to regulate the 900 long-distance (i.e., 900 pay-per-call) telephone service market, which had been dominated by AT&T, to protect consumers from fraud, was passed by a majority of congresspersons. However, 32 Republicans voted against the bill, while no Democrats voted against it, reflecting the general Democrats' political preference for consumer interests (Congressional Quarterly 1992: 4-H). Third, in 1995 a bill ("HR 1555") was introduced to adopt the rule ("H Res 207") to rewrite the nation's telecommunications laws, targeting the removal of some of the regulation on the dominant long-distance service carriers, especially AT&T. 87% of the Republicans favored the bill, but 33% of the Democrats voted for the bill, while a majority of 67% Democrats voted against it (Congressional Quarterly 1995: H-176). These examples support the arguments of ICPSR, Moe and Teske, and thus my assumption.

Hence, for this study of FCC policy-making, considering the arguments of ICPSR (1984), Moe (1985), Teske (1990) and the actual roll-call voting casts of the relevant congresspersons, I hypothesize that over the period from 1965-1995, more liberal congresspersons with higher ADA ratings are expected to more likely to vote for policy changes for American consumers and OCCs, thereby leading the federal regulator (i.e., the FCC) to be more likely to reject the petition(s) by the dominant carrier, AT&T Corp., which had been frequently criticized to take unfair or monopolistic activities in the long-distance telecommunications service market, while less liberal congresspersons with

lower ADA scores are expected to more likely to favor the interests of the regulated dominant carrier, AT&T, thereby leading an increased probability that the FCC will grant AT&T's petition(s) regarding long-distance telecommunications service matters.

Thus, the following hypothesis was derived for the above sixteen congressional variables indicating ADA ratings of the chairs and members of the congressional authorization and appropriations committees and subcommittees with jurisdiction over the FCC.

➡ **<u>Hypothesis G.C3</u>: An increase in the ideological index of liberalism ratings (ADA) in each congressional subset (that is, committees, subcommittees, or chairmen) results in policy-making for OCCs and American consumers by decreasing the rate in AT&T's petition(s) granted by the FCC. Conversely, congressional subsets with lower ratings of liberalism (ADA) are more likely to favor the regulated dominant interest group (AT&T) by resulting in an increased rate in AT&T's petition(s) granted by the FCC.**[251]

However, it must be recognized that it is not easy to trace a 'conservatism/ liberalism' distinction among federal legislators to 'pro-business/anti-business or 'pro-regulation/anti-regulation' positions. Furthermore, it is not easy to clearly trace Republicans/Democrats to pro-AT&T/anti-AT&T positions, because according to *Congressional Quarterly*, both conservative and liberal congresspersons were often

[251] Alternatively, after I technically transform all the ADA scores into the minus quantities, I will be able to hypothesize that federal legislators with high ratings of '*minus* ADA' are more likely favor the regulated

presenting the same preference for more competition in the market. It is also because each congressperson often acted independently by voting for or against bills regarding the specific telecommunications matters, even if such competitive policy-making would be more beneficial for AT&T. Hence, another possible hypothesis is that an increase or decrease in the ideological index of liberalism ratings (ADA) in each congressional subset (that is, committees, subcommittees, or chairmen) will not result in a consistent FCC policy-making for OCCs and American consumers or for the regulated dominant interest group (AT&T).

➧ **Hypothesis G.C4: The federal legislators will independently act to judge the specific long-distance telecommunications matters, no matter whether their political preferences are "liberalism" or "conservatism." That is to say, an increase in the ideological index of liberalism ratings (ADA) in each congressional subset (that is, committees, subcommittees, or chairmen) does not necessarily decrease the likelihood that AT&T's petition(s) will be granted by the FCC. Likewise, a decrease in liberalism (ADA) among federal legislators in each congressional subset does not necessarily increase the likelihood that the FCC will grant AT&T's petition(s) in its policy decisions.**

---

interest group (AT&T) by resulting in an increased rate in the AT&T's petition(s) granted by the FCC.

❑ PRESIDENTIAL POWER VARIABLES:

Although the FCC is an independent regulatory commission that was organized under the U.S. Constitution as an arm of Congress, the President can influence agency public policy, including FCC policy decisions regarding the U.S. long-distance telecommunications service matters, through his own leadership, partisanship, or appointments/reappointments, because the political environment within the executive branch of government centers naturally upon the President and the chain of command runs into the White House.

For this study, in relation to the FCC's adjudicative rule-making decisions regarding AT&T's activities in the U.S. long-distance telecommunications service market, I assume that presidential influence may indicate the power to persuade the FCC Commissioners as bureaucrats to follow presidential regulatory directives with 'presidential nominations' to the FCC. The following general hypothesis to be estimated is derived from presidential power variables.

➧ **<u>General Hypothesis G.P</u>[252]: President variables are significant predictors of the FCC's adjudicative rule-making decisions. The American Presidents are expected to influence FCC policy decisions through presidential appointments and reappointments.**

[252] 'G' still stands for governmental (or political) institution variables and 'P' for the presidential power variables.

X15 = Presidential Appointment Power$_t$

The President is empowered by the U.S. Constitution to nominate the members of the Federal Communications Commission, subject to the advice and consent of the Senate. Both the nomination and confirmation processes involve exercises in presidential leadership. Through their selection of the FCC Commissioners including the FCC Chair or Chairman (the FCC still officially uses the term Chairman),[253] the American Presidents' political philosophy regarding telecommunications regulation is expected to have important consequences for adjudicative rule-making decisions regarding long-distance telecommunications service matters.

The Commissioners of the FCC are nominated by the President and serve five-year terms of office.[254] The FCC Chair is designated as chief executive officer by the President among the tenured Commissioners, and his or her term of office seldom coincides with presidential elections. The Commission--the body of Commissioners making up the FCC--holds regular meetings and special meetings called by the Chairman, to consider items prepared by the staff for a weekly agenda of business. The FCC Chairman presides over all FCC meetings, coordinates and organizes the work of the Commission, and represents the Commission in legislative matters and in relations with other government agencies. The Chairman also delegates management and

[253] According to Hilliard (1991) and Flannery (1995), among the FCC Commissioners including the Chairmen who served over the period from 1965 to 1995, 8 was appointed or/and reappointed by President Johnson, 14 by Nixon, 9 by Ford, 6 by Carter, 10 by Reagan, 6 by Bush, and 10 by Clinton.

[254] When the FCC began operations on July 11, 1934, the independent agency was comprised of seven Commissioners, appointed by the President with the advice and consent of the Senate. However, in 1983, the number of FCC Commissioners was reduced to five.

administrative responsibilities to the Managing Director, and other functions to staff units and bureaus and to committees of the Commissioners. The FCC Commissioners including the Chairman do not report to the White House, but all appointees to any position owe a political debt to the President who appointed/reappointed them (Hilliard 1991: 6-11).

The data on presidential appointments/reappointments to the FCC were obtained from relevant literature and documents (i.e., Hilliard 1991; Flannery 1995; the FCC's official web site[255]). In the period from 1965 through 1995, the Presidents who sequentially took office in the White House are Johnson (D), Nixon (R), Ford (R), Carter (D), Reagan (R), Bush (R), and Clinton (D). However, it is not easy and may be irrelevant to trace Republican/Democratic Presidents to general distinctions of anti-regulation/pro-regulation or pro-business/anti-business. Instead, it may be more relevant to specify the regulatory policy directions of the American Presidents regarding their appointment/reappointment practices for the FCC Commissioners.

In the history of telecommunications regulation, the major philosophical change in the FCC is said to be the move from regulation to deregulation. The 1960s under the Democratic Kennedy-Johnson administrations saw the beginnings of FCC implementation of the "public interest, convenience, and necessity" provision of the *1934 Communication Act*, with citizen groups encouraged to become involved in the FCC's typical adjudicative case-by-case decision-making process (e.g., licensing and renewal process), and with stronger rules and regulations to serve their community's needs.

[255] Refer to **http://www.fcc.gov**.

However, this 'regulatory philosophy for public interest' began to fade away when the Republican Nixon-Ford administrations appointed Richard Wylie (R) as the FCC chair, who introduced what was termed 're-regulation' during his tenure from 1972 into 1977. This process was accelerated under Democratic President Carter's FCC chair, Charles Ferris, who in his tenure from 1977 into 1981 moved the FCC further away from the heyday of 'public-interest regulation' toward what many critics regard as the 'pro-industry, anti-consumer deregulation' of the following decade (Hilliard 1991). Many studies have indicated that in the 1980s, the Republican Reagan administration championed policy approaches designed to free, facilitate, and stimulate markets (see, e.g., Green 1987; Niskanen 1988; Himmelstein 1990). President Reagan's marketplace philosophy of extreme deregulation took place under his FCC chair, Mark Fowler, from 1981 into 1987. Virtually all of the pro-consumer regulations of the 1960s and 1970s, noted above, were eliminated. Upon succeeding Reagan, the Republican Bush administration made no fundamental change in deregulatory regulatory policy, but President Bush's FCC chair, Alfred Sikes, during his tenure from 1989 to 1992, seemed to have slowed down the pace toward nonregulation (Hilliard 1991). The Democratic Clinton administration has maintained the deregulatory philosophy in its telecommunications regulation under his FCC chair, Reed Hundt, who began his term in 1993 to act affirmatively to create competitive markets at all levels of the telecommunications industry. This deregulatory, marketplace philosophy was finally expressed in the *Telecommunications Act of 1996*, which was scheduled to create a pro-competitive, deregulatory national policy framework designed to accelerate rapidly private sector development of advanced telecommunications and information

technologies to all Americans by opening all telecommunications markets (e.g., long-distance service carriers, local phone companies, and cable industry) to competition. According to Hundt (1997), since passage of the *1996 Telecommunications Act*, the FCC's role has been to facilitate the competitive market structure that eliminates the need for economic regulation of telecommunications.

Four points are worth noting. First, all six Presidents (except Democratic President Johnson) involved in a partisan change of administration do not seem to have behaved as the general partisan control hypothesis says: Democrats tend to favor consumer or public interest by allowing competition, while Republicans tend to favor the interests of the existent regulated firms by opposing competitive entry into the status quo market. Instead, all the American Presidents (except Johnson), Democrats and Republicans, appeared to pursue a deregulatory political philosophy for competitive regulatory setting through their appointments/reappointments of the FCC Commissioners.

Second, it must be recognized that there is considerable uncertainty and many counterintuitive results in the published research over whether the Reagan presidency actually resulted in deregulatory policy movements or not (see, e.g., Stewart and Cromartie 1982; Yandle 1985; Wood and Waterman 1991). However, according to my data on FCC policy-making (see **Figure 6**), under the deregulatory policy of the Reagan administration in the 1980s, FCC policy decisions in the long-distance service market arena appeared to marginally shift in a pro-AT&T direction.

Third, in the long-distance telecommunications service arena, OCCs as well as American public or citizens have been 'consumers' of AT&T to some extent in light of the fact that most of them did directly or indirectly use or borrow or resell AT&T's

services and facilities for their long-distance service provision and management.

Fourth, interestingly, the American Presidents' on-going deregulatory philosophy may have led to a more advantageous, favorable regulatory system for the long-term dominant carrier (that is, AT&T) rather than OCCs or American citizens, although their deregulatory policies were expected to ultimately lead more favorable setting for American consumers. It may be in part because in a more competitive, deregulatory telecommunications setting, AT&T equipped with developed facilities and technologies still could hold its dominant market power in the long-distance telecommunications service market and even in other arenas. For example, in 1985 shortly after its break-up, AT&T carried approximately 133 billion (80%) of the total 167 billion minutes of interstate usage. Over the next eight years, AT&T's market share steadily declined from over 80% to 60%, but it was still the most dominant carrier in the long-distance service market. In addition, its traffic volume grew by about 60% (212 billion minutes), while the total volume of its competitors increased four-fold (138 billion minutes) (Hundt 1994). In 1994, the FCC Chairman, Reed Hundt, pointed out that competitive market settings based on the American Presidents' deregulatory philosophy alone had not been adequate to protect consumers or facilitate OCCs' entry into the market, and thus the FCC would need to pursue the same policy of maintaining close regulatory supervision over the long-distance service arena still dominated by a single service provider, AT&T, while promoting competition. Actually, the U.S. interstate long-distance service market was not workably competitive, and under such incomplete and unstable setting of competition, the FCC's deregulatory policy-making (following the Presidents' deregulatory philosophy) could help AT&T, which had more comparative advantage

rather than OCCs, to sustain its dominant position in the market.

Hence, my assumption is that in the process of appointment and reappointment of the FCC Commissioners, the deregulatory policy philosophy of all six American Presidents, from Nixon to Clinton, is expected to lead to pro-AT&T rather than pro-OCCs or pro-consumer position in the federal long-distance telecommunications service regulatory policy-making (that is, the FCC's adjudicative rule-making decisions). The Democratic Johnson Administration alone is expected to lead pro-OCCs or pro-consumer direction in FCC policy-making as the general partisan control hypothesis indicates.

In this study, to detect the extent of FCC's bureaucratic autonomy over adjudicative rule-making decisions regarding the U.S. long-distance telecommunications service matters, presidential influence (that is, the influence of Presidents' political philosophy carried in the process of their appointments/reappointments of the FCC Commissioners) is measured with dummy variables, which are scored '1' after the President assumes office, which may indicates that the President made his first appointment to the FCC, and '0' before he assumes office or/and after he leaves office. Each variable reflects a President administration's ability to push the federal regulatory agency in a preferred direction from the time of Johnson administration, as conditioned by the cumulative effects of its predecessors. Each presidential coefficient, then, represents a shift in the balance between favoring the regulated firm (pro-AT&T) and favoring consumers or/and other common carriers (pro-OCCs) that the incoming President inherits from his predecessor. Hence, the following dummy variables indicating each presidential influence are considered in the model and a hypothesis to be estimated is derived from the presidential power variables.

⇒ **$X_{15.1}$: Johnson Dummy$_t$**

⇒ **$X_{15.2}$: Nixon Dummy$_t$**

⇒ **$X_{15.3}$: Ford Dummy$_t$**

⇒ **$X_{15.4}$: Carter Dummy$_t$**

⇒ **$X_{15.5}$: Reagan Dummy$_t$**

⇒ **$X_{15.6}$: Bush Dummy$_t$**

⇒ **$X_{15.7}$: Clinton Dummy$_t$**

➡ **<u>Hypothesis G.P1</u>: Through their appointments and reappointments of the FCC Commissioners, presidential administrations from Nixon to Clinton with deregulatory political philosophy are likely to push the federal regulatory agency (i.e., the FCC) to produce a consistent policy-making (i.e., "adjudicative rule-making decision") trend favoring the regulated dominant firm (i.e., pro-AT&T) in the long-distance telecommunications service market, while the Johnson administration alone with regulatory philosophy for public interest is likely to result in a policy-making by the FCC favoring the American public and OCCs (i.e., pro-OCCs) in the federal long-distance telecommunications service market.**

However, I cannot exclude another possibility of presidential influence on FCC policy-making through 'presidential partisanship.' A superficial look from my data (see **Figure 6**) may not completely confirm that there were consistent presidential impacts

(i.e., pro-AT&T policy-making by the FCC during the six presidential administrations from Nixon to Clinton) upon the FCC's adjudicative rule-making decisions. Instead, to some extent, the data may reveal some evidence on the traditional partisan control by the American Presidents over FCC policy-making. Through the period from 1965-1995, the party that controls the White House may be expected to influence the regulatory activities of the executive branch and bureaucracy like the FCC as the general partisan politics suggests: Democrats tend to favor consumer or public interest, while Republicans, who want the status quo in the regulatory system, tend to favor the interests of the dominant regulated firms. Again, it must be recognized that it is not easy and may be irrelevant to trace Republican/ Democratic Presidents to general distinctions of anti-regulation/pro-regulation or pro-business/anti-business. However, Crandall (1991) indicates that a Republican administration was generally hostile to antitrust actions, while antitrust had reached its zenith in the Democratic Johnson administration. He strongly argues that the Republican Nixon and Ford administrations retreated from such antitrust actions and thus the AT&T break-up under the Republican Reagan administration was an exception. By quoting the argument of Steve Coll (1986), he adds that the Republican Reagan administration eventually abandoned the antitrust policy against AT&T, but the AT&T case was concluded by the top two political figures, the assistant attorney general William Baxter and Judge Harold Greene (Crandall 1991: 36-37).

Hence, I am considering the estimation of an alternative hypothesis: the Republican Presidents are expected to favor the interest of the regulated dominant business group, AT&T, while the Democratic Presidents are expected to favor the public/consumer interests. If partisan control of the presidency is important, then it may

indicate the influence of the President on the FCC's adjudicative rule-making decisions over the 31-year period of 1965-1995.

X16 = Presidential Partisan Control Dummy$_t$

➡ **<u>Hypothesis G.P2</u>: A change in presidential administration from Republican to Democrat gives rise to the likelihood of a pro-OCCs or pro-consumer shift in the FCC's adjudicative rule-making decisions, while a change from Democrat to Republican is more likely to produce a shift favoring the regulated dominant firm (i.e., pro-AT&T) in the federal long-distance service policy-making.**

❑ COURT INFLUENCE VARIABLE

Judicial influence over the FCC's long-distance service policy decisions is considered to be one of the significant variables regarding the roles of political institutions in regulatory policy-making process. Judicial review may affect administrative procedure more than policy substance, but judicial influence could be measured recursively with court-appealed decisions.

After the federal regulators deny the petitions (and then the legislators allow the denial in some cases), the applicants could appeal the decision by filing a case with the judiciary. The courts are unique among political institutions in having the right to nullify, alter, or embrace FCC policy decisions in individual cases, and many cases do ultimately end up in the courts. Moreover, the opportunity to appeal cases to the Supreme Court

lends a finality and coherence to the system of courts that Congress' subsystems (i.e., committees or subcommittees) lack, making it difficult for the agency to avoid compliance (Melnick 1983; Moe 1985). However, unlike the Presidents and congressional committees or subcommittees, the courts are entirely reactive, waiting for FCC decisions to reach them on petitions for enforcement or review. They also showed a respect for the FCC's right to interpret its own mandate, and the federal agency shifted and reshifted its policy positions many times over the years from 1965 through 1995 with only infrequent intervention by the courts. Hence, like the American Presidents and congressional subsets (i.e., committees, subcommittees, and chairmen), the courts are clearly in an excellent position to shape FCC policy-making process in the long-distance service arena. Thus, the general hypothesis to be estimated is as follows:

➡ **<u>General Hypothesis G.J</u>[256]: Court influence is a significant predictor of the FCC's adjudicative rule-making decisions regarding AT&T in the U.S. long-distance service matters, because the courts are expected to influence the FCC's current policy decisions through the case precedents.**

X17 = Ratio of AT&T's Court Victories to Total Federal Court Cases$_t$

A reversal by the judiciary of the FCC's decision to deny AT&T's petition(s) sets case precedent for future applicants, strengthening the power of AT&T's interests. If the judiciary grants the appeal of AT&T, then the federal regulator (i.e., the FCC) is expected

to alter its decision-making behavior for subsequent applicants to be consistent with the case precedent. According to the FCC's documents (i.e., the *FCC Reports* and *FCC Records*), during the years from 1965 through 1995, in many cases regarding the long-distance telecommunications service matters involving AT&T and other interest parties including OCCs, the FCC made adjudicative rule-making decisions, simultaneously mentioning the previous specific court decisions. Accordingly, the tendency (pro-AT&T or pro-OCCs/public) of court decisions in the previous year may be a signal from the judiciary that the FCC follows in making decisions in the current year.

For the court influence measure, I use an index that compares the extent to which the FCC is overturned in AT&T's favor with the extent to which it is overturned in favor of OCCs/public in the decisions of the relevant courts (e.g., U.S. Supreme Courts, U.S. Courts of Appeal, and U.S. District Courts), in relation to the FCC's long-distance service matters regarding AT&T, in the previous years. This index is the 'Ratio of AT&T's Court Victories to Total Federal Court Cases' involving AT&T as a plaintiff or a defendant, regarding the long-distance service matters (or the ratio of the number of AT&T's victories over OCCs/public to OCCs/public's victories over AT&T in the federal courts).

In order to form the index, first I cumulated all the federal court cases every year from 1964. This is because according to *Supreme Court Reporter*, *Federal Reporter Second & Third Series*, and *Federal Supplement* which provide all federal court decisions, there were no court cases involving AT&T regarding long-distance

---

[256] 'G' still stands for governmental (or political) institution variables and 'J' for the judiciary (or court) influence variables.

telecommunications matters before 1964. Then I weighted the each court level: the Supreme Court cases are weighted 5, the Court of Appeal review cases 3, and the other trial-level cases 1. This weighting scheme, although admittedly arbitrary, has the virtue of reflecting the court level's importance. Hence, a positive (+) change in the index indicates pro-AT&T court decisions regarding the federal long-distance service policy-making.

The data were obtained from relevant government court reports (i.e., *Supreme Court Reporter*, Vols. 80-117, 1964-1995; *Federal Reporter Second Series*, Vols. 258-999 and *Federal Reporter Third Series*, Vols. 1-66, 1964-1995; and *Federal Supplement*, Vols. 164-931, 1964-1995) on all federal court cases involving AT&T, OCCs, the FCC, the U.S. federal government, and other interest parties regarding the long-distance telecommunications service regulatory matters.

➡ **<u>Hypothesis G.J1</u>: The more pro-OCCs/public are the signals emanating from the courts in the previous years, the more pro-OCCs/public are the FCC's subsequent decisions by rejecting AT&T's petition(s), while the greater the tendency of the courts to overturn the opposite party in favor of AT&T in the previous years, the more pro-AT&T the FCC's subsequent policy-making by granting more AT&T's petition(s).**

Especially, this positive relation of AT&T court victory to FCC policy-making favoring AT&T will appear to be stronger in the early subperiod (1965-1995) before the break-up of AT&T than in the later subperiod (1984-1995) after the event. It is because

AT&T's economic and political power before its break-up was strong enough to influence the FCC Commissioners to make decisions in AT&T favor in ways consistent with pro-AT&T court decisions for the previous years, while the declining AT&T's economic and political power and the appearance of AT&T's various competitors in the more competitive market after the break-up of AT&T resulted in a regulatory setting where the federal regulators could not disregard petitions by various business and public interest groups and thus would not completely follow the pro-AT&T tendency of federal court decision-making in their regulatory policy-making (that is, adjudicative rule-making decisions). Accordingly, the following hypothesis indicating a difference between the court influence on FCC policy-making before and after the divestiture of AT&T is also to be estimated.

➧ **Hypothesis G.J2: It is more likely during the subperiod (1965-1983) before the break-up of AT&T that the more pro-AT&T the court decision-making for the previous years, the more positive the FCC's subsequent policy outcomes favoring AT&T's petition(s). This positive relation of pro-AT&T court decision-making to FCC policy-making favoring AT&T is less significant for the subperiod (1984-1995) after the divestiture of AT&T.**

2-3. CONTEXTUAL IMPACT VARIABLES

The U.S. economic environment could influence the ways in which all the interest groups or/and political institutions related to the federal long-distance service regulation policy-making interacted to pursue positive policy outcomes for their own interests. For the study, I developed the measures of 'macroeconomic conditions' in general and 'telecommunications economic environment' in particular to explore the impacts of contexts upon adjudicative rule-making decisions in federal long-distance telecommunications service regulation. I provide the following **Table 4** showing the mean, standard deviation, and number of observations for these contextual impact variables in all three time periods.

Table 4. Contextual Impact Variables

Time Period I (1965-1995)

Contextual Impact Variable	Mean	St.Dv.	N
Inflation Rate$_{t-1}$ (as the Consumer Price Index$_{t-1}$)	100.299	22.855	699
Unemployment Rate$_{t-1}$	6.489	1.269	699
Gross Domestic Product$_{t-1}$	5242.688	1034.788	699
MTS Producer Price Index$_t$	58.675	26.505	699
WATS Producer Price Index$_t$	50.559	29.304	699
Private Line Service Producer Price Index$_t$	70.323	16.031	699

Time Period II (1965-1983)

Contextual Impact Variable	Mean	St.Dv.	N
Inflation Rate$_{t-1}$ (as the Consumer Price Index$_{t-1}$)	74.265	11.178	284
Unemployment Rate$_{t-1}$	6.783	1.722	284
Gross Domestic Product$_{t-1}$	4113.545	512.624	284
MTS Producer Price Index$_t$	86.788	15.878	284
WATS Producer Price Index$_t$	80.405	21.459	284
Private Line Service Producer Price Index$_t$	83.059	18.211	284

Time Period III (1984-1995)

Contextual Impact Variable	Mean	St.Dv.	N
Inflation Rate$_{t-1}$ (as the Consumer Price Index$_{t-1}$)	118.115	3.480	415
Unemployment Rate$_{t-1}$	6.289	0.766	415
Gross Domestic Product$_{t-1}$	6015.402	390.589	415
MTS Producer Price Index$_t$	39.436	9.945	415
WATS Producer Price Index$_t$	30.134	10.187	415
Private Line Service Producer Price Index$_t$	61.607	4.375	415

❑ MACROECONOMIC INFLUENCE IN GENERAL: INFLATION (CPI), UNEMPLOYMENT, AND ECONOMIC GROWTH (GDP)

Other business interest groups could attack the monopolistic long-distance service market strategically, but only if they have inside information about the regulatory process. It seems that the long-term monopolistic AT&T would have a large political capacity (e.g., lobbying) to obtain such inside information, while disorganized OCCs or American consumers must rely on standard economic indicators such as the inflation rate, the unemployment rate, and the gross domestic product (GDP) when they want to be competitive enough to fight with the long-term dominant carrier, AT&T. These macroeconomic variables are expected to influence the FCC's adjudicative rule-making decisions by providing general information about market conditions that may affect the U.S. long-distance service industry. General economic conditions (i.e., inflation, unemployment, and economic growth) can affect the mode of influence which is changed by relative strengths, economic interests, and opposing demands of AT&T, OCCs, and other interest groups on the long-distance telecommunications service matters. Then, the federal regulators need to respond to the economic environment to balance the needs of OCCs or American consumers and AT&T, as explained below. Hence, a general hypothesis to be estimated is as follows.

➡ **<u>General Hypothesis T.E</u>[257]: Macroeconomic variables (i.e., inflation rate, unemployment, and GDP) as contextual factors are significant predictors of the**

FCC's adjudicative rule-making decisions in the federal long-distance service market regulation.

However, it must be recognized that even if the impacts of the economic conditions actually appear to be strong enough to suggest that they are significant predictors of FCC policy-making, there has been no sound theoretical guidance on the direction of the impacts of general economic factors. Moe (1985) has explored the impacts of the economic conditions, indicating that it is difficult to say with confidence what the direction of their impacts should be. Nevertheless, for this study, I tried to develop three specific hypotheses which indicate the directions of the impacts of inflation, unemployment, and GDP on the federal long-distance service policy-making by introducing some reasonable arguments regarding the behavior of interest parties in the market as follows.

X18 = Inflation Rate$_{t-1}$ (as the Consumer Price Index$_t$) (1982-1984 = 100)

The Consumer Price Index (CPI) is a measure of the average change in prices over time in a fixed market basket of goods and services purchased either by urban wage earners and clerical workers or by all urban consumers. In other words, the CPI measures changes in the purchasing power of the consumer dollar. All indexes are expressed on a base of 1982-1984=100. Selection of the 1982-1984 period was made to coincide with

[257] 'T' stands for contextual impacts variables and 'E' for the macroeconomic variables.

the updated expenditure weights, which are based upon data tabulated from the U.S. Bureau of Labor Statistics' Consumer Expenditures Surveys for 1982, 1983, and 1984 (U.S. Bureau of Labor Statistics 1997: 483).

Inflation is defined as a time of generally rising prices for goods and factors of production. The Bureau of Labor Statistics in the U.S. Department of Labor samples prices of items in a representative market basket and publishes the results as the CPI. The media invariably announce the inflation rate as the percent change in the CPI from month to month. Another indicator of inflation is the percent change from the same month of the prior year. For this study, I measure the U.S. inflation rate by the annual level of Consumer Price Index (CPI) as the Bureau of Labor Statistics does. The data are available from the Bureau of Labor Statistics (1997).

If the inflation rate is high in the U.S. economy, then capital is destroyed and investment is harmed. Under these macroeconomic conditions in the previous year, the FCC is expected to more strictly regulate the dominant long-distance carrier, AT&T, which could control the market with more stable capital status and developed facilities rather than OCCs and thus take unlawful or monopolistic actions (e.g., raise the service rates; offer or change tariffs advantageous to them), which may not be good for economic recovery, while the federal regulators are expected to allow more OCCs to freely run their businesses and offer various competitive, fair services, which could help to get over economic deadlock from the stagnant market.

Accordingly, under the economic condition with high inflation rate, the probability that the FCC will grant the petition(s) filed by AT&T regarding the long-distance service market matters is expected to decrease, because consumers and elected

officials as well are more likely to put pressure upon the federal regulators to strongly regulate AT&T's monopolistic activities which may be against economic stability. Conversely, if the inflation rate is low, then the probability that the petition(s) filed by AT&T will be granted by the FCC is expected to increase, because political pressure from politicians and other interest groups is less likely to be strong enough to force the federal regulators to make policy changes against AT&T in the stabilized economic environment.

➧ **<u>Hypothesis T.E1</u>: An increased inflation rate is expected to decrease the likelihood that the FCC will grant petition(s) filed by AT&T, while a decreased inflation rate is expected to increase the probability that the FCC will grant AT&T's petition(s) in the federal adjudicative rule-making decisions regarding the long-distance telecommunications service matters.**

X19 = Unemployment Rate$_{t-1}$

The U.S. unemployment rate, which indicates the extent of joblessness in the national economy and is measured as the percent of the civilian labor force that was actively seeking work, could be another macroeconomic condition that influences the FCC's adjudicative rule-making decisions regarding the long-distance telecommunications service matters. The data are also obtained from the Bureau of Labor Statistics in the U.S. Department of Labor (1997).

If more workers lose their jobs, great political pressure by consumers or other business firms as well as elected politicians is likely to put upon the federal regulators to

make policy changes to allow more OCCs to freely enter the market and offer various competitive, lawful services, which could help to boost economic performance, by granting more petitions by OCCs or public interest parties rather than AT&T. In contrast, if more workers become employed in the U.S. national economy, then the probability that the FCC will grant the petition(s) filed by AT&T regarding the long-distance service market matters is expected to increase, because such political pressure from politicians and consumer interest groups is less likely to be strong enough to lead the federal regulators to make policy-making against AT&T in the condition of economic stabilization with low unemployment rate. In a word, I expect that the effects of inflation and unemployment upon the FCC's adjudicative rule-making decisions would be the same.

➧ **<u>Hypothesis T.E2</u>: A higher unemployment rate is expected to decrease the likelihood that the FCC will grant petitions filed by AT&T, while a lower unemployment rate is expected to increase the probability that the FCC will grant AT&T's petition(s) in the federal adjudicative rule-making decisions regarding the long-distance telecommunications service matters.**

X20 = Gross Domestic Product$_{t-1}$ (1992 = $1.00)

The U.S. gross domestic product (GDP), which was obtained in constant dollars from the Bureau of the Census in the U.S. Department of Commerce (1997), could be another macroeconomic indicator that influenced the FCC's adjudicative rule-making

decisions regarding the long-distance telecommunications service matters. The GDP values are measured in millions of real dollars (1992 = $1.00) by fiscal year, from 1965 to 1995, after the nominal dollar amounts of GDP are corrected for inflation with the Consumer Price Index.

The effects upon FCC policy-making of these GDP values are expected to be inversely correlated (in the arithmetic terms) with those of the previous economic conditions, that is, inflation and unemployment rates. If the U.S. economic condition is aggravated in terms of GDP, then the FCC would be forced to grant more petitions filed by OCCs and public interest groups than AT&T regarding the long-distance service market matters. This may be because elected politicians, consumers, and other common carriers are more likely to put strong political pressure upon the federal regulators to make policy decisions to allow more OCCs to freely enter the market and offer various competitive services, if lawful or fair. This setting could help to bring economic regains, and simultaneously restrain AT&T, which is likely to suffer less damage than OCCs in the real economic decline, from controlling the long-distance market with unlawful, unfair, or monopolistic tariff provisions and telecommunications services/facilities.

In contrast, if economic production within the United States is increasing, then the probability that petition(s) filed by AT&T will be granted by the FCC is expected to increase, because such political pressure is not expected to be strong enough to signal the federal regulators to make decisions against AT&T in the condition of economic growth with a high index of GDP.

➡ **Hypothesis T.E3: Conditions of real domestic economic slowdown (i.e., lower GDP rate) is expected to decrease the probability that AT&T's petition(s) will be granted by the FCC, while condition of domestic economic growth (i.e., higher GDP value) is expected to increase the likelihood that AT&T's petition(s) will be granted by the FCC in the federal adjudicative rule-making decisions regarding the long-distance telecommunications service matters.**

❑ TELECOMMUNICATIONS ECONOMIC CONDITION IN PARTICULAR: INTERSTATE LONG-DISTANCE SERVICE RATES OF AT&T

The federal regulators also must respond to the telecommunications environment to some extent when they try to make reasonable policy decisions reflecting the demands of both AT&T and OCCs or American consumers. It is because that the changes in the interstate long-distance service rates have affected the growth rate of long-distance companies and the financial health of American consumers.

By the late 1930s, AT&T controlled almost the entire long-distance market. In addition, for most of the period between 1934 and 1960, the FCC was not forced to regulate individual AT&T rates. As long as AT&T's rate of return did not rise above a threshold level, its rates would be adjusted "just and reasonable" by the FCC. As long as users did not complain, the FCC was unlikely to intervene. As categories for services and rates proliferated and competitors emerged in the late 1960s, AT&T's interstate long-distance rates became a matter of political and, therefore, regulatory concern (Crandall 1991: 18-23).

Since the early 1970s, the FCC had often noticed that higher long-distance rates induced users to reduce long-distance calling and, later, to look for alternatives (that is, private networks) to common-carrier message telephone service, bypassing the public telephone network. As large private networks proliferated, they posed regulatory problems because they could choose to interconnect with the public network at many locations depending on local rates, may bypass the local exchange altogether, and may even begin to offer common carrier long-distance services in competition with regulated carriers. Hence, considering the complaints of American users and fearing that such bypass may raise long-distance rates further, thereby encouraging further attempts to bypass the public network, the FCC had pressed most actively for using more rational approaches (e.g., 'Rate of Return' and 'Price-Cap' regulations) to regulatory ratemaking through which it favored to offer lower interstate long-distance rates to consumers and prevent some flight to private lines (Crandall 1991: 12-30).

The only continuous indexes of national telephone rates are the Bureau of Labor Statistics' *consumer price index* (CPI) and *producer price index* (PPI) for telephone services. The CPI measures the cost of telephone service to consumers; the PPI measures the price of service offered by telephone companies. The CPI for telephone service was not disaggregated into separate components for local and long-distance service until 1977; moreover, the weights in the CPI are necessarily revised only periodically. Meanwhile, the PPI for telephone service is available for individual types of service--interstate toll, intrastate toll, local residential service, and so on--not as an aggregate index of all telephone service; moreover, the PPI for long-distance service had been based solely on AT&T rates (Crandall 1991: 56).

Hence, the data I use for this study are the interstate telephone producer price indexes (PPIs) for the most important of the long-distance services: AT&T's switched-message telephone services (MTS), AT&T's private-line services (PLS), and AT&T's wide-area telephone service (WATS), a discounted tariff offering of voice-grade, switched long-distance services. The data are available from the Federal Communications Commission (1988-1997). Thus, the following variables were employed to estimate the effects of AT&T's long-distance service rates on the FCC's long-distance service policy-making.

X21 = MTS Producer Price Index$_t$ (1972 = 100)

X22 = WATS Producer Price Index$_t$ (1972 = 100)

X23 = PLS Producer Price Index$_t$ (1972 = 100)

Considering the FCC's policy preference and the availability of real data on the long-distance service rates, I hypothesize that if the long-distance service rates, represented by AT&T's rates of MTS, WATS, and PLS, are increasing, then the FCC is less likely to grant the petition(s) filed by AT&T, because political pressures from American consumers and OCCs will be probably placed on the federal regulators to strongly regulate AT&T's monopolistic or unlawful activities including such rate adjustments. Conversely, if AT&T's long-distance service rates are decreasing, then the FCC is more likely to grant AT&T's petition(s), because such political pressures are not expected to be strong on the federal regulators to make policy decisions against AT&T.

➧ **Hypothesis T.E4: Higher long-distance service rates of AT&T are more likely to lead to the lower likelihood that the FCC will grant the petition(s) filed by AT&T, while lower long-distance service rates of AT&T are more likely to lead to the increased probability that the FCC will grant the petition(s) filed by AT&T in the federal adjudicative rule-making decisions regarding the long-distance telecommunications service matters.**

2-4. INTERACTION VARIABLES

The big three sets--interest, institution, and context--of independent variables allow me to estimate simultaneously the systematic influences on FCC's policy outcomes by interest group politics, the roles of political institutions, and contextual factors. From the variables, one class of variables that directly interact each other is also considered to be estimated in the study as follows.

❑ Media Exposure x Congressional Preference

Media exposure or coverage (whether true or false) of the FCC is expected to precipitate a response by the federal legislators, such as increased oversight of the federal regulators, because media attention can affect their chances for reelection. Through investigative and oversight powers, Congress can monitor FCC's performance and bring media attention to the federal agency.

Hence, considering the ADA liberalism scores of the relevant 'oversight

committees' in the House and Senate and the *New York Times Index* (NYTI), I expect that federal legislators with high scores of liberalism under high media exposure of the FCC are more likely to force the federal regulators to make policy decisions to support the interests of OCCs and American consumers and simultaneously oppose the petition(s) by AT&T which pursues its successive dominant or monopolistic interest in the long-distance telecommunications service market. In contrast, federal legislators with low scores of liberalism under low media exposure of the FCC are more likely favor AT&T's interests by granting the petition(s) filed by the long-term regulated dominant carrier.

The following specific interaction variables are selected to estimate the effects of interaction between media exposure and congressional preference on the FCC's long-distance service policy-making (that is, adjudicative rule-making decisions) over the 31-year period from 1965 to 1995. **Table 5** shows the mean, standard deviation, and number of observations for these interaction variables in all three time periods.

Table 5. Interaction Variables

Time Period I (1965-1995)

Interaction Variable	Mean	St.Dv.	N
(House Commerce Committee ADA Median$_t$)x(NYTI)	601.093	417.602	699
(House Tele. & Finance Subcom. ADA Median$_t$)x(NYTI)	591.679	440.627	699
(Senate Commerce Committee ADA Median$_t$)x(NYTI)	529.662	297.066	699
(Senate Communications Subcom. ADA Median$_t$)x(NYTI)	523.293	294.051	699

Time Period II (1965-1983)

Interaction Variable	Mean	St.Dv.	N
(House Commerce Committee ADA Median$_t$)x(NYTI)	513.357	510.256	284
(House Tele. & Finance Subcom. ADA Median$_t$)x(NYTI)	567.910	546.221	284
(Senate Commerce Committee ADA Median$_t$)x(NYTI)	482.676	291.071	284
(Senate Communications Subcom. ADA Median$_t$)x(NYTI)	431.239	243.329	284

Time Period III (1984-1995)

Interaction Variable	Mean	St.Dv.	N
(House Commerce Committee ADA Median$_t$)x(NYTI)	661.134	327.340	415
(House Tele. & Finance Subcom. ADA Median$_t$)x(NYTI)	607.945	350.338	415
(Senate Commerce Committee ADA Median$_t$)x(NYTI)	561.816	297.188	415
(Senate Communications Subcom. ADA Median$_t$)x(NYTI)	586.288	309.057	415

X24 = (House Commerce Committee ADA Median$_t$) x (NYTI)

X25 = (House Telecom. & Finance Subcommittee ADA Median$_t$) x (NYTI)

X26 = (Senate Commerce Committee ADA Median$_t$) x (NYTI)

X27 = (Senate Communications Subcommittee ADA Median$_t$) x (NYTI)

The interaction between high NYTI index and high ADA score is expected to influence the FCC's adjudicative rule-making decisions in a direction towards pro-OCCs or pro-consumers, while interaction between low media attention and low ADA score of federal legislators influences FCC decisions in a direction towards pro-AT&T. Hence, the following hypothesis was considered to be estimated.

➡ **Hypothesis IA.1[258]: The higher the media exposure of the FCC (regarding AT&T's activities in the long-distance service market) in *The New York Times*, and the higher the ADA scores of the members of the congressional oversight committees with jurisdiction over the FCC, then the lower the likelihood that AT&T's petition(s) will be granted by the FCC. Conversely, the lower the media coverage of the FCC in *The New York Times*, and the lower the ADA ratings of the federal legislators of the congressional oversight committees with jurisdiction over the FCC, then the higher the likelihood that AT&T's petition(s) will be granted by the FCC.**

[258] 'IA' stands for interaction variables.

Chapter 6

APPLICATIONS OF STATISTICAL METHOD OF ANALYSIS TO THE FCC'S ADJUDICAITVE RULE-MAKING DECISIONS REGARDING THE U.S. LONG-DISTANCE TELECOMMUNICATIONS SERVICE MATTERS: TESTS OF HYPOTHESES AND DERIVED RESULTS OF ESTIMATION

Statistical analysis was applied to provide empirical evidence on whether the FCC's adjudicative rule-making decisions over the 31-year period of 1965 through 1995 may be explained by the interrelationships among political economic factors from regulatory theories regarding interest group power, the roles of political institutions, and contextual influence. FCC policy decisions are expected to be influenced by interaction modes of independent variables indicating the long-term regulated interest group (i.e., AT&T), other common carriers, other public/consumer interest groups, political institutions such as the federal regulatory agency itself (i.e., the FCC), Congress, the President, and the courts, and contextual factors such as general macroeconomic and specific telecommunications economic conditions. Hence, testable hypotheses were derived as in the previous chapter and tested with logistic regression in the current chapter.

1. METHODS OF ESTIMATION

During the 31-year period of 1965 through 1995, the Federal Communications Commission made regulatory decisions (that is, adjudicative rule-making decisions) that

granted or denied the petitions filed by AT&T (or OCCs or other public interest organizations) regarding long-distance telecommunications service matters. A dichotomous dependent variable (coded 0 and 1) measures the FCC's adjudicative rule-making decisions regarding AT&T in the long-distance telecommunications service market. These FCC decisions are interpreted as the probability (P[Y=1]) that the federal regulators favor AT&T's interests by granting petition(s) by AT&T and/or denying petitions by OCCs or other public interest groups regarding long-distance service matters. The dependent variable was derived from reviewing 699 cases of adjudicative rule-making decisions by the FCC regarding long-distance telecommunications matters (that is, regarding "rules or regulations governing long-distance service rates or charges related to interconnection or access"—*see* **Chapter 5**).

Hence, for this study, *logit regression* (also called *logistic regression*) is used as an appropriate statistical technique to estimate models with the dichotomous (two-category) dependent variable (that is, the FCC's adjudicative rule-making decisions). Logit models are commonly estimated by maximum likelihood methods which find the coefficient parameter values that make our sample most likely. A likelihood function expresses the probability of obtaining the observed sample as a function of model parameters. The analyst seeks estimates of the coefficient (β) parameters that yield the highest possible values for the likelihood function.

The modeling strategies that I employed to systematically examine the relationships between FCC decisions, independent variables, and interaction terms, are the methods to estimate a complex decision model and then partial decision models (Hosmer and Lemeshow 1989).

First, for the total time period (1965-1995), a complex decision model was constructed and estimated simultaneously using all of the independent variables. The statistically significant predictors of FCC policy-making were selected and considered for model specifications. Then, in order to find the best subsets of regressors, in consideration of the theoretical hypotheses and the regressors detected significantly by the complex decision model, I constructed and estimated partial decision models (that is, multivariate models) where blocks of independent variables, which are not highly correlated each other, were entered. The independent variables were selected in the models if they were significant at the 0.05 level using *Wald-t* statistics and the model statistics such as log-likelihood ratio (LLR) and chi-square (χ^2) values were improved. The *STATA* statistical program was used to find successively better approximations for coefficient values through an iterative procedure. At iteration 0, no coefficient parameters except the intercept were estimated and on successive iterations, parameter estimates improved, causing the log-likelihood to increase. The process stopped when the relative change in each coefficient parameter usually drops below 0.001 or of the log-likelihood changed by less than 0.01.[259]

Furthermore, in order to produce the best model for the full time period, I compared partial decision models with each other and with the complex decision model on the basis of chi-square values and log-likelihood ratios for goodness-of-fit and probability prediction rates of models. In addition, some independent variables that were not statistically significant at the 0.05 level, but that were nevertheless considered to be theoretically meaningful, were included in the final logit model estimate.

---

[259] These criteria (0.001 and 0.01) are arbitrary and can be changed by the analysts. *See* Hanushek and Jackson (1977), Aldrich and Nelson (1984), Harrison (1992), Eliason (1993), and Gujarati (1995) for

Then, for each of the two subperiods (1965-1983 and 1984-1995), I estimated the logit model was estimated using exactly the same observations (within that subperiod) and independent variables which were selected in the final model specification for the full period. This is because using the same observations and variables allows me to do a statistical test for whether estimating two separate models for the two subperiods explains the data better than estimating a single model for the full period of 1965-1995.

2. GENERAL DIAGNOSTIC TESTS FOR LOGIT ESTIMATION

In this analysis with the statistical model of logistic regression, above all, *multicollinearity* may pose critical statistical problems as in OLS regression. When we add to the analysis a new X variable that is strongly related to X variables already in the logit model, symptoms include: (i) substantially higher standard errors, and correspondingly lower *Wald-t* (or z) statistics; (ii) unexpected coefficients despite a high pseudo-R^2;[260] and (iii) nonsignificant coefficients despite a high pseudo-R^2. At the extreme, if perfect multicollinearity (that is, linear relation) exists among predictor variables, estimation of logistic regression equations becomes impossible.

Therefore, I need to diagnose multicollinearity, and the method of checking the matrix of correlations among independent 'variables' usually provides one diagnostic for multicollinearity. However, the usual method is fallible because multicollinearity can occur even without high intervariable correlations. Thus, I also examined the matrix of

---

further detailed discussion of logit regression.

[260] Logistic regression generates a *pseudo-R^2* with its output, as in other maximum-likelihood estimation procedures. However, unfortunately, *pseudo-R^2* statistics lack the straightforward explained-variance interpretation of true R^2 in OLS regression.

correlations among estimated logistic regression 'coefficients' to diagnose multicollinearity problem for the analysis.[261] High correlations between any pair of coefficients indicate the presence of multicollinearity.[262] Each matrix of 'coefficients' correlations displayed in each final model for each time period shows that all correlations among coefficients appear to be low or moderate, suggesting that multicollinearity is not a great problem in each statistical model.[263]

High *discrimination*, like multicollinearity, also may inflate standard errors or make estimation impossible in the logistic regression. Discrimination (also termed *separation*) refers to our ability to predict Y. For instance, discrimination by a dummy variable indicates that X = 1 perfectly predicts Y = 0, but X = 0 does not perfectly predict Y =1. Statistical problems (e.g., untrustworthy estimates and increasing standard errors) worsen as we approach perfect discrimination (Hamilton 1992: 233-235). By checking raw data for each model, I found no evidence of high discrimination in each model.

In addition, *influential cases* can undercut logit regression as in OLS regression. A case appears to be *influential* as an outlier if its deletion substantially changes the logit regression results. However, not all outliers are influential. Typically influence results from particular X patterns or combinations of values on all X variables in the logit

---

[261] The correlation matrix of the coefficients is a standardization of the inverse of the information matrix that is a matrix of negatives of the second partial derivatives of the log likelihood function. Variances and covariances of logit coefficients are estimated from the inverse of the information matrix. The standard errors printed with logit output are square roots of the diagonal elements of the inverse information matrix. *See* Hamilton (1992) for detailed discussion of correlation matrix of the coefficients.

[262] The STATA statistical program handles this multicollinearity problem by automatically dropping one of the offending variables. In this study, if correlations among coefficients appear higher than 70%, I consider high multicollinearity among related predictor variables.

[263] I also provide the matrices of correlations among independent 'variables' for logistic models for the three time periods in **APPENDIX A**, and they indicate that multicollinearity is not a great problem for each model, either.

regression, not from on individual cases or unusual values on one or two of these variables (Hamilton 1992: 125, 235).

Therefore, careful diagnostic work is needed to improve the credibility of my logit results. Hosmer and Lemeshow (1989) suggest three diagnostic tests to check outlier problems: (i) Change in Pearson χ^2 versus Predicted Probability ($\Delta\chi_P^2$ vs. $\hat{P}$); (ii) Change in Deviance versus Predicted Probability ($\Delta\chi_D^2$ vs. $\hat{P}$); and (iii) Influence versus Predicted Probability (ΔB vs. $\hat{P}$).[264] These diagnostic statistics focus not on individual cases (as do the OLS regression diagnostics) but on the same X patterns or specific combinations of X values, which may be shared by any number of cases. Both cases that are poorly fit and influential cases contradict the main pattern of the data and pull model estimates in contrary directions, breaking up the desirable properties of unbiasedness, efficiency, and normality even in large enough samples (e.g., n-k > 100). If such problematic cases are detected from these diagnostic statistics, some remedial measures

---

[264] Let J = the number of unique X patterns in the sample ($J \leq n$) and m_j = the number of cases with the jth X pattern. If no two cases have the same X pattern, J = n and $m_j = 1$ for all j. All cases with pattern j have the same predicted probability that Y = 1, $\hat{P_j}$. For logit regression, the *leverage* of the ith case, h_i, is the ith diagonal element of the *hat matrix*, which is $H = X^*(X^{*\prime}X^*)^{-1}X^{*\prime}$ where $X^* = W^{1/2}X$ and W = an n x n matrix with weights: $w_i = \hat{P_i}(1 - \hat{P_i})$ on the main diagonal, zeros elsewhere. Three influence statistics derive from h_j. First, ΔB_j, analogous to Cook's D in OLS regression, measures the standardized change in estimated parameters (b_k) that results from deleting all cases with the jth X pattern in logit regression. A large value of ΔB_j indicates that the jth pattern exerts substantial influence. $\Delta B \geq 1$ may be viewed as "large." Second, $\Delta\chi_{P(j)}^2$ measures decrease in *Pearson* χ^2 that results from deleting all cases with the jth X pattern. Third, $\Delta\chi_{D(j)}^2$ measures the change in *deviance* that results from deleting all cases with the jth X pattern. The *Pearson* χ^2 statistic is the sum of squared Pearson residuals and the *deviance* equals the sum of squared deviance residuals. Both statistics test whether a given logit model is significantly worse than a perfect-fit (*saturated*) model. In other words, both sums of squared Pearson and deviance residuals resemble χ^2 tests of the null hypothesis of no difference between the estimated logit model and a *saturated* logit model with J parameters (one parameter for each combination of X values). Hence, $\Delta\chi_{P(j)}^2$ and $\Delta\chi_{D(j)}^2$ measure how poorly the logit model fits the jth pattern. Large values in *Pearson* χ^2 and *deviance* indicate that the logit model would fit the data much better if this pattern were deleted. As a rule of thumb, values greater than 5 indicate a "significant" change (because the distribution is asymptotically χ^2). *See* Hosmer and Lemeshow (1989) and Hamilton (1992) for further discussion of standardized residuals and other diagnostic statistics.

(mainly, removal of such outliers) should be taken to have a better fit with the remaining data.

For this study, after I estimated a logit model for the full time period, I executed the three important diagnostic tests to check outlier problems such as influential cases and high discrimination for the logit model and determined some observations to drop, and obtained a final model specification for the total 31-year period of 1965-1995 (Time Period I), as presented in the result section. I also executed the diagnostic tests to check outlier problems for the logit model for each of the two subperiods (Time Period II: 1965-1983 and Time Period III: 1984-1995).

3. RESULTS OF ESTIMATION

First, I estimated the effect of independent variables, derived from regulatory theories on interest group power, political institutions, and contextual influence, on the FCC's adjudicative rule-making decisions regarding long-distance telecommunications matters over the total 31-year period of 1965-1995 in Time Period I. Then, two spilt time periods were estimated to examine the effect of the exogenous variables on the FCC's adjudicative rule-making decisions: the effect was first estimated over the former 19-year period from 1965 to 1983 in Time Period II; and then the effect was also estimated over the latter 12-year period from 1984 to 1995 in Time Period III. Estimating first the model for the total period and then the models for the two subperiods allowed me to focus naturally on the question of how the results for each subperiod differ from the

results for the total period. All three statistical analyses were conducted by using the *STATA* program.

3-1. RESULTS FOR TIME PERIOD I (1965-1995)

In this section, the large picture for influence from interest groups and political institutions is seen with the total cases of the federal agency's regulatory decisions (that is, the FCC's adjudicative rule-making decisions) regarding long-distance telecommunications service matters, from 1965 to 1995.

For Time Period I (that is, total 31-year period from 1965-1995), the first estimated model (**Model 1**) in **Table 6** indicates the impacts of interest groups and political institutions upon the FCC's adjudicative rule-making decisions over the total period from 1965 to 1995. **Model 1** is a tentative final model specification that passed the diagnostic test for multicollinearity among regressors since no multicollinearity problem appeared in the matrix of coefficient correlations in **Table 7**. The independent variables that were significant nearly at the 0.05 level and thus appeared to have some effects on the dependent variable are remained in the model, while the independent variables that were not statistically significant even at the 0.10 level and thus appeared to have no effect on the dependent variables through the log-likelihood ratio (LLR) test were removed from the model. The convergence process for the final model stopped when the relative change in each coefficient dropped below 0.0001.

Hence, among the 29 independent variables entered into this logit model for consideration, 13 were found to be statistically significant and had effects on the FCC's

adjudicative rule-making decisions over the total 31-year period of 1965-1995. The remaining variables were found not statistically significant even at the 0.10 significance level. None of contextual variables appeared to be significant.

The following summary statistics are used for assessing the logit model, as presented in **Table 6**: regression coefficients (b_i), standard errors of the coefficient estimates (SE_{bi}), *Wald t*-statistic (t), level of significance ($p > |t|$). The overall model appeared to be significant and robust as Prob. > Chi-square = 0.0000, and the percentage of the FCC's adjudicative rule-making decisions correctly predicted by **Model 1** is about 76.68 percent.[265]

[265] I do not provide pseudo R^2 statistics for the logistic regressions in this study because unfortunately they lack the straightforward explained-variance interpretation of true R^2 in OLS regression. With OLS the coefficient of determination, R^2, measures overall fit of the model. Several analogous measures have been proposed for logit models. STATA usually calculates a pseudo R^2: pseudo $R^2 = 1 - \ln L_f / \ln L_i$. Aldrich and Nelson (1984) suggest: pseudo $R^2 = \chi^2 / (\chi^2 + n)$ where n is sample size and χ^2 is the test statistic for the null hypothesis that all coefficients but the intercept are zero. Each pseudo R^2 has advantages, but there is no general agreement about which one is best. *See* McKelvey and Zavoina (1976), Aldrich and Nelson (1984), Hosmer and Lemeshow (1989), and Hamilton (1992) for further discussion of pseudo R^2.

Table 6. Logit Regression of Variables from Regulatory Theories on the FCC's Adjudicative Rule-Making Decisions (Model 1) over the 31-year period of 1965-1995.

Independ. Variables	Coef. (b_i)	Std. Err. (SE_{bi})	t	p > |t|	95% Conf. Interval		Mean
ATTMS	+ 0.0285	0.0124	+ 2.304	0.021	0.0043	0.0527	65.6268
OCCPET	- 0.0825	0.0248	- 3.321	0.001	- 0.1316	- 0.0338	3.1087
ATTACK	- 1.6009	0.2060	- 7.773	0.000	- 2.0046	- 1.1972	0.5951
NYTI	- 0.1743	0.0405	- 4.308	0.000	- 0.2537	- 0.0950	12.2418
Yp	- 0.0369	0.0141	- 2.613	0.009	- 0.0645	- 0.0092	50.8788
HCCH	- 0.0087	0.0037	- 2.314	0.021	- 0.0160	- 0.0013	205.648
HSC	+ 0.0159	0.0082	+ 1.941	0.052	- 0.0002	0.0319	46.9743
NIXON	- 1.7318	0.6413	- 2.701	0.007	- 2.9889	- 0.4749	0.0916
FORD	- 2.2168	0.5427	- 4.085	0.000	- 3.2805	- 1.1531	0.0773
CARTER	- 3.0693	0.6010	- 5.107	0.000	- 4.2473	- 1.8913	0.1216
CLINTON	+ 1.2564	0.4269	+ 2.943	0.003	0.4198	2.0931	0.1016
COURT	- 0.0791	0.0217	- 3.644	0.000	- 0.1217	- 0.0366	45.3705
NYxSSC	- 0.0016	0.0008	- 1.897	0.058	- 0.0032	0.0001	523.293
_cons	9.3587	1.7543	5.335	0.000	5.9204	12.7971	1

Statistics for Logit Model 1	
Number of Cases (n)	699
Log-Likelihood (lnL)	- 329.40002
LR Chi-Square (df = 13)	310.10
Prob. > Chi-Square (χ^2)	0.0000

Prediction Table for FCC Decisions in Logit Model 1			
Observed Probability	Predicted Probability		Prediction Rate (%)
	0	1	
0	262	83	345 (75.94%)
1	80	274	354 (77.40%)
Total Prediction Rate (%)			699 (76.68%)

*P(Y=1): Favoring AT&T

Table 7. Correlations between Estimated Coefficients of Logit Model 1.

Coef.	ATTMS	OCCPET	ATTACK	NYTI	Yp	HCCH	HSC
ATTMS	1.0000						
OCCPET	- 0.0333	1.0000					
ATTACK	- 0.0079	- 0.0741	1.0000				
NYTI	- 0.4450	- 0.0376	0.0105	1.0000			
Yp	- 0.2337	- 0.0294	0.0682	0.0278	1.0000		
HCCH	0.0150	0.0052	0.1083	0.2815	- 0.0421	1.0000	
HSC	0.0864	- 0.1330	0.0104	- 0.1626	0.1901	- 0.1871	1.0000
NIXON	- 0.3000	- 0.0416	0.0844	0.0562	0.4967	0.3103	0.1841
FORD	- 0.6160	0.0916	0.0571	0.3752	0.4305	0.3415	- 0.0263
CARTER	- 0.5283	0.1095	0.0976	0.3694	0.3043	0.5678	- 0.0722
CLINTON	0.4509	- 0.0251	0.0306	- 0.1482	- 0.2608	0.1098	- 0.0347
COURT	- 0.4732	0.1210	0.0955	0.4631	0.1485	0.2261	0.0109
NYxSSC	- 0.4015	0.0480	0.0549	- 0.8163	0.0835	- 0.1554	0.0991
_cons	- 0.0631	- 0.0531	- 0.2252	- 0.2517	- 0.4737	- 0.6095	- 0.2377
	NIXON	FORD	CARTER	CLINTON	COURT	NYxSSC	_cons
NIXON	1.0000						
FORD	0.4894	1.0000					
CARTER	0.3683	0.6554	1.0000				
CLINTON	- 0.0768	- 0.2333	- 0.2124	1.0000			
COURT	- 0.2076	0.3994	0.6016	- 0.2886	1.0000		
NYxSSC	0.0399	- 0.2376	- 0.1487	0.0255	- 0.3441	1.0000	
_cons	- 0.2155	- 0.3782	- 0.5949	0.0471	- 0.5819	0.0061	1.0000

This logit model (**Model 1**) is a candidate for the final model specification, as it has passed only multicollinearity tests. Hence, in **Model 1**, I checked outlier problems such as influential or/and poorly fit cases, which may undercut this estimated logit model, by generating several diagnostic statistics and graphs and tables.

First, I generated a diagnostic plot and information of 'Change in Pearson χ^2 versus Predicted Probability' ($\Delta\chi_P^2$ vs. $\hat{P}$) for the logit analysis of **Model 1**, as presented in **Figure 11** and **Table 8**. Most data points align with one of two curves: (i) Going down, left to right, are the points for X patterns with $Y_j = 1$ and $m_j = 1$; and (ii) Going up, left to right, are the points for X patterns with $Y_j = 0$ and $m_j = 1$.[266] The graph shows some X patterns with above 5 $\Delta\chi_P^2$ value, which may be considered as poorly fit.

[266] Let J = the number of unique X patterns in the sample ($J \leq n$) and m_j = the number of cases with the jth X pattern. If no two cases have the same X pattern, J = n and $m_j = 1$ for all j. All cases with pattern j have the same predicted probability that $Y = 1$, $\hat{P_j}$.

Figure 11. Poorness-of-Fit Statistic 'Pearson χ^2 versus Predicted Probability' of Favoring AT&T's Interests ($\Delta\chi_P^2$ vs. P^*) in Model 1.

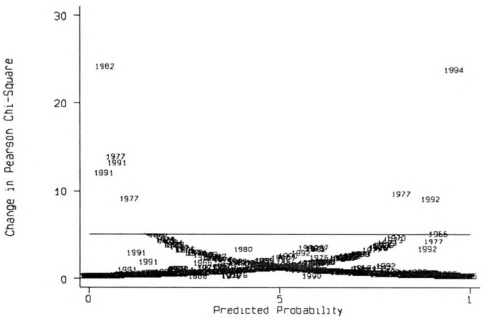


Table 8. Cases with above 5 $\Delta\chi_P^2$ value in Model 1.

Observation No.	Year	$\Delta\chi_P^2$ Value (dX2)	Predicted Probability (P^*)	Position
152	1991	11.7853	0.0381	top-left
153	1991	11.7853	0.0381	top-left
156	1991	12.9189	0.0724	top-left
437	1982	23.8978	0.0418	top-left
560	1977	8.7669	0.1034	top-left
561	1977	13.6376	0.0689	top-left
27	1994	23.5495	0.9590	top-right
73	1992	8.7664	0.8969	top-right
540	1977	9.4320	0.8207	top-right
541	1977	9.4320	0.8207	top-right

Five X patterns showed up as poorly fit at upper left with high $\Delta\chi_P^2$ values (23.90, 13.64, 12.92, 11.79 and 8.77). One X pattern in 1991 occurs twice ($m_j = 2$: observations 152 and 153), other X pattern in 1991 occurs once ($m_j = 1$: observation 156), another X pattern in 1982 occurs once ($m_j = 1$: observation 437), another X pattern in 1977 occurs once ($m_j = 1$: observation 560), and another X pattern in 1977 occurs once again ($m_j = 1$: observation 561) in the raw data. All of these five X patterns (six cases) have the observed probability Y=1 despite low predicted probability values ($\hat{P}_{152, 153} = 0.04$, $\hat{P}_{156} = 0.07$, $\hat{P}_{437} = 0.04$, $\hat{P}_{560} = 0.10$ and $\hat{P}_{561} = 0.07$). For example, according to the raw data, an X pattern in 1991 (observation 156) is the combination of relatively low AT&T market share, strong petitions to directly reject AT&T's petition(s), relatively many *The New York Times* articles on the FCC regarding AT&T's activities, relatively higher liberalism in Congress committees or subcommittees, and so on. In these cases, it is expected that the FCC is unlikely to favor AT&T's interests. Nonetheless, the federal agency did actually favor AT&T's petitions when making decisions.

In addition, three X patterns (four cases) stand out as poorly fit at upper right with very high $\Delta\chi_P^2$ values (23.55, 9.43 and 8.77). One case in 1994 (observation 27), other case in 1992 (observation 73), and two cases in 1977 (observations 540 and 541) take X patterns with observed probability Y = 0 despite high predicted probability values ($\hat{P}_{27} = 0.96$, $\hat{P}_{73} = 0.899$ and $\hat{P}_{540, 541} = 0.82$). For example, according to the data, an X pattern in 1994 (observation 27) is the combination of relatively higher AT&T market share, no strong petition to directly reject AT&T's petition(s), relatively small *The New York Times* articles on the FCC regarding AT&T's activities, relatively lower liberalism in Congress committees or subcommittees, and so on. In these cases, the FCC should be very likely

to favor AT&T's interests, it did not actually favor AT&T's interests when making decisions.

Second, the similar explanation is shown from the plot and information of "Change in Deviance versus Predicted Probability' ($\Delta\chi_D^2$ vs. $\hat{P}$) in **Figure 12** and **Table 9**. The $\Delta\chi_D^2$ statistic ranges less than $\Delta\chi_P^2$ (about 0-7 instead of 0-36), and an X pattern with above 5 $\Delta\chi_D^2$ value may be considered as poorly fit. The same three worst fit X patterns (three cases: observations 156, 437 and 561) stand out at top left with high $\Delta\chi_D^2$ values (5.295, 6.62 and 5.398, respectively). These X patterns (three cases) have the observed probability Y=1 despite low predicted probability values ($\hat{P}_{156} = 0.07$, $\hat{P}_{437} = 0.04$ and $\hat{P}_{561} = 0.07$, respectively). This means that in the case where the FCC is unlikely to favor AT&T's petitions, it did actually favor AT&T's interests when making decisions.

In addition, the same two poorly fit X patterns (three cases) showed up at upper right with high $\Delta\chi_D^2$ values (7.08 and 6.43). Two cases in 1977 (observations 540 and 541) and one case in 1994 (observation 27) appeared to take X patterns with observed probability Y = 0 despite high predicted probability values ($\hat{P}_{540, 541} = 0.82$ and $\hat{P}_{27} = 0.96$). This again indicates that in the case where the FCC is very likely to favor AT&T's petitions, it did not actually favor AT&T's interests.

Figure 12. Poorness-of-Fit Statistic 'Change in Deviance versus Predicted Probability' of Favoring AT&T's Interests ($\Delta\chi_D^2$ vs. P^*) in Model 1.

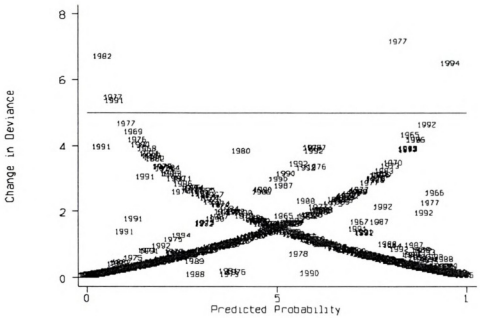


Table 9. Cases with above 5 $\Delta\chi_D^2$ value in Model 1.

Observation No.	Year	$\Delta\chi_D^2$ Value (dD)	Predicted Probability (P^*)	Position
156	1991	5.2957	0.0724	top-left
437	1982	6.6248	0.0418	top-left
561	1977	5.3986	0.0689	top-left
27	1994	6.4340	0.9590	top-right
540	1977	7.0842	0.8207	top-right
541	1977	7.0842	0.8207	top-right

Finally, to combine information about fit and influence, I plotted 'Change in Deviance versus Predicted Probability' ($\Delta\chi_D^2$ vs. $\hat{P}$) with symbols proportional to the influence statistic (ΔB) that measures an X pattern's influence in logistic regression. Influential cases typically appear in X pattern(s) with ΔB values of 1 and over ($\Delta B \geq 1$). **Figure 13** and **Table 10** revealed that the same X pattern with one case in 1982 (observation 437) is poorly fit (upper left) and influential (a large circle) with a high ΔB value ($\Delta B_{437} = 1.04 \geq 1$). As previously indicated, both poorly fit and influential cases like the case (observation 437 in 1982) in the raw data for **Model 1** may contradict the main pattern of the data and pull model estimates in their contrary direction.

Figure 13. 'Change in Deviance versus Predicted Probability' of Favoring AT&T's Interests ($\Delta\chi_D^2$ vs. P^*) with Symbols Proportional to Influence Statistic (ΔB) in Model 1.

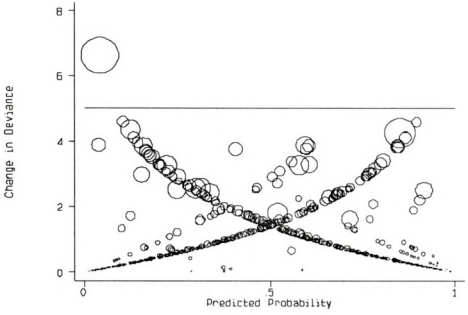


Table 10. Cases with above 1 ΔB value in Model 1.

Observation No.	Year	ΔB Value (dB)	Predicted Probability (P^*)	Position
437	1982	1.0438	0.0418	top-left

Some problematic outlier cases are detected from three diagnostic statistics for **Model 1**, so I removed such outliers to have a better fit with the remaining data in Time Period I with a large sample size of 699 (n-k = 699 – 13 = 683 > 100). That is, I reestimated **Model 1** by dropping the ten poorly fit or/and influential cases (observations 27, 73, 152, 153, 156, 437, 540, 541, 560 and 561) and thus obtained a better model. The newly estimated model (**Model 2**) is an improved model specification in terms of *Wald-t* statistic, log-likelihood, chi-square, and predicted probability as shown in **Table 11**.

Thirteen among twenty-nine independent variables entered into the model were found to be statistically and theoretically significant. **Model 2** also resulted from several specifications that were designed to reduce or eliminate multicollinearity problem among the regressors themselves and coefficients of them, as indicated in **Table 12**. The new model has passed important diagnostic tests and resulted in more improved estimates. Hence, I selected **Model 2** as the most appropriate logit model specification for the FCC's adjudicative rule-making decisions for Time Period I, that is, the total 31-year period from 1965 to 1995.[267]

[267] I provide all commands and steps by the STATA program which generated all tables and figures for the final model in **APPENDIX C**.

Table 11. Final Logit Regression of Variables from Regulatory Theories on the FCC's Adjudicative Rule-Making Decisions (Model 2) over the 31-year period of 1965-1995.

Independ. Variables	Coef. (b_i)	Std. Err. (SE_{bi})	t	p > |t|	95% Conf. Interval		Mean
ATTMS	+ 0.0300	0.0125	+ 2.400	0.016	0.0055	0.0545	65.6390
OCCPET	- 0.0822	0.0250	- 3.295	0.001	- 0.1311	- 0.0333	3.1263
ATTACK	- 1.6561	0.2104	- 7.871	0.000	- 2.0685	- 1.2437	0.5936
NYTI	- 0.1783	0.0412	- 4.324	0.000	- 0.2591	- 0.0975	12.2119
Yp	- 0.0328	0.0142	- 2.308	0.021	- 0.0607	- 0.0049	50.8788
HCCH	- 0.0088	0.0038	- 2.323	0.020	- 0.0162	- 0.0014	205.885
HSC	+ 0.0181	0.0083	+ 2.175	0.030	0.0018	0.0345	46.9521
NIXON	- 1.6479	0.6485	- 2.541	0.011	- 2.9191	- 0.3768	0.0929
FORD	- 2.1796	0.5511	- 3.955	0.000	- 3.2597	- 1.0996	0.0755
CARTER	- 3.0358	0.6090	- 4.985	0.000	- 4.2294	- 1.8422	0.1205
CLINTON	+ 1.4403	0.4376	+ 3.291	0.001	0.5825	2.2980	0.1016
COURT	- 0.0804	0.0220	- 3.649	0.000	- 0.1235	- 0.0372	45.3705
NYxSSC	- 0.0018	0.0008	- 2.088	0.037	- 0.0034	0.0001	522.716
_cons	9.1759	1.7824	5.148	0.000	5.6824	12.6694	1

Statistics for Logit Model 2	
Number of Cases (n)	689
Log-Likelihood (lnL)	- 317.88768
LR Chi-Square (df = 13)	319.21
Prob. > Chi-Square (χ^2)	0.0000

Prediction Table for FCC Decisions in Logit Model 2			
Observed Probability	Predicted Probability		Prediction Rate (%)
	0	1	
0	258	81	339 (76.11%)
1	73	277	350 (79.14%)
Total Prediction Rate (%)			689 (77.65%)

*P(Y=1): Favoring AT&T

Table 12. Correlations between Estimated Coefficients of Logit Model 2.

Coef.	ATTMS	OCCPET	ATTACK	NYTI	Yp	HCCH	HSC
ATTMS	1.0000						
OCCPET	- 0.0344	1.0000					
ATTACK	- 0.0147	- 0.0708	1.0000				
NYTI	- 0.4436	- 0.0356	0.0140	1.0000			
Yp	- 0.2243	- 0.0290	0.0587	0.0250	1.0000		
HCCH	0.0208	0.0040	0.1026	0.2796	- 0.0346	1.0000	
HSC	0.0928	- 0.1357	- 0.0008	- 0.1671	0.1950	- 0.1819	1.0000
NIXON	- 0.2901	- 0.0421	0.0769	0.0523	0.4965	0.3146	0.1862
FORD	- 0.6090	0.0902	0.0598	0.3669	0.4283	0.3318	- 0.0141
CARTER	- 0.5231	0.1128	0.0912	0.3672	0.3009	0.5634	- 0.0699
CLINTON	0.4510	- 0.0343	0.0149	- 0.1521	- 0.2513	0.1045	- 0.0217
COURT	- 0.4729	0.1210	0.0986	0.4640	0.1426	0.2240	0.0096
NYxSSC	0.3922	0.0492	0.0633	- 0.8083	0.0747	- 0.1490	0.0895
_cons	- 0.0688	- 0.0520	- 0.2174	- 0.2521	- 0.4738	- 0.6139	- 0.2412
	NIXON	FORD	CARTER	CLINTON	COURT	NYxSSC	_cons
NIXON	1.0000						
FORD	0.4814	1.0000					
CARTER	0.3611	0.6445	1.0000				
CLINTON	- 0.0712	- 0.2329	- 0.2183	1.0000			
COURT	- 0.2145	0.3983	0.6009	- 0.2897	1.0000		
NYxSSC	0.0387	- 0.2338	- 0.1422	0.0122	- 0.3396	1.0000	
_cons	- 0.2158	- 0.3754	- 0.5926	0.0500	- 0.5787	0.0090	1.0000

Therefore, from **Table 11**, the final logit equation (**Model 2**) for the FCC's adjudicative rule-making decisions in Time Period I (1965-1995) is approximately:

$$\mathbf{L_i^{\wedge} = 9.176 + 0.300*ATTMS - 0.082*OCCPET - 1.656*ATTACK}$$
$$\mathbf{- 0.178*NYTI - 0.033*Yp - 0.009*HCCH + 0.018*HSC}$$
$$\mathbf{- 1.648*NIXON - 2.180*FORD - 3.036*CARTER + 1.440*CLINTON}$$
$$\mathbf{- 0.080*\ COURT - 0.002*NYxSSC}$$

where

$\mathbf{L_i^{\wedge}}$: predicted log odds of favoring AT&T's petition(s), that is, $\mathbf{\ln\{P_i / (1-P_i)\}}$, and **P** is the probability that the FCC will make a decision in favor of AT&T's interests regarding the long-distance telecommunications service matters;

ATTMS : annual ratio of AT&T revenue to the total long-distance service revenue, in percentage (%);

OCCPET : number of petitions filed by other common carriers or interexchange carriers except AT&T and its affiliates, representing other long-distance telecommunications companies' interests, in each FCC decision case;

ATTACK : dummy variable, coded 1 if other business or/and public interest groups filed strong petitions to request the FCC to directly reject or deny AT&T's petitions or interests and 0 otherwise (that is, if they just filed petitions to complain about AT&T's activities), in each FCC decision case;

NYTI : number of mentions of the FCC regarding AT&T's activities in long-distance service matters for two months before each FCC decision case in *The New York Times*;

Yp : ratio of the FCC's adjudicative rule-making decisions favoring A&T over OCCs/public in the previous year, in percentage (%);

HCCH : annual ADA scores of the chairmen of House authorization committees;[268]

HSC : annual ADA median scores of House authorization subcommittees;[269]

NIXON : dummy variable, coded 1 after President Nixon assumes office and 0 before he assumes office or after he leaves office;

FORD : dummy variable, coded 1 after President Ford assumes office and 0 before he assumes office or after he leaves office;

CARTER : dummy variable, coded 1 after President Carter assumes office and 0 before he assumes office or after he leaves office;

CLINTON : dummy variable, coded 1 after President Clinton assumes office and 0 before he assumes office or after he leaves office;

COURT : rates of AT&T court victories in all the federal court trials in the previous years (from 1964-1995), in percentage (%); and

---

[268] The House authorization committees that relevant chairmen served for the total period 1965-1995 were: *House Interstate and Foreign Commerce Committee* (1965-1980), *House Energy and Commerce Committee* (1981-1994) and *House Commerce Committees* (1995). As previously indicated (**Chapter 6**), the chairmen's ADA scores were weighted three times more heavily than the House authorization committees' median scores.

[269] The relevant House authorization subcommittees for the total period from 1965-1995 come under the following names: *House Communications and Power Subcommittee* (1965-1974); *House Communications Subcommittee* (1975-1980); *House Telecommunications, Consumer Protection & Finance Subcommittee* (1981-1986); and *House Telecommunications & Finance Subcommittee* (1987-1995).

NYxSSC : interaction between the mentions of the FCC regarding AT&T's activities in the long-distance service matters for two months before each FCC decision case in *The New York Times* and the annual ADA median scores of Senate authorization subcommittee members (that is, *Senate Communications Subcommittees*).[270]

For interpretation of this logit model (**Model 2**), I used summary statistics such as regression coefficients (b_i), standard errors of the coefficient estimates (SE_{bi}), *Wald t*-statistics (t), level of significance ($p > |t|$), model prediction rate, and chi-square value (χ^2) as goodness-of-fit statistics.

First of all, the logit regression as a whole is highly significant and robust. The model's chi-square value is significant ($p = 0.0000$) because the estimated chi-square value of 319.21 is much larger than the critical chi-square value that is 22.36 with the 0.05 significance level and 13 degrees of freedom. Hence, I reject the null hypothesis that coefficients on all thirteen variables are zero. This indicates that all thirteen variables in the model have some joint impact upon the dependent variable, that is, the FCC's adjudicative rule-making decisions, over the total 31-year period from 1965 to 1995. In addition, the overall percentage of the FCC's adjudicative rule-making decisions correctly predicted by this model is 77.65% that may indicate high prediction power of the logit model.

For **Model 2**, the estimated standard errors (SE_{bi}) of the coefficients are calculated as part of the maximum likelihood estimation process and used to form both *Wald-t* tests

[270] Over the whole time period 1965-1995, the Senate authorization subcommittee was constantly: *Senate Communications Subcommittee.*

and confidence intervals for each logit regression coefficient. In the logit analysis, the *Wald*'s t-statistics (= coefficients divided by standard errors: $t = b_i/SE_{bi}$) test null hypotheses that the corresponding coefficients equal zero ($H_0:\beta_i = 0$) as in OLS analysis. As a rule of thumb, at the significance level of $\alpha = 0.05$ if $|t| \geq 2.00$, we can reject H_0. For **Model 2** with a large sample size of 689 (n-k = 689-13 = 676 > 100), the *Wald* t-tests and a corresponding χ^2 test show the same results. From **Table 11**, *Wald t*-statistics indicate that all thirteen independent variables in the model did significantly influence the FCC's adjudicative rule-making decisions over the total 31-year period from 1965 to 1995.

Four variables reflecting interest group power all appeared to be significantly related to the FCC's adjudicative rule-making decisions at the 95% confidence level: (i) the coefficient on ATTMS ($b_1 = 0.030$) shows up as statistically significant at the 0.05 level ($|t| = 2.400$); (ii) the coefficient on OCCPET ($b_2 = -0.082$) appeared to be statistically significant at the 0.05 level ($|t| = 3.295$); (iii) the coefficient on ATTACK ($b_3 = -1.656$) showed up as very significant at the 0.05 level ($|t| = 7.871$); and (iv) the coefficient on NYTI ($b_4 = -0.178$) is also statistically very significant at the 0.05 level ($|t| = 4.324$).

Eight variables indicating the roles of political institutions all are also significantly related to the FCC's adjudicative rule-making decisions at the 95% confidence level. A variable indicating the federal agency's own influence is significantly related to FCC policy decisions. The coefficient on Yp ($b_5 = -0.033$) is statistically significant at the 0.05 level ($|t| = 2.308$). In addition, two variables reflecting congressional influence show up as significantly related to the FCC's adjudicative rule-

making decisions. The coefficient on HCCH ($b_6 = -0.009$) is statistically significant at the 0.05 level ($|t| = 2.323$), and the coefficient on HSC ($b_7 = 0.018$) appears to be statistically significant at the 0.05 level ($|t| = 2.175$), too. Four variables indicating presidential power are also significantly related to the FCC's adjudicative rule-making decisions: the coefficients on NIXON ($b_8 = -1.648$), FORD ($b_9 = -2.180$), CARTER ($b_{10} = -3.038$) and CLINTON ($b_{11} = 1.440$) are statistically significant at the 0.05 level ($|t| = 2.541$, $|t| = 3.955$, $|t| = 4.985$ and $|t| = 3.291$, respectively). The variable indicating court influence also shows its significant relation to the FCC's adjudicative rule-making decisions. The coefficient on COURT ($b_{12} = -0.080$) is statistically significant at the 0.05 level ($|t| = 3.649$).

Finally, an interaction term of NYTI and SSC appeared to be significantly related to the FCC's adjudicative rule-making decisions over the total 31-year period of 1965-1995. The coefficient on NYxSSC ($b_{13} = -0.002$) is statistically significant at the 0.05 level ($|t| = 2.088$), too.

Therefore, from these *Wald-t* tests, I find that variables indicating interest group power and political institutions' roles had significant impacts upon the FCC's adjudicative rule-making decisions regarding AT&T in the long-distance telecommunications service matters over the 31-year period from 1965-1995.

I interpreted the estimated logistic regression coefficients (b_i) in **Model 2** in terms of the general direction of the estimated relationships between the FCC's adjudicative rule-making decisions and regressors with consideration of their statistical and theoretical significance.

The results reported in **Table 11** first show the relationships between interest group power variables and FCC policy decisions. Especially, over the total 31-year period (1965-1995) explored in the analysis, the influence of the regulated dominant interest group, AT&T, was found to be significant on FCC policy-making. An increase in AT&T's market share (that is, ratio of AT&T revenue to the total long-distance service revenue) increases the probability that the FCC will favor AT&T when making decisions, as hypothesized (H:I.A4). This may indicate the capture of the federal agency by the regulated interest group to some degree.

Meanwhile, as long-distance service common carriers (except AT&T) file more petitions, the likelihood that the FCC will favor AT&T's petition(s) decreases, as hypothesized (H:I.O1). In addition, when other business or public interest groups directly attack AT&T's interests by requesting the FCC to directly reject its petition(s), the probability of FCC decisions to grant AT&T's petition(s) is likely to decrease, as hypothesized (H:I.O2). More *The New York Times* articles on the FCC regarding AT&T's activities in the long-distance service market for two months before each FCC decision also decrease the likelihood of FCC decisions to grant AT&T's petition(s), as hypothesized (H:I.P3). The significance of each of these four estimated coefficients indicates that business interest groups and public interest groups did make strong impacts upon the FCC's adjudicative rule-making decisions regarding AT&T in the U.S. long-distance telecommunications service matters over the 31-year period of 1965-1995. As expected, the direction of influence of AT&T interest group on FCC decision-making is the opposite to that of other interest groups.

I also find that impact of the federal agency itself is significant upon its policy-making over the total study period. An increase in FCC decisions favoring AT&T's petition(s) in the previous year decreases the probability of FCC decisions favoring AT&T's petition(s) for the current year, contrary to the hypothesis (H:G.F1). This may indicate that the FCC Commissioners recognized AT&T's dominant power in the long-distance service market before and even after its break-up and thus tried to continue to keep a balance between AT&T's interests and other business or public interests when making decisions.

Two congressional subsets also appeared to be significant predictors of the FCC's adjudicative rule-making decisions over the 31-year period from 1965 to 1995. The chairmen of House authorization committees had significant impacts upon the federal regulators' long-distance regulatory decisions. An increase in liberalism (that is, ADA scores) in the House committee chairs, who are responsible for oversight, decreases the likelihood of FCC's favoring AT&T, as hypothesized (H:G.C3). Meanwhile, a more highly rated pro-labor score in the House authorization subcommittees appeared to increase the likelihood of FCC decisions to grant AT&T's petition(s), contrary to the hypothesis (H:G.C3). At any rate, the significance of each of two variables indicates federal legislators' ideological influence on FCC policy-making (that is, adjudicative rule-making decisions) regarding AT&T in the U.S. long-distance telecommunications service matters over the 31-year period from 1965 to 1995.

Presidential influence variables are also significant predictors of FCC policy decisions over the total study period from 1965-1995. President Nixon, Ford, Carter, and Clinton's impacts appeared to be relatively significant. The coefficients on other

Presidents (Johnson, Reagan and Bush) were not statistically significant even at the 0.10 level and excluded from the model. A point of note is that although presidential administrations from Nixon to Clinton expressed a political philosophy of telecommunications deregulation, American presidents (Nixon, Ford and Carter) before the AT&T break-up influenced FCC policy-making by decreasing the probability of FCC decisions favoring AT&T, while a presidential administration (Clinton) after the divestiture of AT&T made significant impact upon FCC policy decisions by increasing the likelihood of FCC's favoring AT&T when making decisions.

Institutional influence from the judiciary was also detected as significant on the FCC's adjudicative rule-making decisions over the total 31-year period from 1965-1995. An increase in AT&T victories relative to losses in court decisions regarding long-distance service matters in the previous years decreases the probability of FCC's favoring of AT&T's petition(s) when making decisions for the current year. The direction of the estimated coefficient is contrary to the hypothesis (H:G.J1). Although the courts protected AT&T's interests to some degree for the previous years, the federal regulators tried to make decisions against AT&T's interests over the 31-year period from 1965-1995. This may indicate that the FCC Commissioners continued to keep a balance of interests between AT&T and other business or public interest groups when making decisions, before or after the break-up of AT&T.

An interaction term of public interest and congressional influence, NYTIxSSC, was found as a significant predictor of the FCC's adjudicative rule-making decisions over the total 31-year period of 1965-1995. Public interest reflected in a daily newspaper and federal legislators' liberalism is negatively related to the probability of FCC's favoring

AT&T when making decisions. An increase in mentions of the FCC regarding AT&T's activities in the long-distance service market in *The New York Times* and an increase in ADA median scores of the *Senate Communications Subcommittee* members interactively influenced FCC policy-making by decreasing the probability that AT&T will be favored, as hypothesized (H:IA.1).

None of contextual factors showed up as a statistically significant predictor of the FCC's adjudicative rule-making decisions over the 31-year period of 1965-1995.

Now I interpret the logistic regression coefficients (b_i) for **Model 2** in terms of its relative influence on the dependent variable, that is, the FCC's adjudicative rule-making decisions, with the reference to odds ratios (e^{bi}). That is, odds ratios were used to describe the strength of an effect by a logit coefficient. With the help of odds ratios, I examined how much change the FCC's adjudicative rule-making decisions occurred by influence of each regressor, that is, how strong the effects of the individual independent variables on FCC policy decisions over the total 31-year period from 1965 to 1995 was. The values of odds ratios for **Model 2**, obtained by the STATA program, were presented in the following **Table 13**.

If X is a measurement variable, then the numbers of the "Odds Ratio" column of the output describes the effect of a one-unit change of each independent variable on the odds [$= P_i/(1-P_i)$]. That is, the odds ratio values (e^{bi}) indicate amounts by which the odds favoring Y=1 (i.e., favoring AT&T's petitions in this model) are multiplied, per 1-unit increase in that X variable "*if other X variables' values stay the same*." Meanwhile, for dummy variables, odds ratios (e^{bi}) describe comparative effects in cases when $X_i = 0$ and $X_i = 1$ "*if other X variables' values stay the same*."

Table 13. Marginal Effect of Each Regressor on the FCC's Adjudicative Rule-Making Decisions in Model 2 over the 31-year period of 1965-1995.

Independ. Variables	Odds Ratio (e^{bi})*	Std. Err. (SE_{bi})	t	p > |t|	95% Conf. Interval		Mean
ATTMS	1.0305	0.0129	+ 2.400	0.016	1.0055	1.0560	65.6390
OCCPET	0.9211	0.0230	- 3.295	0.001	0.8771	0.9672	3.1263
ATTACK	0.1909	0.0402	- 7.871	0.000	0.1264	0.2883	0.5936
NYTI	0.8367	0.0345	- 4.324	0.000	0.7718	0.9071	12.2119
Yp	0.9677	0.0138	- 2.308	0.021	0.9411	0.9951	50.8788
HCCH	0.9912	0.0038	- 2.323	0.020	0.9839	0.9986	205.885
HSC	1.0183	0.0085	+ 2.175	0.030	1.0018	1.0351	46.9521
NIXON	0.1924	0.1248	- 2.541	0.011	0.0540	0.6861	0.0929
FORD	0.1131	0.0623	- 3.955	0.000	0.0384	0.3330	0.0755
CARTER	0.0480	0.0293	- 4.985	0.000	0.0146	0.1585	0.1205
CLINTON	4.2218	1.8476	+ 3.291	0.001	1.7906	9.9542	0.1016
COURT	0.9228	0.0203	- 3.649	0.000	0.8838	0.9635	45.3705
NYxSSC	0.9982	0.0008	- 2.088	0.037	0.9966	0.9999	522.716

*with the other regressors' values staying the same

Logistic Statistics	
Number of Cases (n)	689
Log-Likelihood (lnL)	- 317.88768
LR Chi-Square (df = 13)	319.21
Prob. > Chi-Square (χ^2)	0.0000

From **Table 13**, with the reference to odds ratios (e^{bi}), I interpret how much change in the FCC's adjudicative rule-making decisions occurred by influence of four significant regressors from interest group theory over the total period from 1965-1995.

First, the regulated dominant interest group, AT&T, did influence FCC policy-making. Each 1-rate in the percent of AT&T revenue to the total long-distance service revenues (that is, AT&T's market share) multiplies the odds [= $(P_i/(1 - P_i)$] of favoring AT&T's petition(s) by 1.03. This means that an increase in the AT&T market share does increase the odds of favoring AT&T by 3% [= $100(e^b - 1) = 100(1.03-1)$],[271] as hypothesized (H:I.A3). This may indicate evidence supporting the capture of the federal agency by the regulated interest group to some degree.

Meanwhile, each 1-petition increase by other common carriers multiplies the odds of favoring AT&T's petition(s) by 0.92. That is, one more petition by OCCs against AT&T's interests decreases the odds of favoring AT&T's petition(s) by 8% [= 100(0.92-1)], as hypothesized (H:I.O1). ATTACK is a dummy variable indicating other interest group' strong objection of AT&T petition(s). The odds ratio of ATTACK is 0.1909. This means that the odds of favoring AT&T's petition(s) are just 0.19 times higher when other business or public interest groups file strong petitions to request the FCC to directly reject or object AT&T's petition(s) than when they just file petitions to complain about AT&T's activities, as hypothesized (H:I.O2). In addition, each 1-mention increase in the articles of the FCC regarding AT&T's activities in *The New York Times* for two months before each FCC decision multiplies the odds of favoring AT&T's petition(s) by 0.836. This means that one more article about FCC actions about AT&T in the long-distance

[271] In general, if we take the antilog of a slope coefficient, subtract one (1) from it, and multiply the result by 100, that is, [= $100(e^b-1)$], we get the percent change in the odds [= P/(1-P)] for a unit increase in the

service matters in the newspaper drops the odds of favoring AT&T's petition(s) by about 16.4% [= 100(0.836-1)], as hypothesized (I.P3).

Political institutions' influence was detected from the federal agency itself over the total 31-year period of 1965-1995. Each 1-percentage increase in the probability of FCC's favoring AT&T's petition(s) for the previous year multiplies the odds of favoring AT&T's petition(s) by 0.968. This means that one unit increase in the probability of FCC's favoring AT&T's petition(s) for the previous year reduces the odds of favoring AT&T's petition(s) by about 3.2% [= 100(0.968-1)] for the current year. This finding is contrary to the hypothesis (H:G.F1). This evidence may indicate that in recognition of AT&T's ongoing dominant power over the total 31-year period from 1965 to 1995, the federal regulators continued to keep a balance of interests between AT&T and other business or public interest groups when making decisions.

Two institutional variables indicating ideological influence by federal legislators also show some impacts upon the FCC's adjudicative rule-making decisions over the total 31-year period. Each 1-score increase in the ADA ratings for the chairmen of House authorization committees multiplies the odds of favoring AT&T's petition(s) by 0.991. This indicates that one more point increase in the ADA scores of the House authorization committee chairs decreases the odds of favoring AT&T's petition(s) by about 0.9% [= 100(0.991-1)], as hypothesized (H:G.C3). Meanwhile, each 1-score increase in the ADA median ratings for the House authorization subcommittee members multiplies the odds of favoring AT&T's petition(s) by 1.018. This means that one more point increase in median ADA scores of the House authorization subcommittee members increases the

---

regressor.

odds of favoring AT&T's petition(s) by about 1.8% [= 100(1.018-1)], contrary to the hypothesis (H:G.C3).

Impacts by American presidents, especially through their appointments and reappointments of the FCC Commissioners, are considerable upon the FCC's adjudicative rule-making decisions over the total 31-year period of 1965-1995. Each presidential influence variable (NIXON, FORD, CARTER, and CLINTON) is a dummy variable indicating presidential influence, so it is needed to be careful when interpreting its coefficient with the odds ratio. First, the odds ratio of NIXON is 0.192. This means that the odds of FCC's favoring AT&T when making decisions are just 0.19 times higher after President Nixon assumes office than before he assumes or after he leaves office, compared to the average odds during the administrations of the other Presidents. Next, the odds ratio 0.113 of FORD indicates that the odds of favoring AT&T in FCC decisions are just 0.11 times higher after President Nixon assumes office than before he assumes or after he leaves office, compared to the average odds during the administrations of the other Presidents. The odds ratio of CARTER is 0.048. This means that the odds of favoring AT&T's petition(s) are just 0.05 times higher after President Carter assumes office than before he assumes or after he leaves office, compared to the average odds during the administrations of the other Presidents. However, a point to note is that all variables indicating the influence of American presidents (Nixon, Ford and Carter) before the AT&T break-up are negatively related to FCC decisions favoring AT&T. Conversely, the odds ratio of the coefficient on CLINTON is 4.22 and its coefficient has a positive sign. This means that the odds of favoring AT&T's petition(s) are 4.22 times higher after President Clinton assumes office than before he assumes office, compared to

the average odds during the administrations of the other Presidents, as hypothesized (H:G.P1). President Clinton's impact is considerable relative to the influence derived by the other Presidents and positively related to FCC policy-making favoring AT&T.

In addition, institutional influence from the judiciary appears to be substantial and strong on the FCC's adjudicative rule-making decisions through the total 31-year period from 1965 to 1995. Each 1-percentage increase in AT&T victory rate in the court decisions regarding long-distance service matters for the previous years multiplies the odds of favoring AT&T's petition(s) by 0.923. This means that one percent increase of AT&T court victory reduces the odds of favoring AT&T's petition(s) by 7.7% [= 100(0.923-1)], which is still contrary to the hypothesis (H:G.J1). This finding for court influence indicates that whether before or even after the economic or political power of AT&T assumably weakened by its break-up effective in 1984, AT&T's victories in the courts did not induce FCC policy decisions favoring the interests of the long-term dominant carrier itself.

Interacting with public interest reflected in *The New York Times*, the *Senate Communications Subcommittee* also did group influence to some degree on the FCC's adjudicative rule-making decisions regarding long-distance service matters over the total 31-year period, as hypothesized (H:IA.1). Each 1-unit (mention x score) increase in the interaction term of the articles on the FCC regarding AT&T's activities in the daily newspaper and the ADA median scores of federal legislators who are responsible for oversight in the Senate subcommittees multiplies the odds of favoring AT&T's petition(s) by 0.998. This means that one combined unit increase in both FCC articles in *The New York Times* and the median ADA scores of the *Senate Communications*

Subcommittee members reduces the odds of FCC's favoring AT&T's petition(s) by just 0.2% [= 100(0.998-1)].

Here, I tried to interpret each logit coefficient for **Model 2** in terms of probabilities [$\hat{P} = 1 / (1 + e^{-L})$].[272] Over the total 31-year period from 1965-1995, the probability that the FCC will make decisions favoring AT&T is about 45.8 percent ($\hat{P} = 0.4583$) when the mean values are entered for all regressors.[273] To compare the influence of each independent variable on the probability of FCC's favoring AT&T, the 25th and 75th percentile values were entered into the logit equation (**Model 2**) for each regressor, while holding the values of the remaining regressors constant at their mean values. Then, the predicted probability of FCC's favoring AT&T with each independent variable fixed at its 25th percentile was compared to the predicted probability with the independent variable at its 75th percentile (**Table 14**).[274]

---

[272] Logit regression (also called logistic regression) takes the following formula with a logit or log odds as left-hand-side variable: $\hat{L_i} = \ln[P_i/(1 - P_i)] = \beta_0 + \beta_1 X_{i1} + \beta_2 X_{i2} + \ldots + \beta_{K-1} X_{iK-1}$. If the logit (L) is a linear function of X variables, then probability (P) is a nonlinear, S-shaped function. Predicted probabilities approach, but never reach or exceed, the boundaries of 0 and 1. Thus, logit regression provides a more realistic model for probabilities than does linear regression. Here, $P_i/(1 - P_i) = e^{Li}$ is called "odds," $\ln[P_i/(1 - P_i)]$ "logit or log odds," and e^{bi} "odds ratios." Reversing the logit formation yields "predicted probabilities:" $\hat{P}[Y=1] = 1 /(1 + e^{-Li})$.

[273] The probability is calculated as follows:

$$\begin{aligned}\hat{L_i} = \ln\{P_i/(1-P_i)\} &= 9.176 + 0.30*ATTMS - 0.082*OCCPET - 1.656*ATTACK - 0.178*NYTI \\ &\quad - 0.033*Y_p - 0.009*HCCH + 0.018*HSC - 1.648*NIXON - 2.180*FORD \\ &\quad - 3.038*CARTER + 1.440*CLINTON - 0.080*COURT - 0.002*NYxSSC \\ &= 9.176 + 0.030*(65.6390) - 0.082*(3.1263) - 1.656*(0.5936) - 0.178*(12.2119) \\ &\quad - 0.033*(50.8788) - 0.009*(205.8853) + 0.018*(46.9521) - 1.648*(0.0929) \\ &\quad - 2.180*(0.0755) - 3.036*(0.1205) + 1.440*(0.1016) - 0.080*(45.3705) \\ &\quad - 0.002*(522.7163) \\ &= -0.1670.\end{aligned}$$

Thus, $\hat{P_i} = 1 / (1 + e^{-L}) = 1 / (1 + e^{-(-0.1670)}) = 1 / (1 + 1.1818) = 0.4583$.

[274] 'Conditional effect plots,' which can be obtained by the STATA but not provided in the study, can provide a graphical view of relationships between probabilities and X variables.

Table 14. Conditional Effect of Each Regressor by its Percentile Values on Probability of FCC's Favoring AT&T in the Adjudicative Rule-Making Decisions over the 31-year period of 1965-1995 in Model 2.

Independ. Variables	Percentile Values			Probabilities*			Difference
	25%	50%	75%	$P^{\wedge}_{25\%}$	$P^{\wedge}_{50\%}$	$P^{\wedge}_{75\%}$	$P^{\wedge}_{75\%} - P^{\wedge}_{25\%}$ ($\Delta\%$)**
ATTMS	50.7	60.2	82.6	0.351	0.418	0.585	+ 0.234 (+ 66.67%)
OCCPET	1	1	4	0.502	0.502	0.441	- 0.061 (- 12.15%)
ATTACK	0	1	1	0.693	0.302	0.302	- 0.391 (- 56.42%)
NYTI	8	11	16	0.642	0.512	0.301	- 0.341 (- 53.12%)
Yp	45.3	50.0	57.8	0.504	0.466	0.402	- 0.102 (- 20.24%)
HCCH	192	210	240	0.490	0.449	0.384	- 0.106 (- 21.63%)
HSC	40	46	55	0.428	0.454	0.495	+ 0.067 (+ 15.65%)
NIXON	0	0	0 1****	0.497	0.497	0.497 0.160****	0 (no change) - 0.337 (- 67.81%)****
FORD	0	0	0 1****	0.499	0.499	0.499 0.101****	0 (no change) - 0.398 (- 79.76%)****
CARTER	0	0	0 1***	0.550	0.550	0.550 0.055***	0 (no change) - 0.495 (- 90.00%)***
CLINTON	0	0	0 1***	0.422	0.422	0.422 0.755***	0 (no change) + 0.333 (+ 78.91%)***
COURT	41.8	44.6	46.3	0.530	0.474	0.440	- 0.090 (- 16.98%)
NYxSSC	300	472	665	0.569	0.484	0.389	- 0.180 (- 31.63%)

*predicted probabilities of FCC's favoring AT&T when each regressor is entered in the **model equation at its 25th and 75th percentile values with the other regressors at their mean values**

**$(P^{\wedge}_{75\%}/P^{\wedge}_{25\%} - 1) \times 100$[275]

***90th percentile value and $P^{\wedge}_{90\%}$

****95th percentile value and $P^{\wedge}_{95\%}$

[275] We need to be very careful to interpret the differences of probabilities when each regressor is entered in the model equation at its 25th and 75th percentile values. The 'percentage' change in two probabilities for each regressor in the model must be calculated as $(P^{\wedge}_{75\%}/P^{\wedge}_{25\%} - 1) \times 100$. For example, in the case of ATTMS, the difference between two probabilities (0.585 – 0.351) is +0.234, not +23.4%. Instead, the 'percentage' change in two probabilities is (0.585/0.351 – 1) x 100 = +66.667(%).

Now I compare the relative influence of four independent variables indicating interest group influence on the 'probability' of FCC's favoring AT&T over the total 31-year period of 1965-1995.

First, if the regressor AT&T's Market Share is set to its 25th percentile value in the logit equation (**Model 2**), holding the other regressors constant at their mean values, the probability that the FCC will favor AT&T when making decisions is 0.351. If the regressor AT&T's Market Share is set to its 75th percentile value, with the remaining regressors at their mean values, the probability that the FCC will make decisions in AT&T's favor increases up to 0.585. The difference is +0.234, which means a 66.67% increase in the probability of favoring AT&T. This indicates that as the market share of AT&T in the total long-distance service revenues goes up, the FCC Commissioners are more likely to favor AT&T's petition(s). This provides some evidence of the influence of the regulated interest group on regulatory settings. This finding illustrates some potential for the federal regulators to be captured by the regulated interest group, AT&T, in the long-distance service market over the total 31-year period.

However, the influence of other long-distance carriers and other public interest groups is considerable. When the number of OCCs' petitions against AT&T is entered into the model equation (**Model 2**) at its 25th percentile and other regressors are entered at their mean values, the probability that the FCC will favor AT&T when making decisions is 0.502. When the number of OCCs' petitions reaches its 75th percentile value, with the other regressors at their mean values, the probability of FCC's favoring AT&T drops to 0.441. As more petitions against AT&T are filed by OCCs with the FCC, the probability

of favoring AT&T decreases by 0.061, which means a 12.15 percent decrease in the probability of favoring AT&T when making decisions.

The impact of ATTACK is very great on FCC policy-making in terms of relative influence on the probability. As the regressor ATTACK is a dummy variable, we need to be careful to interpret it. If the 25th percentile value (0) of the regressor (ATTACK) enters the model equation (**Model 2**), which means that other business and public interest groups did not file strong petitions to directly reject AT&T's interests, while holding the remaining regressors constant at their mean values, the probability of FCC's favoring AT&T is 0.693. If the regressor (ATTACK) is entered into the logit model at its 75th percentile value (1), which means that other business and public interest groups filed strong petitions to request the FCC to directly reject AT&T's petition(s), with the other regressors at their mean values, the probability the FCC will favor AT&T when making decisions drops up to 0.302. The difference (–0.391) means a 56.42 percent decrease in the probability of favoring AT&T. The filing of strong petitions by other interest groups against AT&T has a very large negative effect upon the probability of FCC's favoring AT&T when the federal regulators make adjudicative rule-making decisions over the 31-year period of 1965-1995.

In addition, the probability that AT&T will be favored in FCC decisions is 0.642 if the number of mentions of the FCC regarding AT&T's activities in *The New York Times* is entered into the model equation (**Model 2**) at its 25th percentile, while holding the remaining regressors are held constant at their mean values. The probability that AT&T will be favored in FCC policy-making decreases to 0.301 when the number of *The New York Times* mentions of the FCC regarding AT&T's activities reaches its 75th

percentile value with the other regressors at their mean values. The difference (–0.341) means a 53.12 percent decrease in probability of favoring AT&T in FCC policy-making. This means that the public interest reflected in the daily newspaper has also considerable influence on the FCC's adjudicative rule-making decisions regarding AT&T in the long-distance telecommunications service matters over the total 31-year period of 1965-1995.

Second, I examined the relative influence of eight independent variables indicating institutional differences on the probability of FCC's favoring AT&T when making decisions. The influence by the federal agency itself was found to be significant. When the ratio of favoring AT&T in previous FCC decisions is set to its 25th percentile value in the logit equation (**Model 2**), holding the other regressors at their mean values, the probability of FCC's favoring AT&T in the current year is 0.504. However, if the ratio of favoring AT&T in previous FCC decisions reaches its 75th percentile value with the other regressors at their mean values, the probability of favoring AT&T in the current year decisions decreases to 0.402. The difference is –0.102, which means a 20.24 percent decrease in the probability of favoring AT&T, contrary to hypothesis (H: G.F1). This finding means that if the dominant carrier, AT&T, got what it wanted in FCC decisions for the previous year, the federal regulators try to deny the petition(s) by AT&T for the current year. This may indicate that the FCC Commissioners, who sufficiently recognized AT&T's on-going dominant position in the long-distance service market, before or even after its break-up, wanted to keep a balance of interests between AT&T and OCCs in the market.

The influence by federal legislators (especially, from the House committees and subcommittees) also appears to be substantial on FCC policy-making for the total 31-year

period from 1965-1995. When the House authorization committee chair's ADA score is entered into the logit equation (**Model 2**) at its 25th percentile and the other regressors are entered in their mean values, then the probability that AT&T's petitions will be favored by the FCC is 0.490. When the House authorization committee chair's ADA score reaches its 75th percentile with the other regressors at the mean values, then the probability of favoring AT&T drops to 0.384. As liberalism increases among key federal legislators who are responsible for oversight over the FCC in the House committee, the probability of FCC's favoring AT&T decreases by 0.106, which means a 21.63 percent decrease in the probability of favoring AT&T, as hypothesized (H:G.C3).

Meanwhile, the probability that the FCC will favor AT&T when making decisions is 0.428 when the ADA median score of House authorization subcommittee members is set to its 25th percentile and the other independent variables are held at their mean values. However, the probability of favoring AT&T increases to 0.495 when the ADA median score of the House congresspersons reaches its 75th percentile with the other regressors at their mean values. The difference (+0.067) means a 15.65 percent increase in the probability of favoring AT&T in FCC policy-making. Liberalism of the federal legislators who are responsible for oversight over the FCC in the House subcommittee is positively related to the FCC's adjudicative rule-making decisions which favor AT&T's interests, contrary to the hypothesis (H:G.C3).

American presidents also had considerable impact upon the FCC's adjudicative rule-making decisions over the total 31-year period of 1965-1995. Four President variables (NIXON, FORD, CARTER and CLINTON) were found to be significant predictors of the probability of FCC's favoring AT&T when making decisions, and each

of them is a dummy variable indicating the presidential influence on FCC policy-making through his appointment and reappointment power on the FCC Commissioners. Here, a point of note is that all the 25th and 75th percentile values of four President influence variables are zero (0), which means that each President did not assume office yet or left office. This also means that the predicted probabilities of favoring AT&T in FCC decisions are the same for each President variable. Accordingly, in order to assess how much each President did influence the probability of FCC decisions favoring AT&T 'after he assumes office' in comparison with 'before he assumes office' or 'after he leaves office,' a percentile with the value of '1' is needed for each presidential variable. Hence, I used 95th percentiles (with '1' values) for NIXON and FORD and 90th percentiles (with '1' values) for CARTER and CLINTON, as presented in the parentheses in **Table 14**. However, the impact estimated by using such 90th or 95th percentile cannot provide direct comparison with the impact estimated by using the 75th percentile. Accordingly, we need to be careful in interpreting the relative influence of each of four President variables on the probability of favoring AT&T when comparing it with that of other variable using the 75th percentile value.

First, the probability of favoring AT&T in FCC decisions is 0.497 when the 25th percentile value (0) of NIXON, which means that President Nixon did not assume office yet or left office, enters the logit equation (**Model 2**) and other variables are fixed at their mean values. Even when the 75th percentile value (0) of NIXON enters the model, the probability of favoring AT&T is the same. Accordingly, the 95th percentile value (1) of NIXON, which means that President Nixon assumed office, was entered in the model, holding the other variables constant at their mean values, and thus the probability that

AT&T will be favored by the FCC appeared as a low value, 0.160. The difference (−0.367) means a 67.81 percent drop in the probability of favoring AT&T after President Nixon assumed office.

In addition, if FORD is set to its 25th percentile value (0) or 75th percentile value (0), which means that President Ford did not assume office yet or left office, holding the other variables at their mean values, the probability that the FCC will make decisions in AT&T favor is the same, 0.499. If FORD is set to its 95th percentile value (1), with the other variables at their mean values, the probability that the FCC will make decision favoring AT&T is 0.101. This means that after President Ford assumed office, the probability of favoring AT&T in FCC policy-making dropped by 0.398, which means a 79.76 percent decrease in the probability of favoring AT&T.

Also, when CARTER is entered into the model at its 25th percentile value (0) or 75th percentile value (0), which means that President Carter did not assume office yet or left office, and the other regressors are entered at their mean values, the probability that AT&T will be favored in FCC policy decisions is the same, 0.550. Hence, when CARTER is entered into the model at its 90th percentile value (1), with the other regressors at their mean values, the probability that AT&T will be favored in FCC policy-making decreases up to 0.055. This difference (−0.495) means a 90.00 percent drop in the probability of favoring AT&T in FCC policy-making after President Carter assumed office.

Meanwhile, President Clinton's influence is positively related to FCC policy-making favoring AT&T. If the 25th or 75th percentile value (0) of CLINTON, which means that President Clinton did not assume office yet, enters the model and the other

regressors are entered at their mean values, the probability of favoring AT&T is the same, 0.422. However, if CLINTON reached its 90th percentile value (1) with the other regressors at their mean values, which means that President Clinton assumed office, the probability that AT&T will be favored by the FCC increases up to 0.755. The difference (+0.333) means a 78.91 percent increase in the probability favoring AT&T when making decisions after the President assumed office.

In short, the chief executives, Nixon, Ford and Carter, who assumed office before the break-up of AT&T, resulted in more decreased probability that the FCC will make decisions in AT&T's favor. A monopolistic position of AT&T in the long-distance service market before its break-up seemed to strong enough for American presidents to carry political signals against AT&T so that the FCC Commissioners came to deny more AT&T's petition(s) when making decisions. Conversely, President Clinton, the chief executive who assumed office after the break-up of AT&T, resulted in an increased probability of FCC's favoring AT&T as his deregulatory policy philosophy carries political signal of less restricted regulation on AT&T as well as OCCs to the federal regulators.

The institutional influence by the judiciary is also found to be significant on FCC policy decisions over the total 31-year period of 1965-1995. If the ratio of AT&T court victory is entered into the logit equation (**Model 2**) at its 25th percentile, while holding the remaining regressors constant at their mean values, the probability that AT&T will be favored in FCC policy-making is 0.530. If the ratio of AT&T court victory reaches its 75th percentile value, the probability that the FCC will favor AT&T when making decisions drop to 0.440. This difference (–0.09) means a 16.98 percent decrease in the

probability of favoring AT&T, indicating that the AT&T court victories are negatively related to FCC decisions favoring AT&T, still contrary to the hypothesis (H:G.J1).

Finally, an interaction term indicating the interactive influence of both public interest and congressional liberalism shows up as a significant predictor of the FCC's adjudicative rule-making decisions over the total 31-year period of 1965-1995. If the interaction term of the number of mentions of the FCC regarding AT&T's activities in *The New York Times* and the ADA median score of *Senate Communications Subcommittee* members is entered into the logit equation (**Model 2**) at its 25th percentile value, while holding the other regressors constant at their mean values, then the probability that the FCC will favor AT&T when making decisions is 0.569. However, when the interaction term reaches its 75th percentile value with the other variables at their means, the probability of FCC's favoring AT&T when making decisions decreases to 0.389. This decrease (–0.180) means a 31.63 percent drop in the probability of favoring AT&T, which indicates that as liberalism increases among federal legislators who are responsible for oversight over the FCC in the Senate and simultaneously public exposure of FCC behavior regarding AT&T increases in the daily newspaper, the federal regulators responded by denying AT&T's petition(s) when making decisions, as hypothesized (H: IA.1).

In conclusion, for the total 31-year period from 1965 to 1995, the significance tests on the logit coefficients and the two methods of interpretation of their relative influence on the federal regulators' policy-making in **Model 2** did confirm the impacts of interest groups and political institutions upon the FCC's adjudicative rule-making decisions regarding AT&T in the U.S. long-distance telecommunications service matters.

The results support several of my hypotheses about the interest group and political institutional factors affecting FCC policy-making and provide some reasonably interesting, unexpected findings. The credibility of the results was supported by some important diagnostic tests for the logit analysis that I have already executed to clear up the statistical problems such as multicollinearity and outliers with poor fit and influential cases.

The FCC Commissioners, who are responsible for telecommunications regulation, responded to business and public interests involved in the long-distance service matters by granting or denying their petitions when making decisions over the total 31-year period including the historical event of AT&T break-up.

First, the impact of the long-term regulated dominant group (AT&T) upon FCC policy decisions is substantial over the total 31-year period. An increase in the AT&T market share in terms of long-distance service revenues led the federal regulators to make decisions in ways consistent with the dominant, strong interest of AT&T. This finding may support some evidence of capture of federal agency by the regulated interests.

However, the influence from other long-distance carriers and other public interest groups on regulatory settings was found to be considerable over the total 31-year period. As other common carriers (OCCs) filed more petitions against AT&T, the federal regulators did not disregard their voices and acted to reject AT&T's interests to some degree when making decisions.

Above all, strong petitions filed by other business or public interest groups to request the FCC to directly reject AT&T's petition(s) had the greatest impact upon FCC

policy-making by sharply decreasing the likelihood that the federal regulators will make decisions in AT&T's favor.

In addition, public interest reflected in *The New York Times* was strong enough to signal the FCC Commissioners to more regulate AT&T's activities that were frequently criticized as monopolistic, unlawful or unfair regarding the long-distance telecommunications service matters. As more articles on FCC actions about AT&T's activities in the long-distance service matters were carried in the daily newspaper, the federal regulators responded by denying more AT&T's petition(s) when making decisions.

This finding for media exposure of the federal regulators indicates the federal regulators' response to public interest and Congress as well. First, as more media exposure of FCC actions regarding the dominant carrier could reflect the American public's dislikes against the dominant position or monopolistic behaviors that AT&T took in the long-distance telecommunications service market, the FCC Commissioners reflected such public interest in their policy-making. In addition, this media exposure of the federal regulators' activities regarding AT&T could precipitate increased oversight of the FCC by federal legislators, who must pay attention to public interest expressed in the media for their reelection, and then trigger strong political signals from federal legislators to the FCC Commissioners so that they reject the petition(s) by the long-term dominant carrier when making decisions.

Institutional influence from the federal agency itself, Congress, the Presidents and the courts was also critical over the FCC's adjudicative rule-making decisions over the total 31-year period for 1965-1995.

The federal agency exerted some impact upon its own policy-making by considering its past decision-making direction. As the previous policy decisions turned out in a pro-AT&T direction, the FCC Commissioners reacted to harm AT&T's interests in the current decision-making, contrary to the hypothesis (H:G.F1). This finding indicates that the federal regulators estimated that AT&T's interests had been more favored and thus they judged that the interests of OCCs or/and public organizations should be protected as much in the regulatory settings.

Consistent with the traditional congressional dominance theory that legislative control of committees or subcommittees is substantial over agency policy-making, Congress, through its subsets (especially House authorization committees or subcommitees), did have some group influence on the FCC's telecommunications regulatory policy-making. A negative sign on the ADA scores for chairs of the House committees suggests that as liberalism increases among key federal legislators who are responsible for oversight over the FCC in the House, the FCC Commissioners responded to political pressure from Congress by denying more AT&T's petitions, as hypothesized (H: G.C3).

Meanwhile, the unexpected positive sign on the median ADA scores of the House authorization subcommittee members suggests that as liberalism increases among federal legislators who are responsible for oversight over the FCC in the House, the federal agency responded by granting more AT&T's petitions, contrary to the hypothesis (H:G.C3).

These findings on congressional influence suggest that the FCC Commissioners made decisions by responding to political signals from federal legislators who acted

independently to deal with specialized areas like long-distance telecommunications service matters, no matter whether they are liberals or conservatives, as hypothesized (H:G.C4).

Federal legislators in the Senate also played substantial roles in FCC policy-making. Although not separate effects, the federal legislators in *Senate Communications Subcommittees* did have some group impacts, jointly with influence of public interest reflected in *The New York Times*, upon the FCC's adjudicative rule-making decisions regarding long-distance service matters over the total 31-year period of 1965-1995. As hypothesized (H:IA.1), liberalism in the subcommittee legislators led the federal regulators to act to hurt AT&T's interests as the liberal legislators were responding to the American public's interest expressed in the newspapers, which had been usually opposite to AT&T's monopolistic activities in the long-distance telecommunications service market.

The other variables indicating political preferences of the other House and Senate subsets were excluded from the final model (**Model 2**) due to statistical insignificance or multicollinearity problems.

Findings for presidential influence from the total analysis with the 31-year period of 1965-1995 provided clear evidence of the difference in the impacts upon FCC policy-making by American presidents who assumed office before and after the AT&T break-up, no matter whether they are Republicans or Democrats. Through their power to appoint or reappoint the FCC Commissioners, the chief executives (Nixon, Ford and Carter), who assumed offices before the breakup of AT&T, had a negative impacts upon FCC policy decisions favoring AT&T's interests. Meanwhile, President Clinton's power

to appoint or reappoint the FCC Commissioners had a positive influence on the probability of FCC decisions favoring AT&T's interests. JOHNSON, REAGAN and BUSH appeared to be statistically insignificant and thus were not included in the final model specification (**Model 2**). Even though JOHNSON and BUSH were statistically insignificant, an interesting finding is that the coefficient on President Johnson, who assumed office before the AT&T break-up has a negative sign and the coefficient on President Bush, who assumed office after the divestiture of AT&T has a positive sign. In the case of the Reagan administration, the difference of its impacts upon FCC policy-making before and after the AT&T break-up (effective in 1984) cannot be correctly assessed from the analysis (**Model 2**) with the total 31-year period, as President Reagan assumed office in 1981 and left office in 1988.

These findings for the chief executives may provide some evidence that American presidents who served before the historical break-up of AT&T sent political signals to the FCC Commissioners so that they were less likely to favor AT&T's interests, while American presidents who served after the historical event of AT&T divestiture sent political signals to the FCC Commissioners so that they were more likely to favor AT&T's interests, no matter what their party affiliations are (Republicans or Democrats). That is, the influence of the Presidents on FCC policy-making before the AT&T break-up is the very opposite to that of the Presidents after the divestiture of AT&T. These results suggest the following two points. First, American presidents (Nixon, Ford, Carter, and maybe Johnson and Reagan) who assumed office before the AT&T break-up sufficiently recognized AT&T's monopolistic position in the long-distance service market and thus wanted to continue to regulate the long-term dominant carrier, even though they all had a

political philosophy to deregulate the long-distance telecommunications system. Second, American presidents (Clinton, and maybe Reagan and Bush) who assumed office after the AT&T break-up estimated that AT&T's dominant or monopolistic power was declining in the long-distance service market after its divestiture, and thus the federal regulators streamlined strong regulation against the long-term dominant carrier as the Presidents' deregulatory policy intended to arrange more competitive long-distance market settings after the AT&T break-up, which were advantageous to AT&T as well as OCCs.

Over the total 31-year period from 1965 to 1995, the judiciary also had a strong influence on the FCC's adjudicative rule-making decisions by inflicting the interest of the long-term regulated dominant carrier, AT&T. Unexpectedly, the increased court victory rates of AT&T in the previous years did not act as a favorable factor for AT&T itself in FCC policy-making. In contrast to the courts' favoring AT&T's interests, the federal regulators did not favor its interests when making decisions. Although federal regulators used many previous court decisions to support their judgments when making decisions and knew that AT&T won many court cases, the FCC Commissioners did not want to protect the dominant interest group they regulated in the long-distance telecommunications service market. This finding may suggest that federal regulators, who all the time recognized and watched AT&T's dominant or monopolistic position in the long-distance service market, tried to keep a balance of interests between AT&T and OCCs or other public interest groups in the market and regulatory settings.

Over the total 31-year period from 1965-1995 explored in the analysis, all of six macroeconomic and telecommunications economic variables indicating the influence of

contextual factors were excluded from the final model **(Model 2)** due to the multicollinearity problems.

3-2. DIAGNOSIS OF INITIAL LOGIT MODELS FOR TIME PERIOD II (1965 1983) AND TIME PERIOD III (1984-1995)

After the estimation of a logit model for the full time period (1965-1995) as presented in the previous section (**3-1**), I estimated the logit model for each of the two subperiods, that is, the 19-year period (1965-1983) before the break-up of AT&T and the 12-year period (1984-1995) after the divestiture of AT&T, using exactly the same observations (within that subperiod) and variables.

I provide the initial estimation results for the 19-year period before the divestiture of AT&T and for the 12-year period after the break-up of AT&T in **APPENDIX D**. However, I do not consider these logit models as the final model specifications for the two subperiods as high multicollinearity problem appeared between regressors ATTMS and COURT in each model. The matrices of correlations between estimated coefficients in **APPENDIX D** show that the coefficients of correlation between the two variables in the initial models for the subperiods before and after the AT&T break-up are 0.8667 and 0.9579, respectively, suggesting that multicollinearity between the two regressors is a great problem in each model. In general, high multicollinearity causes problems: (i) higher standard errors and lower t-statistics; (ii) unexpected coefficient magnitudes, signs, or sign reversals; and (iii) nonsignificant coefficients despite a high pseudo-R^2. Accordingly, the estimated standard errors, t-statistics and coefficient magnitudes and signs of ATTMS and COURT in each initial model may result from high

multicollinearity between the two variables. In addition, the fact that the two variables are so highly correlated means that it is impossible to isolate the individual impact of either ATTMS or COURT on FCC policy-making.

Thus, I determined to reestimate each initial logit model by excluding ATTMS because dropping ATTMS instead of COURT resulted in a better model for each subperiod, which is improved in terms of model statistics such as standard errors, Wald t-statistics and levels of significance ($p > |t|$), model prediction rates, and chi-square values (χ^2) as good-of-fit statistics.

In addition, the regressors ATTACK and Yp both appeared to be statistically insignificant ($|t| = 0.879$ and $|t| = 0.680$, respectively) with negative signs for the 19-year period before the break-up of AT&T, while the two variables showed up as very significant ($|t| = 8.756$ and $|t| = 2.878$, respectively) with negative signs for the 12-year period after the divestiture of AT&T. As hypothesized (H:I.O3), the finding on ATTACK indicates that as AT&T dominated the long-distance service market before its break-up, its political economic power was strong enough to nullify OCCs' strong petitions against the monopolistic carrier in FCC policy-making. Meanwhile, it indicates that as AT&T's competitors and other public interest groups effectively acted to stop AT&T from dominating the long-distance market after the divestiture of AT&T, the FCC Commissioners had to respond OCCs' strong petitions by hurting more AT&T's interests when making decisions.

The findings on Yp indicate that previous pro-AT&T policy-making led the FCC Commissioners to more likely to reject AT&T petitions because the federal regulators wanted to keep a balance of interests between AT&T and OCCs in the regulatory setting

as they sufficiently recognized AT&T's on-going market power even after the break-up of AT&T, while the FCC's previous pro-AT&T policy-making had no significant (negative) effect upon the current FCC policy-making favoring AT&T because AT&T's political economic power before its break-up was strong enough to influence the FCC Commissioners not to make decisions to balance interests between AT&T and OCCs by rejecting more AT&T's petitions in consideration of their previous policy-making.

Therefore, excluding the independent variables that appeared to be insignificant or highly correlated from the initial logit models, I obtained the final logit model specifications for each subperiod: **Model 3** for the 19-year period before the AT&T break-up and **Model 4** for the 12-year period after the AT&T divestiture, as presented in the following sections (**3-3** and **3-4**).

3-3. RESULTS FOR TIME PERIOD II (1965-1983): BEFORE THE AT&T BREAK-UP

The estimation results (**Model 3**) in **Table 15** show the impact of each variable from regulation theories regarding interest group power and political institutions' roles upon the FCC's adjudicative rule-making decisions for Time Period II over the 19-year period of 1965-1983. **Model 3** is the final model specification that passed the diagnostic test for multicollinearity among regressors, as no high multicollinearity problem appeared in the matrix of coefficient correlations in **Table 16**.

To find any difference between this subperiod and the full period, I estimated the logit model for this subperiod using exactly the same variables, which were found to be statistically significant by the total analysis for the full time period. After considering

multicollinearity problems between the estimated coefficients (and between the regressors as well) in the model, I obtained the final logit model (**Model 3**) for the 19-year period before the break-up of AT&T. Nine variables were found to be statistically significant at the 0.05 level or theoretically meaningful and thus appeared to have some effects on the dependent variable, that is, the FCC's adjudicative rule-making decisions over the 19-year period 1965-1983. All of six contextual variables that have been excluded from the total model (**Model 2**) due to multicollinearity problems were not considered in this model specification (**Model 3**). Four interaction terms were constructed as previously presented, but only one of them was found to be significant.

The logit model (**Model 3**) has no statistical problems such as influential cases and high discrimination. In the final model specification (**Model 2**) for the total period (1965-1995), the total data have shown no outlier problems, and this model specification (**Model 3**) was derived from data for the subperiod (1965-1983) using exactly the same observations. Nevertheless, for this logit model I tried to check outlier problems by executing Hosmer and Lemeshow's (1989) three diagnostic tests which show the relationships between 'Predicted Probability' ($\hat{P}$) and three statistics: 'Change in Pearson χ^2' (χ_P^2), 'Change in Deviance' ($\Delta\chi_D^2$), and 'Change in Deviance' ($\Delta\chi_D^2$). The three tests revealed no significant outlier problems (*see* **APPENDIX B**). Thus, as the logit model has passed important diagnostic tests, I selected **Model 3** as the most appropriate logit model specification for the FCC's adjudicative rule-making decisions in Time Period II (1965-1983) before the AT&T break-up.

Table 15. Final Logit Regression of Variables from Regulatory Theories on the FCC's Adjudicative Rule-Making Decisions (Model 3) during the 19-year period of 1965-1983.

Independ. Variables	Coef. (b_i)	Std. Err. (SE_{bi})	t	p > |t|	95% Conf. Interval		Mean
OCCPET	- 0.1507	0.0566	- 2.664	0.008	- 0.2616	- 0.0399	2.4229
NYTI	- 0.1334	0.0587	- 2.271	0.023	- 0.2485	- 0.0183	12.2509
HCCH	- 0.0065	0.0055	- 1.168	0.243	- 0.0173	0.0044	167.677
HSC	+ 0.0234	0.0095	+ 2.456	0.014	0.0047	0.0421	42.8154
NIXON	- 0.9926	0.5854	- 1.696	0.090	- 2.1399	0.1547	0.2294
FORD	- 1.4386	0.5137	- 2.800	0.005	- 2.4456	- 0.4317	0.1864
CARTER	- 2.3799	0.6302	- 3.777	0.000	- 3.6150	- 1.1447	0.2975
COURT	- 0.0407	0.0196	- 2.080	0.038	- 0.0790	- 0.0023	46.7746
NYxSSC	- 0.0031	0.0016	- 2.017	0.044	- 0.0062	- 0.0001	432.319
_cons	6.3060	1.8306	3.445	0.001	2.7180	9.8940	1

Statistics for Logit Model 3	
Number of Cases (n)	279
Log-Likelihood (lnL)	- 148.11332
LR Chi-Square (df = 9)	90.26
Prob. > Chi-Square (χ^2)	0.0000

Prediction Table for FCC Decisions in Logit Model 3			
Observed Probability	Predicted Probability		Prediction Rate (%)
	0	1	
0	94	50	144 (65.28%)
1	32	103	135 (76.30%)
Total Prediction Rate (%)			279 (70.61%)

*P(Y=1): Favoring AT&T

Table 16. Correlations between Estimated Coefficients of Logit Model 3.

Coef.	OCCPET	NYTI	HCCH	HSC	NIXON	FORD	CARTER
OCCPET	1.0000						
NYTI	- 0.0691	1.0000					
HCCH	0.0483	- 0.3586	1.0000				
HSC	- 0.2171	- 0.2674	0.0873	1.0000			
NIXON	- 0.0121	- 0.1129	0.4892	0.1686	1.0000		
FORD	0.2165	0.4366	0.1213	- 0.1427	0.2996	1.0000	
CARTER	0.2613	0.1063	0.5858	- 0.0829	0.3726	0.5457	1.0000
COURT	0.2662	0.3557	0.0953	- 0.0080	- 0.3351	0.3542	0.5138
NYxSSC	0.1037	- 0.7974	0.4952	0.1118	0.2109	- 0.2817	0.2019
_cons	- 0.2190	- 0.0499	- 0.7229	- 0.1859	- 0.2764	- 0.4175	- 0.8223

	COURT	NYxSSC	_cons
COURT	1.0000		
NYxSSC	- 0.2026	1.0000	
_cons	- 0.6739	- 0.2523	1.0000

Hence, the final logit equation (**Model 3**) for the FCC's adjudicative rule-making decisions in Time Period II (1965-1983) from **Table 15** is approximately:

$$\mathbf{L_i^{\wedge} = 6.306 - 0.151*OCCPET - 0.133*NYTI - 0.006*HCCH + 0.023*HSC - 0.993*NIXON - 1.439*FORD - 2.380*CARTER - 0.041*\ COURT - 0.003*NYxSSC}$$

where

$\mathbf{L_i^{\wedge}}$: predicted log odds of favoring AT&T's petition(s), that is, $\mathbf{\ln\{P_i / (1-P_i)\}}$, and **P** is the probability that the FCC will make a decision in favor of AT&T's interests regarding the long-distance telecommunications service matters;

OCCPET : number of petitions filed by other common carriers or interexchange carriers except AT&T and its affiliates, representing other long-distance telecommunications companies' interests, in each FCC decision case;

NYTI : number of mentions of the FCC regarding AT&T's activities in long-distance service matters for two months before each FCC decision case in *The New York Times*;

HCCH : annual ADA scores of the chairmen of House authorization committees;

HSC : annual ADA median scores of House authorization subcommittees;

NIXON : dummy variable, coded 1 after President Nixon assumes office and 0 before he assumes office or after he leaves office;

FORD : dummy variable, coded 1 after President Ford assumes office and 0 before he assumes office or after he leaves office;

CARTER : dummy variable, coded 1 after President Carter assumes office and 0 before he assumes office or after he leaves office;

COURT : rates of AT&T court victories in all the federal court trials in the previous years (from 1964-1995), in percentage (%); and

NYxSSC : interaction between the mentions of the FCC regarding AT&T's activities in the long-distance service matters for two months before each FCC decision case in *The New York Times* and the annual ADA median scores of Senate authorization subcommittee members (that is, *Senate Communications Subcommittees*).

Interpretation for this logit model (**Model 3**) is also possible by using summary statistics such as regression coefficients (b_i), standard errors of the coefficient estimates (SE_{bi}), Wald t-statistics (t), level of significance ($p > |t|$), model prediction rate, and chi-square value (χ^2) as goodness-of-fit statistics.

First of all, the logit regression as a whole is highly significant. The model's chi-square value is significant ($p = 0.0000$) because the estimated chi-square value of 90.26 is greater than the critical chi-square value that is 16.92 with the 0.05 significance level and 9 degrees of freedom. Thus, we can reject the null hypothesis that coefficients on all nine variables are zero. This means that all nine variables in the model did have some joint

effect on the dependent variable, the FCC's adjudicative rule-making decisions over the period from 1965 to 1983. In addition, the overall percentage of the FCC's adjudicative rule-making decisions correctly predicted by this model is 70.61%, which may indicate high prediction power of the logit model.

For **Model 3** with a large sample size of 279 (n-k = 279-9 = 270 > 100), the results from the *Wald t*-tests and a corresponding χ^2 test are the same. That is, in **Table 15** *Wald-t* statistics show that nine independent variables in the model have significant joint effects upon the FCC's adjudicative rule-making decisions during the 19-year period of 1965-1983 before the AT&T break-up.

Two variables reflecting interest group power appear to be significantly related to the FCC's adjudicative rule-making decisions during the 19-year period of 1965-1983. The coefficient on OCCPET ($b_1 = -0.151$) appears to be statistically significant a the 0.05 level ($|t| = 2.664$); and the coefficient on NYTI ($b_2 = -0.133$) is also statistically significant at the 0.05 level ($|t| = 2.271$).

However, as indicated in the previous section (**3-2**), the regressor ATTACK appeared to be statistically insignificant ($|t| = 0.879$) and was excluded from the model, indicating that strong petitions filed by other business or public interest groups to request the FCC to directly reject AT&T's petitions had no significant impact upon FCC decisions during the period before the AT&T break-up.

Six variables indicating the influence of political institutions were significantly related to the FCC's adjudicative rule-making decisions during the 19-year period of 1965-1983. Two variables reflecting congressional influence appeared to be significantly related to FCC policy-making. The coefficient on HCCH ($b_3 = 0.006$)appeared to be

statistically significant around 76% confidence level (|t| = 1.168), although not at 95% confidence level. It may be considered theoretically significant. The coefficient on HSC (b_4 = +0.023) shows up as statistically significant at the 0.05 level (|t| = 2.456). Three variables indicating presidential power are also significantly related to the FCC's adjudicative rule-making decisions. The coefficient on NIXON (b_5 = –0.993) is statistically significant around 91% confidence level (|t| = 1.696), although not at 95% confidence level. It may be also considered theoretically significant. The coefficients on FORD (b_6 = –1.439) and CARTER (b_7 = –2.380) are statistically significant at the 0.05 level (|t| = 2.800 and |t| = 3.777, respectively). A variable indicating court influence shows its significant relation to the FCC's adjudicative rule-making decisions. The coefficient on COURT (b_8 = –0.041) is statistically significant at the 0.05 level (|t| = 2.080).

However, a variable indicating the federal agency's own institutional influence did not appear to be significantly related to FCC policy-making. As indicated in the previous section (**3-2**), the regressor Yp showed up as statistically insignificant (|t| = 0.680) and was excluded from the model, indicating that FCC policy-making in the previous year had no significant impact upon FCC decisions for the current year during the period before the break-up of AT&T. However, the total analysis (**Model 2**) found the significant negative impact of previous FCC decisions upon current FCC policy-making favoring AT&T's petition(s).

Finally, an interaction variable between NYTI and SSC showed up as significantly related to the FCC's adjudicative rule-making decisions during the 19-year

period of 1965-1983. The coefficient on NYxSSC ($b_9 = -0.003$) is statistically significant at the 0.05 level ($|t| = 2.017$).

Therefore, the *Wald-t* test results indicate that variables reflecting interest group power and political institutions' roles had some simultaneous effects on the FCC's adjudicative rule-making decisions regarding AT&T in the long-distance telecommunications service matters during the 19-year period (1965-1983) before the divestiture of AT&T.

Now, I interpret the estimated logit coefficients in consideration of the general direction of the relationships between the FCC's adjudicative rule-making decisions and regressors.

Table 15 shows the relationships between interest groups power variables and FCC policy-making. First, during the period of 1965 through 1983, an increase in the number of petitions filed by long-distance service common carriers (OCCs except AT&T) decreases the likelihood of FCC decisions to grant AT&T's petition(s), as hypothesized (H:I.O1). In addition, more *The New York Times* mentions of the FCC regarding AT&T's activities in the long-distance service matters during two months before FCC policy-making also decreases the likelihood of FCC decisions to grant AT&T's petition(s), as hypothesized (H:I.P3). The significance of each of these two estimated coefficients indicates that business interest groups and public interest groups did make strong impacts upon the FCC's adjudicative rule-making decisions during the period before the AT&T break-up. However, the influence of strong petitions (against AT&T) filed by business and public interest groups was not significant on FCC policy-making during the 19-year period (1965-1983) before the AT&T divestiture.

Two congressional variables indicating ideological influence from federal legislators had some impacts upon the FCC's adjudicative rule-making decisions during the 19-year period (1965-1983) before the AT&T break-up. A higher pro-labor (ADA) score among the House authorization committee chairs, who are responsible for oversight, appeared to decrease the likelihood of FCC decisions to grant AT&T's petition(s), as hypothesized (H:G.C3). However, an increase in liberalism in the House authorization subcommittee members appeared to increase the likelihood of FCC policy-making favoring AT&T, differently from the hypothesis (H:G.C3). The significance of each of two congressional variables indicates the significant ideological impact by federal legislators upon the FCC's adjudicative rule-making decisions regarding AT&T in the U.S. long-distance telecommunications service matters during the 19-year period (1965-1983) before the AT&T break-up. This evidence on inconsistent influence of federal congresspersons through their political preferences (that is, liberalism) has been also detected by the total analysis (**Model 2**) for the full period (1965-1995).

Findings for presidential influence show that American presidents, who served before the break-up of AT&T, had negative impacts upon the FCC's adjudicative rule-making decisions during the 19-year period of 1965-1983. Presidents Nixon, Ford and Carter, who served to deregulate the telecommunications system before the AT&T break-up, influenced FCC policy-making by decreasing the probability of FCC decisions favoring AT&T's petition(s). The coefficients on the other presidents before the AT&T break-up were excluded from the model due to multicollinearity problems. The negative influence of the presidents before the divestiture of AT&T on FCC policy-making favoring AT&T was also detected by the total analysis for the full period (1965-1995).

The institutional influence from courts was detected as moderate on the FCC's adjudicative rule-making decisions during the 19-year period (1965-1983) before the divestiture of AT&T. An increase in AT&T victory rates in the all federal court decisions regarding long-distance service matters in the previous years decreases the likelihood of FCC decisions to grant AT&T's petition(s). The direction of the estimated coefficient, however, is contrary to the hypothesis (H:G.J1) and the hypothesis (H:G.J2) as well. That is, during the 19-year period before the break-up of AT&T, the FCC Commissioners made decisions against the monopolistic AT&T's interests as AT&T won the cases in the courts for the previous years. This finding may indicate that the FCC Commissioners knew AT&T's dominant position in the long-distance service market and thus tried to keep a balance between AT&T's interests and other business or public interests when making decisions. Furthermore, this evidence indicates that the long-term dominant economic actor in the market was not protected by the federal regulators and thus FCC policy-making regarding long-distance service matters was not captured by the regulated interest group during the 19-year period before its break-up. The total analysis (**Model 2**) has found the negative impact of federal courts upon FCC policy-making favoring AT&T over the 31-year period (1965-1995).

As found in the total analysis for the 31-year period (1965-1995), an interaction term of public interest and congressional influence, NYTIxSSC, appeared to be a significant predictor of the FCC's adjudicative rule-making decisions during the 19-year period (1965-1983) before the break-up of AT&T. An increase in mentions of the FCC regarding AT&T's activities in the long-distance service market in *The New York Times* and an increase in ADA scores of the *Senate Communications Subcommittee* members

interactively made some effects on FCC policy-making by decreasing the probability that the FCC will make decisions favoring AT&T's petition(s), as hypothesized (H:IA.1). The evidence shows that some congresspersons in the Senate also exerted significant effects on FCC policy decisions, although not separate effects. The negative effect of this interaction term of public interest and congressional ideology on FCC policy-making was also detected by the total analysis for the full period (1965-1995).

Now, I need to interpret each coefficient for **Model 3** in terms of its relative influence on the dependent variable, that is, the FCC's adjudicative rule-making decisions during the 19-year period (1965-1983) before the AT&T divestiture. Again, I interpret the estimated logit coefficients with reference to odds ratios (e^{bi}) and probabilities [$\hat{P} = 1 / (1 + e^{-L})$] as they are used to describe the strength of an effect by a logit coefficient.

First, with the help of odds ratios, I examined how much change the FCC's adjudicative rule-making decisions occurred by influence of each regressor, that is, how strong the effects of the individual independent variables on FCC policy decisions during the 19-year period (1965-1983) before the break-up of AT&T was. The following **Table 17** of odds ratios for **Model 3** was obtained by the STATA program.

Table 17. Marginal Effect of Each Regressor on the FCC's Adjudicative Rule-Making Decisions in Model 3 during the 19-year period of 1965-1983.

Independ. Variables	Odds Ratio $(e^{b_i})^*$	Std. Err. (SE_{bi})	t	p > |t|	95% Conf. Interval		Mean
OCCPET	0.8601	0.0487	- 2.664	0.008	0.7698	0.9609	2.4229
NYTI	0.8751	0.0514	- 2.271	0.023	0.7799	0.9819	12.2509
HCCH	0.9935	0.0055	- 1.168	0.243	0.9828	1.0044	167.677
HSC	1.0237	0.0097	+ 2.456	0.014	1.0047	1.0430	42.8154
NIXON	0.3706	0.2170	- 1.696	0.090	0.1177	1.1674	0.2294
FORD	0.2373	0.1219	- 2.800	0.005	0.0867	0.6494	0.1864
CARTER	0.0926	0.0583	- 3.777	0.000	0.0269	0.3183	0.2975
COURT	0.9601	0.0188	- 2.080	0.038	0.9239	0.9977	46.7746
NYxSSC	0.9969	0.0016	- 2.017	0.044	0.9938	0.9999	432.319

*with the other regressors' values staying the same

Logistic Statistics	
Number of Cases (n)	279
Log-Likelihood (lnL)	- 148.11332
LR Chi-Square (df = 9)	90.26
Prob. > Chi-Square (χ^2)	0.0000

From the results presented in **Table 17** (that is, with the reference to odds ratios), first, it is possible to interpret how much change in the FCC's adjudicative rule-making decisions occurred by influence of three significant regressors from interest group theory.

Each 1-unit increase in other common carriers' petitions multiplies the odds of favoring AT&T's petition(s) by 0.860. This means that one more petition by OCCs against AT&T's interests decreases the odds [= $(P_i/(1 - P_i)]$ of favoring AT&T's petition(s) by 14.0% [= $100(e^b - 1) = 100(0.860-1)$], as hypothesized (H:I.O1). In addition, each 1-mention increase in the articles of the FCC regarding AT&T's activities in *The New York Times* for two months before each FCC decision multiplies the odds of favoring AT&T's petition(s) by 0.875. In other words, one more article about FCC actions regarding AT&T's activities in the long-distance service market in the daily newspaper decreases the odds of favoring AT&T's petition(s) by 12.5% [= 100(0.875-1)], as hypothesized (H:I.P3).

Two institutional variables indicating political preference of congressional committee members had some impacts on the FCC's adjudicative rule-making decisions during the 19-year period (1965-1983) before the AT&T break-up. Each 1-score increase in the ADA scores for the chairpersons of House authorization committees multiplies the odds of FCC's favoring AT&T by 0.994. This indicates that one more point increase in the ADA ratings of the key federal legislators decreases the odds of favoring AT&T's petition(s) by just 0.6% [= 100(0.994-1)], as hypothesized (H:G.C3). Meanwhile, each 1-score increase in the ADA median ratings for the House authorization subcommittee members multiplies the odds of favoring AT&T's petition(s) by 1.024. This means that one more point increase in median ADA scores of the House authorization subcommittee

members increases the odds of favoring AT&T's petition(s) by about 2.4% [= 100(1.024-1)], contrary to the hypothesis (H:G.C3).

The impacts of political institutions are considerable from three American presidents upon the FCC's adjudicative rule-making decisions during the 19-year period (1965-1983) before the divestiture of AT&T. Since NIXON, FORD and CARTER are dummy variables indicating presidential influence, it is needed to be cautious when we interpret them. The odds ratio of NIXON is 0.3706. This means that the odds of FCC's favoring AT&T when making decisions are just 0.4 times higher after President Nixon assumes office than before he assumes or after he leaves office, compared to the average odds during the administrations of the other presidents. Next, FORD's odds ratio is 0.2373. This indicates that the odds of favoring AT&T's interests are just 0.2 times higher after President Ford assumes office than before he assumes or after he leaves office, compared to the average odds during the administrations of the other Presidents. The odds ratio of CARTER is 0.0926. This means that the odds of favoring AT&T's petition(s) are just 0.1 times higher after President Carter assumes office than before he assumes or after he leaves office, compared to the average odds during the administrations of the other Presidents. Here, we need to note that these president influence variables are negatively related to FCC policy-making favoring AT&T. This evidence on the negative impacts of the American presidents who served before the AT&T break-up has been found in the total analysis for the full period.

In addition, institutional influence by the judiciary appears to be significant and negative on FCC policy-making favoring AT&T. Each 1-percentage increase in AT&T victory rates in all the federal court decisions regarding long-distance service matters for

the previous years multiplies the odds of favoring AT&T's petition(s) by 0.960 for the current year. This means that one percent increase of AT&T court victory reduces the odds of favoring AT&T's petition(s) by about 4.0% [= 100(0.960-1)], which is still contrary to the hypothesis (H:G.J1) and the hypothesis (H:G.J2) as well. This finding means that AT&T's past court victories acted as an unfavorable factor in FCC policy-making favoring AT&T during the 19-year period before the break-up of AT&T. This negative impact by the judiciary upon FCC policy-making favoring AT&T has been also found in the total analysis for the full period.

In interaction with impacts of public interest reflected in *The New York Times*, the *Senate Communications Subcommittee* did group influence to some degree on the FCC's adjudicative rule-making decisions regarding long-distance service matters during the 19-year period (1965-1983) before the divestiture of AT&T. Each 1-unit (mention x score) increase in the interaction term of the articles on the FCC regarding AT&T's activities in the newspaper and the ADA median ratings of the federal legislators in the Senate authorization subcommittees multiplies the odds of favoring AT&T's petition(s) by 0.9969. This means that one combined unit increase in both the FCC (regarding AT&T's activities) articles in *The New York Times* and the median ADA scores of the *Senate Communications Subcommittee* members reduces the odds of favoring AT&T's petition(s) by just 0.3% [= 100(0.9969-1)], as hypothesized (H:IA.1).

Now, I also interpret each logit coefficient for **Model 3** in terms of probabilities [$P^{\wedge} = 1 / (1 + e^{-L})$]. The probability that the FCC will make a decision favoring AT&T is 46.8 percent ($P^{\wedge} = 0.4677$) when the mean values are entered for all regressors.[276] To

[276] The probability was calculated as follows:
$L_i^{\wedge} = \ln\{P_i/(1-P_i)\} = 6.306 - 0.151*OCCPET - 0.133*NYTI - 0.0069*HCCH + 0.023*HSC$

compare the influence of each independent variable on the probability of FCC's favoring AT&T, the estimated logit coefficients were summed with the 25th percentile and 75th percentile values for individual regressor, while the remaining regressors were held at their mean values. Then, the predicted probability of FCC's favoring AT&T with each independent variable fixed at its 25th percentile was compared to the predicted probability with the independent variable at its 75th percentile (**Table 18**).

$$
\begin{aligned}
&- 0.993*\text{NIXON} - 1.439*\text{FORD} - 2.380*\text{CARTER} - 0.041*\text{COURT} \\
&- 0.003*\text{NYxSSC} \\
&= 6.306 - 0.151*(2.4229) - 0.133*(12.2509) - 0.006*(167.6774) + 0.023*(42.8154) \\
&- 0.993*(0.2294) - 1.439*(0.1864) - 2.380*(0.2975) - 0.041*(46.7746) \\
&- 0.003*(432.319) \\
&= - 0.1293.
\end{aligned}
$$

Thus, $\hat{P_i} = 1 / (1 + e^{-L}) = 1 / (1 + e^{-(-0.1293)}) = 1 / (1 + 1.1380) = 0.4677.$

Table 18. Conditional Effect of Each Regressor by its Percentile Values on Probability of FCC's Favoring AT&T in the Adjudicative Rule-Making Decisions during the 19-year period of 1965-1983 in Model 3.

Independ. Variables	Percentile Values			Probabilities*			Difference
	25%	50%	75%	$\hat{P}_{25\%}$	$\hat{P}_{50\%}$	$\hat{P}_{75\%}$	$\hat{P}_{75\%} - \hat{P}_{25\%}$ (Δ%)**
OCCPET	0	1	3	0.559	0.521	0.446	- 0.113 (- 20.21%)
NYTI	7	11	16	0.639	0.509	0.348	- 0.291 (- 45.54%)
HCCH	135	159	201	0.517	0.481	0.418	- 0.099 (- 19.15%)
HSC	37	40	50	0.435	0.452	0.509	+ 0.074 (+ 17.01%)
NIXON	0	0	0 1***	0.525	0.525	0.525 0.290***	0 (no change) - 0.235 (- 44.76%)***
FORD	0	0	0 1***	0.535	0.535	0.535 0.214***	0 (no change) - 0.321 (- 60.00%)***
CARTER	0	0	1	0.641	0.641	0.142	- 0.499 (- 77.85%)
COURT	36.5	41.8	57.4	0.573	0.519	0.362	- 0.211 (- 36.82%)
NYxSSC	270	360	560	0.589	0.522	0.375	- 0.214 (- 36.33%)

***predicted probabilities of FCC's favoring AT&T when each regressor is entered in the model equation at its 25th and 75th percentile values with the other regressors at their mean values**

****$(\hat{P}_{75\%}/\hat{P}_{25\%} - 1) \times 100$**

*****90th percentile value and $\hat{P}_{90\%}$**

First, I examine the relative influence of independent variables indicating interest group influence on the 'probability' of FCC's favoring AT&T during the 19-year period (1965-1983) before the break-up of AT&T.

The probability that the FCC will favor AT&T when making decisions is 0.559 when the number of OCCs' petitions is set to its 25th percentile value in the logit equation (**Model 3**), holding the other regressors constant at their mean values. If the number of OCCs' petitions is set to its 75th percentile value, with the remaining regressors at their mean values, the probability that the FCC will favor AT&T drops to 0.446. This difference (–0.113) means a 20.21 percent decrease in the probability of favoring AT&T. As more petitions against AT&T are filed by OCCs with the FCC, the FCC Commissioners were more likely to hurt AT&T's interests in their long-distance policy-making during the 19-year period before the divestiture of AT&T. This negative impact by OCCs' petitions upon FCC policy-making favoring AT&T has been found by the total analysis for the full 31-year period.

In addition, the probability that AT&T is favored is 0.639 if the number of mentions of the FCC regarding AT&T's activities in *The New York Times* is entered into the logit model at its 25th percentile, while holding the remaining regressors are held constant at their mean values. Meanwhile, the probability that AT&T is favored in FCC decisions decreases to 0.348 when the number of *The New York Times* mentions of the FCC regarding AT&T's activities reached its 75th percentile value with the other regressors at their mean values. The difference (–0.291) is a 45.54 percent decrease in probability of favoring AT&T. This means that the public interest reflected in the daily newspaper has considerable influence on the FCC's adjudicative rule-making decisions

regarding AT&T in the long-distance telecommunications service matters during the 19-year period before the AT&T break-up. The total analysis for the full 31-year period also showed this negative impact by the public interest reflected in the daily newspaper upon FCC policy-making favoring AT&T.

Second, I check the relative influence of independent variables indicating political institutions' roles on the probability of FCC's favoring AT&T during the 19-year period (1965-1983) before the break-up of AT&T.

The influence by some federal legislators from the House authorization committees and subcommittees on FCC policy-making appeared to be substantial to some degree during the period of 1965-1983. If the House authorization committee chairperson's ADA score is entered into the logit equation (**Model 3**) at its 25th percentile, holding the other regressors at their mean values, then the probability that the FCC will favor AT&T's petitions is 0.517. However, the probability of favoring AT&T decreases to 0.418 when the ADA score of the key federal regulators, who are responsible for appropriations over the FCC in the House committees, reaches its 75th percentile with the other regressors at their mean values. The difference is –0.099, which means a 19.15 percent decrease in the probability of FCC's favoring AT&T.

Meanwhile, the probability of FCC's favoring AT&T is 0.435 when the ADA median score of the House authorization subcommittee members is set to its 25th percentile with the other variables at their mean values. However, the probability of favoring AT&T in FCC policy-making increases to 0.509 when the ADA median score of the House subset reaches its 75th percentile value and the other variables are fixed at their

mean values. The difference (+0.099) means a 17.01 percent increase in the probability of FCC's favoring AT&T.

These findings on congressional variables mean that during the 19-year period before the AT&T break-up, liberalism on the key federal legislators (that is, chairs) who are responsible for oversight over the federal agency in the committee was negatively related to the FCC's adjudicative rule-making decisions favoring AT&T's interests, as hypothesized (H:G.C3), while liberalism of the federal congresspersons in the subcommittee is postively related to FCC policy-making, contrary to the hypothesis (H:G.C3). The finding on this inconsistent influence of federal legislators in the same committee and subcommittee on FCC policy-making favoring AT&T was also found by the total analysis for the full 31-year period.

The influence of three American presidents is considerable on the probability that the FCC will favor AT&T when making decisions. If NIXON is set to its 25th percentile value (0) or 75th percentile value (0) in the logit model (**Model 3**), which means that President NIXON did not assume office yet or left office, holding the other variables at their mean values, the probability that the FCC will make decisions in AT&T favor is the same, 0.525. If NIXON is set to its 90th percentile value (1), with the other variables at their mean values, the probability that the FCC will make decision favoring AT&T is 0.290. This means that after President Nixon assumed office, the probability of favoring AT&T in FCC policy-making dropped by 0.235, which means a 44.76 percent decrease in the probability of favoring AT&T in FCC policy-making.

The probability of FCC's favoring AT&T is 0.535 when both 25th percentile value (0) and 75th percentile value (0) of FORD, which means that President Ford did not

assume office yet or left office, enter the logit model (**Model 3**) with the other variables fixed at their mean values. Accordingly, the 90th percentile value (1) of FORD, which means that President Ford assumed office, was entered in model, holding the other variables constant at their mean values, and thus the probability that AT&T will be favored in FCC policy-making drops to 0.214. The difference (–0.321) means a 60.00 percent decrease in the probability of favoring AT&T in FCC policy-making after President Ford assumed office.

If the 25th percentile value (0) of CARTER, which means that President Carter did not assume office yet or left office, enters the logit equation and the other regressors are entered at their mean values, the probability of favoring AT&T is 0.641. When CARTER reaches its 75th percentile value (1), which means that President Carter assumed office, with the other regressors at their mean values, the probability of favoring AT&T drops to 0.142. The difference (–0.499) means a 77.85 percent decrease in the probability that AT&T will be favored in FCC decisions after President Carter assumed office.

The findings on presidential influence in FCC policy-making indicates that American presidents who served before the break-up of AT&T sent their political signals to the FCC Commissioners so that they were less likely to favor AT&T when making decisions during the 19-year period (1965-1983). These NIXON, FORD and CARTER's negative relations to FCC policy-making favoring AT&T have also been detected from the total analysis for the full period (1965-1995).

In addition, the judiciary had significant influence on FCC policy decisions during the 19-year period of 1965-1983. If the ratio of AT&T court victories is entered into the

logit equation (**Model 3**) at its 25th percentile, while holding the remaining regressors constant at their mean values, the probability of FCC's favoring AT&T is 0.573. However, when the ratio of AT&T court victory reaches it 75th percentile value, holding the other regressors at their mean values, the probability of FCC's favoring AT&T when making decisions decreases to 0.362. The difference (−0.211) means a 36.82 percent drop in the probability of FCC's favoring AT&T, indicating that the AT&T court victories are negatively related to FCC decisions favoring AT&T, contrary to the hypothesis (H:G.J1) as detected in the total analysis.

Finally, an interaction term indicating the interactive influence of both public interest and congressional liberalism shows up as a significant predictor of the probability of FCC's favoring AT&T during the 19-year period of 1965-1983. If the interaction term of the number of mentions of the FCC regarding AT&T's activities in *The New York Times* and the ADA median score of *Senate Communications Subcommittee* is entered into the logit equation (**Model 3**) at its 25th percentile value, while holding the other regressors constant at their mean values, then the probability that the FCC will favor AT&T when making decisions is 0.589. However, when the interaction term reaches its 75th percentile value with the other variables at their means, the probability of FCC's favoring AT&T when making decisions drops to 0.375. This difference (−0.214) means a drop of 36.33 percent in the probability of favoring AT&T. This indicates that as liberalism increased among federal legislators who are responsible for oversight over the FCC in the Senate subcommittees, with interactive effects from public interest reflected in *The New York Times*, the FCC Commissioners responded by denying more the petition(s) by AT&T when making decisions, as hypothesized (H:IA1). This interaction

term's negative relation to the probability of FCC's favoring AT&T has been found in the total analysis for the full period (1965-1995).

In conclusion, the significance tests on the logit coefficients and the two methods of interpretation of their relative influence on FCC policy-making did confirm the influence of interest groups and political institutions on the FCC's adjudicative rule-making decisions regarding AT&T in the U.S. long-distance telecommunications service matters for the 19-year period (1965-1983) before the break-up of AT&T.

The federal regulators responded to business interest and public interest regarding the long-distance service matters, when making decisions. Increasing petitions filed by other common carriers against AT&T were not disregarded and led the FCC Commissioner to reject AT&T's interests. Public interest reflected in *The New York Times* was strong enough to signal the federal regulators to more regulate AT&T's monopolistic behavior in the long-distance service market. As more articles about the FCC regarding AT&T's activities in the long-distance service market were carried in the daily newspaper, the federal regulators were more likely to deny the petitions filed by AT&T. However, strong petitions filed by other business or public interest groups to request the FCC to directly reject AT&T's petitions had no significant impact upon FCC decisions during the period before the AT&T break-up.

Three variables indicating AT&T interest group power (i.e., AT&T Petitions, AT&T Employment, and AT&T Market Share) were excluded from the final model specification (**Model 3**) due to statistical insignificance or multicollinearity problems.

The FCC Commissioners also obviously responded to political pressures from federal legislators, the American presidents, and the federal courts during the 19-year

period of 1965-1983 before the AT&T break-up. However, I found that the institutional influence from the federal agency itself was not significant on its policy-making during the period before the AT&T break-up, as presented in the previous section (**3-2**). Meanwhile, the total analysis (**Model 2**) found the significantly negative impact of the previous FCC decisions on current FCC policy-making to grant AT&T's petition(s).

The ideology of federal legislators in the House committees and subcommittees played a meaningful role in the federal agency's policy-making during the 19-year period (1965-1983) before the divestiture of AT&T. As liberalism increases among key federal legislators (that is, chairs of the House authorization committees) who are responsible for oversight over the FCC, the federal agency responded by denying more AT&T's petitions, as hypothesized (H:G.C3). However, as liberalism increases among the House authorization subcommitee members, the FCC was more likley to grant AT&T's petitions, contrary to the hypothesis (H:G.C3).

The findings indicates that Congress, through its committee and subcommittee members' political preferences, did some group influence on the FCC's telecommunications regulatory policy-making (that is, adjudicative rule-making decisions) during the period from 1965-1983. The evidence on the inconsistent influence of federal legislators who are responsible for oversight over the FCC may suggest that the FCC Commissioners made decisions responding to political signals from federal legislators who acted independently to deal with specialized areas like long-distance service matters, no matter what they are liberals or conservatives.

In addition, although not separate effects, the federal legislators in *Senate Communications Subcommittees* did some group impacts, jointly with influence of public

interest reflected in *The New York Times*, upon the FCC's adjudicative rule-making decisions regarding long-distance service matters. As hypothesized (H:IA.1), liberalism in the subcommittee legislators moved the federal regulators toward hurting AT&T's interests as the liberal legislators were getting more recognizant of the American public's interest expressed in the newspapers, which had been usually opposite to AT&T's monopolistic activities in the long-distance telecommunications service market.

The other variables indicating liberalism of other House and Senate committees and subcommittees including chairs of them were excluded from the final model (**Model 3**) due to statistical insignificance or multicollinearity problems. The other interaction terms (indicating Congress x public interest reflected in the media) were also excluded from the logit model because they were determined to be statistically insignificant or highly correlated each other or with other variables.

Presidents Nixon, Ford and Carter's power to appoint or/and reappoint the FCC Commissioners had a negative influence on the probability of FCC decisions favoring AT&T's interests during the 19-year period (1965-1983) before the divestiture of AT&T. The other presidential influence variables (that is, JOHNSON and REAGAN) were excluded from the final model specification (**Model 3**) due to multicollinearity problems, but the coefficients on those variables have negative signs, too. The findings for the chief executives may imply that American presidents who served before the historical break-up of AT&T sent political signals to the FCC Commissioners so that they were less likely to favor AT&T's petition(s), no matter what their party affiliations are (Republicans or Democrats). Not surprisingly, this result indicates that American presidents from Johnson to Reagan recognized AT&T's monopolistic position in the long-distance

service market before the AT&T divestiture and thus wanted to continue to regulate the long-term dominant carrier, even though they all had a political philosophy to deregulate the long-distance telecommunications service system. This evidence on the negative influence on FCC policy-making favoring AT&T by American presidents (that is, Nixon, Ford and Carter) before the AT&T break-up was also detected in the total analysis for the full time period (1965-1995).

In addition, during the 19-year period (1965-1983) before the AT&T divestiture the judiciary had a strong impact upon the federal agency's policy-making by inflicting the regulated dominant carrier's interests, contrary to the hypothesis (H:G.J1). Even though AT&T won many court cases in the previous years, the increased court victory rates of AT&T surprisingly moved the FCC Commissioners toward denying AT&T's interests in the agency's adjudicative rule-making decision cases for the current year. Like the Presidents who served before the AT&T break-up, it is because the federal regulators sufficiently recognized AT&T's monopolistic position in the long-distance service market and thus tried to keep a balance between AT&T's interests and OCCs or other public interests in the market. Furthermore, this finding may indicate that the federal regulators were not captured by the regulated AT&T interest group during the period from 1965 to 1983 before the AT&T break-up. Even when the FCC Commissioners used many previous court cases in making decisions and knew that courts decided in AT&T favor in many cases, the federal regulators did not try to protect the dominant interest group they regulated in the long-distance telecommunications service market. The evidence on this COURT's negative relation to FCC policy-making favoring AT&T has been found in the total analysis for the full period (1965-1995).

The credibility of these conclusions is supported by the results of some important diagnostic tests for the logit analysis that I have already executed to check up the statistical problems such as multicollinearity and outliers with poor fit and influential cases.

3-4. RESULTS FOR TIME PERIOD III (1984-1995): AFTER THE AT&T BREAK-UP

For Time Series III, the estimated model (**Model 4**) in **Table 19** also indicates the impact of interest groups and political institutions upon the FCC's adjudicative rule-making decisions during the 12-year period from 1984 to 1995 after the AT&T break-up. **Model 4** is the final model specification that passed the diagnostic test for multicollinearity among regressors since no multicollinearity problem appeared in the matrix of coefficient correlations in **Table 20**.

As indicated in the previous section (**3-2**), I estimated the logit model for this subperiod using exactly the same variables, which showed up as statistically significant in the total analysis for the full time period. Using the same variables allows me to find out any differences between this subperiod and the full time period (Time Period I) and between this subperiod (Time Period III) and the first subperiod (Time Period II). After considering multicollinearity problems between the estimated coefficients (and between the regressors), I obtained the final logit specification (**Model 4**) for the 12-year period after the divestiture of AT&T. Eight variables were found to be statistically (at the 0.05 level) and theoretically significant and thus appeared to have some impacts upon the FCC's adjudicative rule-making decisions during the 12-year period 1984-1995 after the

AT&T break-up. All of six contextual variables that were excluded from the total model (**Model 2**) due to multicollinearity problems were not considered in the model specification (**Model 4**) for this subperiod. Among the four interaction terms that were constructed from significant variables as previously presented, one of them (NYxSSC) entered into the model equation, but was excluded from the logit model (**Model 4**) since it was found to be insignificant as presented in the previous section (**3-2**).

This logit model (**Model 4**) has no significant statistical problems such as the influential cases and high discrimination. This model specification (**Model 4**) for the partial period (1984-1995) was derived from data using exactly the same observations (within this subperiod) from which outlier problems were removed by the final model specification (**Model 2**) for the total period (1965-1995). Nevertheless, for this logit model I tried to check outlier problems by executing the three diagnostic tests that Hosmer and Lemeshow (1989) suggest: (i) 'Change in Pearson χ^2 versus Predicted Probability' ($\Delta\chi_P^2$ vs. $\hat{P}$); (ii) 'Change in Deviance versus Predicted Probability' ($\Delta\chi_D^2$ vs. $\hat{P}$); and (iii) 'Change in Deviance versus Predicted Probability' ($\Delta\chi_D^2$ vs. $\hat{P}$) with plotting symbols sized proportional to the influence statistic (ΔB) that measures an X pattern's influence in logistic regression. No significant outlier problems were detected (*see* **APPENDIX B**). Hence, as the logit model has passed important diagnostic tests, I selected **Model 4** as the most appropriate logit model specification for the FCC's adjudicative rule-making decisions in Time Period III (1984-1995) after the AT&T break-up.

Table 19. Final Logit Regression of Variables from Regulatory Theories on the FCC's Adjudicative Rule-Making Decisions (Model 4) during the 12-year period of 1984-1995.

Independ. Variables	Coef. (b_i)	Std. Err. (SE_{bi})	t	p > |t|	95% Conf. Interval		Mean
OCCPET	- 0.0610	0.0296	- 2.064	0.039	- 0.1190	- 0.0031	3.6049
ATTACK	- 3.2635	0.3678	- 8.872	0.000	- 3.9845	- 2.5425	0.5854
NYTI	- 0.3501	0.0424	- 8.249	0.000	- 0.4333	- 0.2669	12.1854
Yp	- 0.0973	0.0254	- 3.831	0.000	- 0.1471	- 0.0475	53.6863
HCCH	- 0.0133	0.0070	- 1.913	0.056	- 0.0270	0.0003	231.885
HSC	- 0.0239	0.0205	- 1.163	0.245	- 0.0641	0.0163	49.7671
CLINTON	+ 2.7268	0.6596	+ 4.134	0.000	1.4340	4.0196	0.1707
COURT	- 0.5275	0.1226	- 4.304	0.000	- 0.7677	- 0.2873	44.4151
_cons	39.0746	7.0023	5.580	0.000	25.3504	52.7988	1

Statistics for Logit Model 4	
Number of Cases (n)	410
Log-Likelihood (lnL)	- 136.78043
LR Chi-Square (df = 8)	293.84
Prob. > Chi-Square (χ^2)	0.0000

Prediction Table for FCC Decisions in Logit Model 4			
Observed Probability	Predicted Probability		Prediction Rate (%)
	0	1	
0	172	23	195 (88.21%)
1	32	183	215 (85.12%)
Total Prediction Rate (%)			410 (86.59%)

*P(Y=1): Favoring AT&T

Table 20. Correlations between Estimated Coefficients of Logit Model 4.

Coef.	OCCPET	ATTACK	NYTI	Yp	HCCH	HASCCH	CLINTON
OCCPET	1.0000						
ATTACK	- 0.0507	1.0000					
NYTI	0.0492	0.3808	1.0000				
Yp	0.0299	0.2262	0.3901	1.0000			
HCCH	0.0227	0.1273	0.2704	- 0.1410	1.0000		
HSC	- 0.0865	0.1633	0.1086	0.3423	- 0.4603	1.0000	
CLINTON	- 0.1348	- 0.1390	- 0.3724	- 0.5363	0.1799	- 0.3295	1.0000
COURT	0.1754	0.2264	0.3899	0.5018	0.0233	0.2924	- 0.6727
_cons	- 0.1492	- 0.3344	- 0.5388	- 0.1815	- 0.1815	- 0.3415	0.6542

Coef.	COURT	_cons
COURT	1.0000	
_cons	- 0.9525	1.0000

Therefore, from **Table 19**, the final logit equation (**Model 4**) for the FCC's adjudicative rule-making decisions in Time Period III (1984-1995) is approximately:

$$\mathbf{L_i^{\wedge} = 39.075 - 0.061*OCCPET - 3.263*ATTACK - 0.350*NYTI - 0.097*Yp - 0.013*HCCH - 0.024*HSC + 2.727*CLINTON - 0.527*\ COURT}$$

where

$\mathbf{L_i^{\wedge}}$: predicted log odds of favoring AT&T's petition(s), that is, $\mathbf{\ln\{P_i / (1-P_i)\}}$, and **P** is the probability that the FCC will make a decision in favor of AT&T's interests regarding the long-distance telecommunications service matters;

OCCPET : number of petitions filed by other common carriers or interexchange carriers except AT&T and its affiliates, representing other long-distance telecommunications companies' interests, in each FCC decision case;

ATTACK : dummy variable, coded 1 if other business or/and public interest groups file strong petitions to request the FCC to directly reject or deny AT&T's petitions or interests and 0 otherwise (that is, if they just file petitions to complain about AT&T's activities), in each FCC decision case;

NYTI : number of mentions of FCC activities regarding AT&T in long-distance service matters for two months before each FCC decision case in *The New York Times*;

Yp : ratio of the FCC's adjudicative rule-making decisions favoring A&T over OCCs/public in the previous year, in percentage (%);

HCCH : annual ADA scores of the chairmen of House authorization committees;

HSC : annual ADA median scores of House authorization subcommittees;

CLINTON : dummy variable, coded 1 after President Clinton assumes office and 0 before he assumes office; and

COURT : rates of AT&T court victories in all the federal court trials in the previous years, in percentage (%).

For interpretation of this logit model (**Model 4**), I also use summary statistics such as regression coefficients (b_i), standard errors of the coefficient estimates (SE_{bi}), Wald t-statistics (t), level of significance ($p > |t|$), model prediction rate and chi-square value (χ^2) as goodness-of-fit statistics.

First, the logit regression as a whole is highly significant and robust. The model's chi-square value is significant ($p = 0.0000$) because the estimated chi-square value of 293.84 is much larger than the critical chi-square value that is 15.51 with the 0.05 significance level and 8 degrees of freedom. Therefore, I can reject the null hypothesis that coefficients on all eight variables are zero. This indicates that the eight variables in the model have some joint impact on the dependent variable, the FCC's adjudicative rule-making decisions during the 12-year period from 1984 to 1995 after the AT&T break-up. In addition, the overall percentage of the FCC's adjudicative rule-making decisions

correctly predicted by this model is 86.59%, which may indicate high prediction power of the logit model.

From **Table 19**, *Wald t*-statistics indicate that all eight independent variables in the model did significantly influence the FCC's adjudicative rule-making decisions during the 12-year period of 1984-1995 after the AT&T break-up. Thus, for **Model 4** with a large sample size of 410 (n-k = 410-8 = 402 > 100), the results from the *Wald t*-tests and a corresponding χ^2 test are the same.

Three variables reflecting interest group power appeared to be significantly related to the FCC's adjudicative rule-making decisions during the 12-year period of 1984-1995: (i) the coefficient on OCCPET ($b_1 = -0.061$) appeared to be statistically significant at the 0.05 level ($|t| = 2.064$); (ii) the coefficient on ATTACK ($b_2 = -3.263$ showed up as very significant at the 0.05 level ($|t| = 8.872$); and (iii) the coefficient on NYTI ($b_3 = -0.350$) is also statistically very significant at the 0.05 level ($|t| = 8.249$).

One variable indicating the federal agency's own influence is significantly related to the FCC's adjudicative rule-making decisions. The coefficient on Yp ($b_4 = -0.097$) is statistically significant at the 0.05 level ($|t| = 3.831$). In addition, two variables reflecting congressional influence appear to be significantly related to the FCC's adjudicative rule-making decisions. The coefficient on HCCH ($b_5 = -0.013$) is statistically significant nearly at the 95% confidence level ($|t| = 1.913$). The coefficient on HSC ($b_6 = -0.024$) showed up as statistically significant around 76% confidence level ($|t| = 1.163$), but it may considered theoretically significant. A variable indicating presidential power is also significantly related to the FCC's adjudicative rule-making decisions. The coefficient on CLINTON ($b_7 = 2.727$) is statistically significant at the 0.05 level ($|t| = 4.134$). Finally,

the variable indicating court influence also shows its significant relation to the FCC's adjudicative rule-making decisions. The coefficient on COURT ($b_8 = -0.527$) is statistically significant at the 0.05 level ($|t| = 4.304$).

Therefore, from these *Wald-t* tests, I find that variables indicating interest group power and political institutions' roles had some impact upon the FCC's adjudicative rule-making decisions regarding AT&T in the long-distance telecommunications service matters during the period from 1984-1995 after the divestiture of AT&T.

In consideration of their statistical and theoretical significance and their information on the general direction of the estimated relationships between the FCC's adjudicative rule-making decisions and regressors, I interpreted the estimated logistic regression coefficients (b_i) in **Model 4**.

The results reported in **Table 19** shows that during the 12-year period from 1984 to 1995 after the AT&T break-up, as long-distance service common carriers (except AT&T) file more petitions, the likelihood of FCC decisions to grant AT&T's petition(s) decreases, as hypothesized (H:I.O1). In addition, when other business or public interest groups directly attack AT&T's interest by requesting the FCC to directly reject its petition(s), the probability of FCC decisions to grant AT&T's petition(s) is likely to decrease, as hypothesized (H:I.O2; H:I.O3). More *The New York Times* articles about the FCC regarding AT&T in long-distance service matters for the two months before each FCC decision also decreases the likelihood of FCC decisions to grant AT&T's petition(s), as hypothesized (H:I.P3). Thereby, the significance of each of these three estimated coefficients still indicates that business interest groups and public interest groups did make strong impacts upon the FCC's adjudicative rule-making decisions

regarding AT&T in the U.S. long-distance telecommunications service matters after the break-up of AT&T effective in 1984.

From the estimated model results, I find some impacts of the federal agency itself upon its policy-making. An increase in the likelihood of FCC decisions favoring AT&T's petition(s) in the previous year decreases the likelihood of FCC decisions to grant AT&T's petition(s) for the current year. This finding is contrary to the hypothesis (H:G.F1). This result may indicate that the FCC Commissioners sufficiently recognized AT&T's dominant power in the long-distance service market even after its break-up and thus tried to continue to keep a balance between AT&T's interest and other business or public interests when making decisions.

Two congressional subsets in the House also showed up as significant predictors of the FCC's adjudicative rule-making decisions. During the 12-year period from 1984 to 1995, congresspersons who are responsible for oversight over the FCC in the House authorization committees and subcommittees had significant impacts upon FCC policy-making. A more highly rated pro-labor (ADA) score in the House committee chairs appeared to decrease the likelihood of FCC's favoring of AT&T's petition(s), as hypothesized (H:G.C3). In addition, an increase in liberalism in the House subcommittee members appeared to decrease the likelihood of FCC decisions to grant AT&T's petitions, as hypothesized (H:G.C3). The significance of two variables indicates federal legislators' ideological influence on FCC policy-making (that is, adjudicative rule-making decisions) regarding AT&T in the U.S. long-distance telecommunications service matters during the 12-year period (1984-1995) after the AT&T break-up. However, differently from this consistent influence of congresspersons on FCC policy-making in

this partial model (**Model 4**), the total analysis (**Model 2**) and the first partial analysis (**Model 3**) have found the inconsistent impact of federal legislators in the same committee and subcommittee upon FCC policy decisions.

I also find presidential influence on FCC policy decisions. President Clinton's impact appeared to be relatively significant. The coefficients on the other presidents after the AT&T break-up were excluded from the model due to multicollinearity problems. President Clinton, who expressed a political philosophy of telecommunications deregulation, influenced FCC policy-making by increasing the probability of FCC decisions to grant AT&T's petition(s), as hypothesized (H:G.P1).

Institutional influence from the judiciary was also detected as significant on the FCC's adjudicative rule-making decisions even after the AT&T divestiture. An increase in AT&T victories in court decisions regarding long-distance service matters in the previous years decreases the likelihood of FCC's favoring of AT&T's petition(s) for the current year. The direction of the estimated coefficient, however, is still contrary to the hypotheses (H:G.J1; H:G.J2) as found in the total analysis and the first partial analysis. Although the courts protected AT&T's interests to some degree for the previous years, the FCC made decisions against AT&T's petitions during the period after the AT&T break-up. This may also indicate that the FCC Commissioners did not underestimate AT&T's dominant power in the long-distance service market even after its break-up and thus tried to continue to keep a balance of interests between AT&T and other business or public interest groups when making decisions.

Now, I interpret the logistic regression coefficients (b_i) for **Model 4** in terms of its relative influence on the dependent variable (that is, the FCC's adjudicative rule-making

decisions) with the reference to odds ratios (e^{bi}). With the help of odds ratios, I examined how much change the FCC's adjudicative rule-making decisions occurred by influence of each regressor, that is, how strong the effects of the individual independent variables on FCC policy-making favoring AT&T during the 12-year period of 1984-1983 was. The values of odds ratios for **Model 4**, obtained by the STATA program, were presented in the following **Table 21**.

Table 21. Marginal Effect of Each Regressor on the FCC's Adjudicative Rule-Making Decisions in Model 4 during the 12-year period of 1984-1995.

Independ. Variables	Odds Ratio $(e^{bi})^*$	Std. Err. (SE_{bi})	t	p > |t|	95% Conf. Interval		Mean
OCCPET	0.9408	0.0278	- 2.064	0.039	0.8878	0.9969	3.6049
ATTACK	0.0383	0.0141	- 8.872	0.000	0.0186	0.0787	0.5854
NYTI	0.7046	0.0299	- 8.249	0.000	0.6484	0.7657	12.1854
Yp	0.9073	0.0231	- 3.831	0.000	0.8632	0.9536	53.6863
HCCH	0.9868	0.0069	- 1.913	0.056	0.9734	1.0003	231.885
HSC	0.9764	0.0200	- 1.163	0.245	0.9379	1.0165	49.7671
CLINTON	15.2842	10.0817	+ 4.134	0.000	4.1954	55.6809	0.1707
COURT	0.5901	0.0723	- 4.304	0.000	0.4641	0.7703	44.4151

***with the other regressors' values staying the same**

Logistic Statistics	
Number of Cases (n)	**410**
Log-Likelihood (lnL)	**- 136.78043**
LR Chi-Square (df = 8)	**293.84**
Prob. > Chi-Square (χ^2)	**0.0000**

First, with the reference to odd ratios, I interpret how much change in the FCC's adjudicative rule-making decisions occurred by influence of three significant regressors from interest group theory. Each 1-petition increase by other common carriers multiplies the odds [= $(P_i/(1 - P_i)]$ of favoring AT&T's petition(s) by 0.941. That is, one more petition by OCCs against AT&T's interests decreases the odds of favoring AT&T's petition(s) by 6% [= $100(e^b - 1) = 100(0.94-1)$], as hypothesized (H:I.O1). The regressor ATTACK is a dummy variable indicating another interest group power. We need to be careful to interpret the coefficient with its odds ratio. The odds ratio of ATTACK is 0.038. This means that the odds of favoring AT&T's petition(s) are just 0.04 times higher when other business or public interest groups file strong petitions to request the FCC to directly reject or object AT&T's petition(s) than when they just file petitions to complain about AT&T's activities, as hypothesized (H:I.O2; H:I.O3). In addition, each 1-mention increase in the articles of the FCC regarding AT&T in *The New York Times* for two months before each FCC decision multiplies the odds of favoring AT&T's petition(s) by 0.706. This means that one more article about the FCC regarding AT&T's activities in the long-distance service market in the daily newspaper decreases the odds of favoring AT&T's petition(s) by 29.4% [= 100(0.706-1)], as hypothesized (H:I.P3).

Political institutions' influence was detected from the federal agency itself. Each 1-percentage increase in the probability of FCC's favoring AT&T's petition(s) for the previous year multiplies the odds of favoring AT&T's petition(s) by 0.907 for the current year. This means that one more percent increase in the probability of FCC's favoring AT&T's petition(s) for the previous year decreases the odds of favoring AT&T's petition(s) by about 9.3% [= 100(0.907-1)] for the current year. The direction of the

estimated coefficient is contrary to the hypothesis (H:G.F1). This evidence may indicate that in recognition of AT&T's ongoing dominant power even after its divestiture, the federal regulators continued to keep a balance of interests between AT&T and other business or public interest groups when making decisions.

Two significant institutional influence variables indicating political preference of congressional committee and subcommittee members also have some impacts on the FCC's adjudicative rule-making decisions during the 12-year period from 1984-1995. Each 1-score increase in the ADA ratings for the chairmen of House authorization committees multiplies the odds of favoring AT&T's petition(s) by 0.987. That is, one more point increase in the ADA scores of the House authorization committee chairs decreases the odds of favoring AT&T's petition(s) by just 1.3% [= 100(0.987-1)], as hypothesized (H:G.C3). Also, each 1-score increase in the ADA median ratings for the House authorization subcommittee members multiplies the odds of FCC's favoring AT&T by 0.976. This means that one more point increase in the median ADA scores of the federal legislators who are responsible for oversight over the FCC in the House subcommittee decreases the odds of favoring AT&T's petition(s) by about 2.4% [= 100(0.976-1)], as hypothesized (H:G.C3).

The impacts of political institutions showed up as considerable from an American president and federal courts upon the FCC's adjudicative rule-making decisions even after the AT&T's break-up. CLINTON is a dummy variable indicating the influence of the President, and the odds ratio is 15.284. This means that the odds of favoring AT&T's petition(s) are about 15.3 times higher after President Clinton assumes office than before he assumes office, compared to the average odds during the administrations of the other

presidents, as hypothesized (H:G.P1). The evidence on the positive influence of President Clinton on FCC policy-making favoring AT&T has been also found in the total analysis for the full period (1965-1995).

In addition, each 1-percentage increase in AT&T victory rate in all the federal court decisions regarding long-distance service matters for the previous years multiplies the odds of favoring AT&T's petition(s) by 0.590. This means that one rate increase of AT&T court victory reduces the odds of favoring AT&T's petition(s) by as much as 41.0% [= 100(0.590-1)], which is still contrary to the hypotheses (H:G.J1; H:G.J2). This strong negative impact by the judiciary upon FCC policy decisions has also been found in the partial analysis for the first subperiod (1965-1983) as well as in the total analysis for the full period (1965-1995).

Here, I also interpret each logit coefficient for **Model 4** in terms of probabilities [$\hat{P} = 1 / (1 + e^{-L})$]. The probability that the FCC will make a decision favoring AT&T is about 58 percent ($\hat{P} = 0.5799$) when the mean values are entered for all regressors.[277] To compare the influence of each independent variable on the probability of FCC's favoring AT&T, the 25th and 75th percentile values were entered into the logit equation (**Model 4**) for each regressor, while holding the values of the remaining regressors constant at their mean values. Then, the predicted probability of FCC's favoring AT&T with each independent variable fixed at its 25th percentile was compared to the predicted probability with the independent variable at its 75th percentile (**Table 22**).

---

[277] The probability was calculated as follows:

$$\hat{L_i} = \ln\{P_i/(1-P_i)\} = 39.075 - 0.061*OCCPET - 3.263*ATTACK - 0.350*NYTI - 0.097*Y_p - 0.013*HCCH - 0.024*HSC + 2.727*CLINTON - 0.527*COURT$$
$$= 39.075 - 0.061*(3.6049) - 3.263*(0.5854) - 0.350*(12.1854) - 0.097*(53.6863) - 0.013*(231.8854) - 0.024*(49.7671) + 2.727*(0.1707) - 0.527*(44.4151)$$
$$= 0.3223.$$

Thus, $\hat{P_i} = 1 / (1 + e^{-L}) = 1 / (1 + e^{-(0.3223)}) = 1 / (1 + 0.7245) = 0.5799$.

Table 22. Conditional Effect of Each Regressor by its Percentile Values on Probability of FCC's Favoring AT&T in the Adjudicative Rule-Making Decisions during the 12-year period of 1984-1995 in Model 4.

Independ. Variables	Percentile Values			Probabilities*			Difference
	25%	50%	75%	$P^{\wedge}_{25\%}$	$P^{\wedge}_{50\%}$	$P^{\wedge}_{75\%}$	$P^{\wedge}_{75\%} - P^{\wedge}_{25\%}$ (Δ%)**
OCCPET	1	1	4	0.618	0.618	0.574	- 0.044 (- 7.12%)
ATTACK	0	1	1	0.903	0.263	0.263	- 0.640 (- 70.87%)
NYTI	8	11	16	0.857	0.676	0.266	- 0.591 (- 68.96%)
Yp	46.2	56.0	60.0	0.741	0.524	0.428	- 0.313 (- 42.24%)
HCCH	210	225	255	0.647	0.602	0.506	- 0.141 (- 21.79%)
HSC	45	46	55	0.608	0.602	0.549	- 0.059 (- 9.70%)
CLINTON	0	0	0 1***	0.464	0.464	0.464 0.930***	0 (no change) + 0.466 (+ 100.4%)***
COURT	42.6	44.8	46.2	0.782	0.530	0.350	- 0.432 (- 55.24%)

*predicted probabilities of FCC's favoring AT&T when each regressor is entered in the model equation at its 25th and 75th percentile values with the other regressors at their mean values

**$(P^{\wedge}_{75\%}/P^{\wedge}_{25\%} - 1) \times 100$

***90th percentile value and $P^{\wedge}_{90\%}$

First, I checked the relative influence of independent variables indicating interest group influence on the 'probability' of FCC's favoring AT&T.

The probability that the FCC will favor AT&T when making decisions is 0.618 when the number of OCCs' petitions against AT&T is entered into the model equation (**Model 4)** at its 25th percentile and other regressors are entered at their mean values. If the number of OCCs' petitions reaches its 75th percentile value and other regressors are entered at their mean values, the probability of FCC's favoring AT&T drops to 0.574. As more petitions are filed by OCCs with the FCC, the probability of favoring AT&T decreases by 0.044, which means a 7.12 percent drop in the probability of favoring AT&T when making decisions.

The influence of ATTACK appears to be very large on FCC policy-making. When the 25th percentile value (0) of the regressor (ATTACK) enters the logit equation (**Model 4**), which means that other business and public interest groups did not file strong petitions to directly reject AT&T's interests, while holding the remaining regressors constant at their mean values, the probability of FCC's favoring AT&T is 0.903. However, when the regressor (ATTACK) is entered into the model at its 75th percentile value (1), which means that other business and public interest groups filed strong petitions to request the FCC to directly reject AT&T's petition(s), with the other regressors at their mean values, the probability the FCC will favor AT&T when making decisions drops to 0.263. The difference (−0.640) means as much as 70.87 percent decrease in the probability of favoring AT&T. The filing of strong petitions by other interest groups against AT&T had very large negative effects upon the probability of FCC's favoring AT&T when the federal regulators made adjudicative rule-making

decisions during the 12-year period (1984-1995) after the AT&T break-up. This strong negative impact of ATTACK upon the probability of FCC's favoring AT&T has been found in the total analysis for the full period (1965-1995).

The influence of NYTI appears to be the largest on FCC policy-making. The probability that AT&T will be favored in FCC decision-making is 0.857 if the number of mentions of the FCC regarding AT&T's activities in *The New York Times* is entered into the model at its 25th percentile, while holding the remaining regressors are held constant at their mean values. Meanwhile, the probability that the FCC will favor AT&T when making decisions decreases to 0.266 when the number of *The New York Times* mentions of the FCC regarding AT&T's activities reached its 75th percentile value with the other regressors at their mean values. The difference (−0.591) means a 68.96 percent drop in the probability of favoring AT&T. This indicates that the public interest reflected in the daily newspaper had considerable influence on the FCC's adjudicative rule-making decisions regarding AT&T in the long-distance telecommunications service matters after the AT&T break-up. The total analysis for the full period (1965-1995) and the partial analysis for the subperiod (1965-1983) have also found the evidence on the strong negative influence of NYTI on the probability of FCC's favoring AT&T.

Second, I checked the relative influence of independent variables indicating institutional differences on the probability of FCC's favoring AT&T during the period of 1984-1995 after the divestiture of AT&T.

The influence by the federal agency itself is detected. If the probability of favoring AT&T in previous FCC decisions is entered into the logit equation (**Model 4**) at its 25th percentile value, holding the other regressors at their mean values, the probability

of FCC's favoring AT&T in the current year is 0.741. When the probability of favoring AT&T in previous FCC decisions reaches its 75th percentile value with the other regressors at their mean values, the probability of favoring AT&T in the current year decisions is 0.428. The difference (–0.313) means a 42.24 percent decrease in the probability favoring AT&T, meaning that the federal regulators tried to deny the petitions by AT&T for the current year when the dominant carrier got what it wanted in FCC decisions for the previous year. This may indicate that the FCC Commissioners sufficiently recognized AT&T's dominant position in the long-distance service market even after its break-up and thus wanted to keep a balance of interests between AT&T and OCCs. This negative impact of the previous pro-AT&T policy-making upon the current FCC decisions favoring AT&T was also detected by the total analysis for the full period (1965-1995).

In addition, the influence by federal legislators (especially, from House authorization committees and subcommittees) on FCC policy-making appears to be substantial to some degree during the 12-year period from 1984-1995. If the House authorization committee chair's ADA score is entered into the logit equation (**Model 4**) at its 25th percentile and the other regressors are entered in their mean values, then the probability that AT&T's petitions will be favored by the FCC is 0.647. If the House committee chair's ADA score is entered into the model at its 75th percentile with the other regressors at their mean values, then the probability of favoring AT&T is 0.506. As liberalism increases among key federal legislators who are responsible for oversight over the federal agency, the probability of FCC's favoring AT&T decreases by 0.141, which means a 21.79 percent decrease in the probability of favoring AT&T, as hypothesized

(H:G.C3). This finding on the negative impact of the House committee chairs upon FCC policy-making favoring has also been found in the total analysis for the full period (1965-1995) and the partial analysis for the first subperiod (1965-1983).

In addition, the probability that the FCC will favor AT&T is 0.608 when the median ADA score of House authorization subcommittees members is entered into the logit model (**Model 4**) at its 25th percentile and the other independent variables are held at their mean values. Again, the probability of favoring AT&T decreases to 0.549 when the median ADA score of the House subset members reaches its 75th percentile with the other regressors at their mean values. The difference (–0.059) means a 9.7 percent decrease in the probability of favoring AT&T in FCC policy-making. Liberalism on the key federal legislators who are responsible for oversight over the FCC is negatively related to the FCC's adjudicative rule-making decisions which favor AT&T's interests, as hypothesized (H:G.C3). However, in the total analysis for the full period (1965-1995) and the partial analysis for the first subperiod (1965-1983), the influence of the same House authorization subcommittee chairs on FCC policy-making favoring AT&T has appeared to be significant in the other direction, contrary to the hypothesis (H:G.C3).

The influence of an American president is considerable on the probability that the FCC will make decisions in AT&T's favor. If the 25th percentile value (0) of CLINTON, which means that President Clinton did not assume office yet, enters the logit equation (**Model 4**) and the other regressors are entered at their mean values, the probability of favoring AT&T is 0.464. When CLINTON reached its 75th percentile value (0) with the other regressors at their mean values, which means that President Clinton still did not assumed office yet, the probability of favoring AT&T is the same, too. Accordingly, in

this case I entered the 90th percentile value (1) of CLINTON in the model, holding the remaining regressor at their mean values, and thus the probability that AT&T will be favored by the FCC showed up as a high value, 0.930. The difference is a 0.466 increase in the probability favoring AT&T, which in turn means an 100.4 percent increase in the probability favoring when making decisions. This may indicate that President Clinton, a chief executive after the break-up of AT&T, resulted in more increased probability of FCC's favoring AT&T as his deregulatory policy philosophy carried political signal of less restricted regulation on AT&T as well as OCCs to the federal regulators. The total analysis for the full period (1965-1995) has also shown the strong positive impact of President Clinton upon FCC policy-making favoring AT&T.

Finally, the judiciary has also considerable influence on FCC policy decisions during the 12-year period (1984-1995) after the AT&T break-up. If the ratio of AT&T court victory is entered into the logit equation (**Model 4**) at its 25th percentile, while holding the remaining regressors constant at their mean values, the probability of FCC's favoring AT&T is 0.782. Meanwhile, when the ratio of AT&T court victory reached its 75th percentile value, the probability of FCC's favoring AT&T when making decisions decreases up to 0.350. This difference (–0.432) means a 55.24 percent decrease in the probability of favoring AT&T in FCC policy-making. This finding indicates that contrary to the hypotheses (H:G.J1; H:G.J2), the AT&T court victory was negatively related to FCC decisions favoring AT&T during the subperiod after the divestiture of AT&T. The evidence on COURT's negative relation to FCC policy-making favoring AT&T has been found by the first partial analysis for the subperiod (1965-1983) as well as the total analysis for the full time period (1965-1995).

In conclusion, for the 12-year period from 1984 to 1995 after the divestiture of AT&T, the significance tests on the logit coefficients and the two methods of interpretation of their relative influence on FCC policy-making in **Model 4** did confirm the influence of interest groups and political institutions on the FCC's adjudicative rule-making decisions regarding AT&T in the U.S. long-distance telecommunications service matters. The results also provide reasonable support for several of my hypotheses about the interest group and political institutional factors affecting FCC policy-making. The credibility of the results was supported by some important diagnostic tests for the logit analysis that I have already executed to check up the statistical problems such as multicollinearity and outliers with poor fit and influential cases.

The FCC Commissioners responded to business and public interests regarding the long-distance service matters, when making decisions, for the 12-year period after the AT&T break-up.

Increasing petitions filed by other common carriers against AT&T were not disregarded and led the federal regulators to reject AT&T's interests when making decisions. Especially, during the subperiod (1984-1995) after the divestiture of AT&T other business or public interest groups' strong petitions requesting the federal regulators to directly reject AT&T's petition(s) made a very large influence on FCC policy-making by sharply decreasing the probability that AT&T will be favored in FCC policy decisions, as hypothesized (H:I.O2; H:I.O3).

In addition, public interest reflected in *The New York Times* was very strong enough to signal the FCC Commissioners to more regulate AT&T's monopolistic behavior in the long-distance service market even after the break-up of AT&T effective

in 1984. As more articles about FCC actions regarding AT&T in the long-distance service matters were appeared in the daily newspaper, the federal regulators were more likely to deny petitions filed by AT&T. It may be because the American public's dislikes against the dominant position or monopolistic behavior that AT&T had taken in the long-distance telecommunications service market and furthermore such media exposure triggered increased oversight of the federal agency by Congress.

Political influence from the federal agency itself, Congress, the Presidents and the courts was also critical over FCC decisions during the 12-year period of 1984-1995 after the AT&T break-up.

The federal agency's previous policy decisions were significantly but negatively related to the current FCC policy-making. When the regulated dominant carrier obtained what they pursued from FCC policy decisions in the previous year, the federal regulators acted to deny more AT&T's petition(s) when making decisions in the current year. The FCC Commissioners, who watched AT&T's ongoing dominant position even after its break-up, wanted to keep a balance of interests between AT&T and OCCs/public organizations by hurting the interests of AT&T which won more cases in the previous year.

As legislative control of committees and subcommittees over on the federal agency' policy-making, the ideology of federal legislators in the House authorization committees and subcommittees played a meaningful role in the FCC's regulatory policy-making (that is, adjudicative rule-making decisions) after the break-up of AT&T. Negative signs on the ADA scores for both House subsets suggest that as liberalism increases among congresspersons who are responsible for oversight over the FCC, the

FCC Commissioners responded to political pressure from Congress by denying more AT&T's petitions, as hypothesized (H:G.C3). Federal legislators in the Senate did not play substantial roles in FCC policy-making. The other variables indicating liberalism of Senate congresspersons were excluded from the final model (**Model 4**) due to statistical insignificance or multicollinearity problems. This finding suggests that Congress, just through House committee chairs and subcommittee members (more specifically, through their political ideologies), had moderate group influence on the FCC's adudicative rule-making decisions during the 12-year period from 1984-1995 after the AT&T break-up.

President Clinton, through his power to appoint or reappoint the FCC Commissioners, had a positive influence on the probability of FCC decisions favoring AT&T's interests. The regressors REAGAN and BUSH indicating appointment and reappointment power by presidents Reagan and Bush on the federal agency during the subperiod (1984-1995) after the divestiture of AT&T were not included in the final model specification (**Model 4**) due to multicollinearity problems, but the coefficients on those variables have positive signs, too. This finding may support my conclusion that American presidents, who served after the historical break-up of AT&T, sent political signals to the FCC Commissioners so that they were more likely to favor AT&T's interests, no matter what their party affiliations are (Republicans or Democrats). That is, the influence of the Presidents after the break-up of AT&T is the very opposite to that of the Presidents before the divestiture of AT&T. This result may indicate that Presidents Reagan, Bush and Clinton estimated that AT&T's dominant or monopolistic power was declining in the long-distance service market after its break-up. Hence, the Presidents' political philosophy of deregulating the long-distance telecommunications service system

led the federal legislators to favor a little more AT&T's interests. That is, the FCC Commissioners seemed to try to mitigate strong regulation over the dominant carrier as the American presidents' deregulatory policy intended to arrange more competitive long-distance market settings that are advantageous to AT&T as well as OCCs.

During the 12-year period (1984-1995) after the AT&T break-up, the judiciary also had large impacts upon the federal agency's policy-making by inflicting the regulated dominant carrier's interests. This finding is still contrary to the hypotheses (H:G.J1; H:G.J2) as found in the previous total and partial analyses. The increased court victory rates of AT&T in the previous years did not act as a beneficial factor for AT&T itself in FCC policy-making even after its break-up. In contrast to the federal courts' favoring AT&T's interests, the federal regulators did not favor its interests when making decisions. That is, even when the FCC Commissioners quoted many previous court cases in making decisions and knew the fact that AT&T won many court cases, the federal regulators did not want to protect the dominant interest group they regulated in the long-distance telecommunications service market. It may also indicate that federal regulators, who still recognized AT&T's monopolistic position in the long-distance service market even after the break-up of AT&T, tried to keep a balance of interests between AT&T and OCCs or other public interest groups in the regulatory settings.

For the 12-year period (1984-1995) explored in the analysis, all of six contextual variables indicating macroeconomic and long-distance telecommunications service conditions were excluded from the final model specification (Model 4) due to multicollinearity problems. Among four interaction terms indicating the interactive influence on FCC policy-making by public interest reflected in the daily newspaper (i.e.,

The New York Times) and liberalism of federal legislators, three interaction variables and one interaction term, NYxSSC, were excluded from the logit equation (**Model 4**) due to multicollinearity problems and statistical insignificance, respectively.

3-5. COMPARING TOTAL MODEL WITH PARTIAL MODELS BY LOG-LIKELIHOOD TEST

In the previous sections, I first estimated the logit model for the full time period (1965-1995) and then the logit model for each of the two subperiods (1965-1983 and 1984-1995) using exactly the same variables and observations (within that subperiod). In this section, I conduct the Log-Likelihood Ratio (LLR) test for whether estimating two separate models for the two subperiods explains the data better than estimating a single model (**Model 2**) for the full period. In other words, I will decide whether a single set of coefficients for the whole time period do a better job of explaining the data on the FCC's adjudicative rule-making decisions than two sets of coefficients for the two subperiods by employing the LLR test as a nested chi-squared test.

To execute the LLR test, I use the results from the initial logit estimation for each subperiod as presented in **APPENDIX D**. Estimating two separate models with identical independent variables on the two subperiods should result in the same coefficients as estimating a single model with all of those variables (including the constant) interacted first with a dummy for the first subperiod (1965-1983) and then with a dummy for the second subperiod (1984-1995). In addition, to employ the LLR test, the models to be compared should be derived from the same observations (689 cases). Accordingly, the log-likelihood ratio for the full model (**Model 2**) and the sum of the two log-likelihood

ratios for the two subperiods are used in the LLR-test and then the null hypothesis to be tested is that a single set of coefficient in the single model (**Model 2**) for the full period explains the data as well as two sets of coefficients for the two subperiod.

To test the null hypothesis, the following LLR test was applied:

$$\lambda = 2 \mid LLR_U - LLR_R \mid \sim \chi^2_{df = Kr = T-K}$$

where

λ = LLR test statistic;

LLR_U = unrestricted log-likelihood ratio;

LLR_R = restricted log-likelihood ratio;

Kr = number of restrictions (= T–K)

T = number of parameters estimated in the unrestricted model; and

K = number of parameters estimated in the restricted model.

The test statistic λ follows the chi-square (χ^2) distribution with degrees of freedom (df) equal to the number of restrictions.

The log-likelihood ratio for the single model (**Model 2**) is –317.8877 and 14 parameters were estimated. The sum of the likelihood ratios for the two subperiods is –280.1731 (= –144.2204 – 135.9527) and there are a total of 24 parameters estimated. Thus, I obtain the following data:

$LLR_U = -280.1731$ and $LLR_R = -317.8877$

Therefore,

$$\lambda = 2 \mid -280.1731 - (-317.8877) \mid = 75.4292 > \chi^{2*}_{Pr=0.05/df=24-14=10} = 18.3070$$

That is, the LLR test statistic is 75.4292, which is distributed as the chi-square distribution with 10 (= 24–14) degrees of freedom. The critical chi-square value is

18.3070 at the 0.05 significance level (with df = 10) and 23.2093 at the 0.01 significance level (with df = 10). Hence I can reject the null hypothesis that a single set of coefficients in **Model 2** explains the data on the FCC's adjudicative rule-making decisions as well as two sets of separate coefficients for the two subperiods. Therefore, I conclude that we could get a better explanation on the data by considering two sets of coefficients from the two separate models together rather than a single set of coefficients from **Model 2**.

Chapter 7

CONCLUSION

In the U.S. telecommunications history, especially over the period of 1965 through 1995, the Federal Communications Commission (FCC) produced various regulatory or deregulatory policy decisions to induce more competition in the U.S. interstate long-distance telecommunications service market.

When the FCC was created by the *Communications Act of 1934*, AT&T was providing virtually all interstate long-distance services, although Congress never granted AT&T an exclusive franchise for the provision of all such services. In addition, through its affiliated 22 Bell Operating Companies (BOCs), AT&T provided most local service and access to long-distance service. A number of independent telephone companies provided local telephone services and access in certain locations, but these companies depended upon AT&T for long-distance connections to other local companies, and thus effectively operated as cooperating partners with the Bell System. AT&T wielded virtual monopolistic influence over long-distance telephone service during the period 1934-1971.

The FCC's *Above 890 Order* in 1959, however, paved the way to break AT&T's old monopoly regime by establishing a new principle that the established monopoly telephone company (AT&T) no longer enjoy a presumptive right to carry all long-distance traffic and collect all long-distance revenues. However, until the early 1970s there was no essential competition in the long-distance and local telephone service provisions. AT&T began to lose its monopolistic power when the FCC issued the

Specialized Common Carriers Order in 1971, which allowed other telecommunications companies to enter the long-distance service market. Especially during the period 1972-1983, an open and competitive long-distance market setting was constructed by: (i) a number of developments such as technological progress (e.g., microwave technology); (ii) increased demand on more competition by other public or consumer and governmental organizations; and (iii) new court decisions and commission policies to open the door to new entry in limited market segments.

Nevertheless, by the early 1980s, AT&T still dominated the long-distance telecommunications service market. The political economic power coming from the monopolistic interest group (AT&T)'s high market share of long-distance service revenues, policy-making favoring AT&T by the federal agency (i.e., the FCC), and independent policy preferences of some federal legislators (e.g., the House appropriations subcommittee chairs before AT&T break-up) allowed AT&T to dominate the long-distance market place, even though many of the barriers to effective competition had been reduced with the advent of various interest groups.

Political concern for on-going market domination by AT&T's political economic power led the U.S. Justice Department, under the 1982 consent decree with AT&T, to execute the historical break-up of AT&T effective in 1984 that paved the road for more competition in the provision of long-distance services. After the event, moreover, other common carriers were surely expanding their presence in the market and raising their voices against AT&T in FCC policy-making. Many of the entry barriers that had previously restricted competition in long-distance services, including both regulatory and technological barriers, were eliminated or substantially reduced by some of the FCC's

new policy-making such as the *AT&T Price Cap Regulation Order* in 1989. More competitive schemes were executed by the federal agency, which could inflict AT&T's monopolistic interests in the long-distance telecommunications service market, and such policy theme came to bring the enactment of the landmark *Telecommunications Act of 1996*, which allowed cable industry, local phone companies, and long-distance telecommunications companies to freely enter each other's domain.

Over the period of 1965-1995, the overall U.S. policy direction was to take an evolutionary step from monopoly to competition in the long-distance service market. During the 31-year period, both AT&T and OCCs/other public interest groups frequently alleged the other party' violations of "rules or regulations governing long-distance service rates or tariffs related to interconnection or access." To determine which party's arguments should be preferred, the FCC Commissioners made a large number of "adjudicative rule-making decisions" by issuing *Memorandum Opinion and Orders* (*MO&Os*) or *Report and Orders* (*R&Os*), but such FCC decisions were made in favor of AT&T in some cases and in favor of other common carriers (OCCs)/American public in other cases. That is, as the FCC Commissioners confronted such specific telecommunications issues brought before them by the parties, the federal agency never established a policy of monopoly, nor did it establish a policy of particular degrees of competition.

These FCC's adjudicative rule-making decisions appeared to be influenced by AT&T, other business and public interest groups, political institutions, and some contextual factors. The long-term regulated dominant carrier (AT&T) sustained its market power and filed many petitions with the FCC. Other competitive long-distance

carriers, other telecommunications business groups, and public interest groups (U.S. citizens, public schools, government organizations, etc.) also rushed to file their petitions against AT&T. The FCC Commissioners could not disregard public interest reflected in daily newspapers when making decisions, too. The federal regulators responded to political signals from American presidents as they appointed or reappointed the FCC Commissioners after they assumed office. Through oversight and appropriations, chairmen and federal legislators in the congressional committees or subcommittees regarding telecommunications matters could affect FCC policy-making, too. In addition, as each party appealed to the federal courts and thereafter the FCC's original decisions were often reversed, the federal regulators had to refer to previous court decisions regarding the long-distance telecommunications service matters when making decisions.

Accordingly, in this analysis, I have explored the political economic factors influencing the FCC's adjudicative rule-making decisions regarding the long-term dominant, monopolistic carrier (AT&T) in the U.S. federal long-distance service regulation matters over the 31-year period of 1965-1995. With the goal of identifying the determinants of the federal long-distance service policy decisions regarding the regulated interest group, AT&T, this study could assess the relative and joint effects of interest group power, political institutions, and other contextual factors on FCC policy decisions with the help of a quantitative model ('logistic regression') characterizing the conditions under which the FCC actually adopted policy decisions favoring or inflicting AT&T's interests over the 31-year period.

Given the facts above, this study was designed to answer the following four main research questions:

- What are the determinants of the U.S. federal telecommunications policy decisions regarding the U.S. long-distance service market over the 31-year period, from 1965 to 1995?
- Were the dynamics of FCC policy decisions affected by interest group politics, political institutions, or/and simultaneously other contextual factors?
- What kinds of political economic conditions permitted AT&T to get what it wanted from the FCC's regulatory policy-making?
- Under what political economic conditions, did the FCC adopt policy decisions against AT&T's interests? In other words, what kinds of conditions led the FCC to make decisions in favor of OCCs and American public instead of AT&T?

Significant results were derived by three statistical analyses (i.e., logit regressions), which employed the data for the total 31-year period of 1965-1995, the partial 19-year period of 1965-1983 (before the break-up of AT&T), and the partial 12-year period of 1984-1995 (after the divestiture of AT&T), respectively. The results provide reasonable evidence supporting several of my hypotheses and interesting findings about the interest group politics and political institutions' roles in FCC policy-making.

First, from the total analysis for Time Period I (1965-1995), I could confirm the simultaneous influence of both interest group politics and political institutions on the FCC's adjudicative rule-making decisions over the total 31-year period of 1965-1995.

The impact of the long-term dominant carrier through its market power was substantial on FCC policy-making. However, the influence from other long-distance carriers and other public organizations was relatively more significant on FCC policy

decisions. All the time, the FCC Commissioners did not disregard the complaints as well as strong petitions against AT&T raised by other long-distance carriers and American public. Before or even after the AT&T break-up, the American public's interest reflected in the daily newspaper (that is, *The New York Times*) had a very significant impact upon FCC policy decisions.

Institutional influence from the federal agency's own past policy-making was a significant predictor of the FCC's current policy-making. Through federal legislators' ideologies, Congress had significant impacts upon the federal agency's policy-making. That is, policy preferences of chairs and members, who are responsible for oversight over the FCC in the House authorization committees and subcommittees, were effectively reflected in FCC policy-making. The federal legislators, who are responsible for oversight over the FCC in the Senate subcommittees, also effectively sent their policy preferences to FCC policy-making process, only under the interaction with the influence of public interest reflected in the daily newspaper (*The New York Times*). However, there was no direct budget control by Congress over the FCC. In addition, presidential administrations (Nixon, Ford, Carter and Clinton) appeared to be very significant factors of FCC policy-making, and political influence from the judiciary was also significant on FCC policy decisions.

My analysis for the total 31-year period of 1965-1995 explored the direction and relative strength in the influence of each political economic factor on the FCC's adjudicative policy decisions with reference to odds and probabilities, as presented in **Figure 14** and **Figure 15**, respectively.

Figure 14. Relationships of Influence from Interest Group Politics and Political Institutions, in terms of Odds Ratios, for Time Period I (1965-1995)

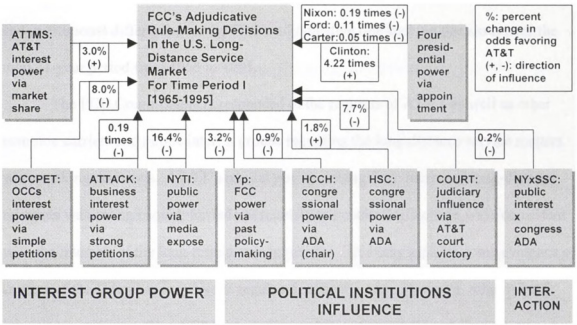
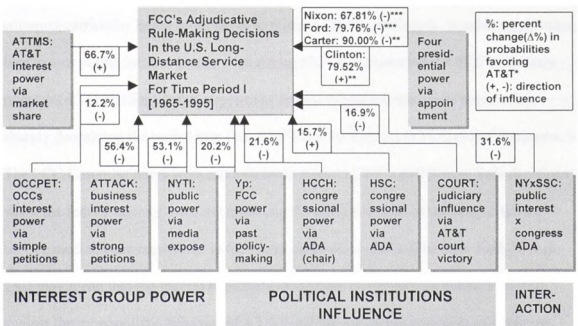


Figure 15. Relationships of Influence from Interest Group Politics and Political Institutions, in terms of Probabilities, for Time Period I (1965-1995)



***percent change in the probabilities of FCC's favoring AT&T when each regressor moves its 25th percentile value to its 75th percentile value in the model with the other regressors at their mean values: ($P^{*}_{25\%}$/ $P^{*}_{75\%}$ - 1) x 100**
****percent change in the probabilities when the 90th percentile value is used for the regressor**
*****percent change in the probabilities when the 95th percentile value is used for the regressor**

The two methods showing the relative influence of each factor on FCC policy-making confirmed clear evidence of the simultaneous influence of interest group politics and institutional differences on the FCC's adjudicative rule-making decisions over the total 31-year period from 1965 to 1995.

The FCC Commissioners responded to the requests of AT&T as well as other common carriers and public interest groups regarding the long-distance service matters when making decisions. AT&T's market power coming from increased long-distance revenues was strong enough for federal regulators to make decisions in ways consistent with the interests of the long-term dominant carrier. This may indicate some evidence of capture of the federal agency by the regulated interest group. However, other AT&T interest group factors (i.e., AT&T employees and its petitions) did not show up as significant predictors of FCC policy-making.

Conversely, the FCC Commissioners responded to the petitions from other common carriers by being more likely to reject AT&T's petition(s). In addition, if other business or public interest groups filed strong petitions requesting the FCC to directly reject AT&T's petition(s), the response of federal regulators was more positive by sharply decreasing the probability that AT&T will be favored in FCC policy decisions. The FCC Commissioners were more likely to reject AT&T's petitions in their decisions when the federal agency's actions regarding AT&T's activities in the long-distance service market were mentioned in the recent daily newspapers (*The New York Times*). This may mean that the federal regulators recognized the American public's interest against the monopolistic behavior of AT&T and the upcoming oversight of Congress.

Institutional influence from the FCC itself was negatively related to FCC policy-making. The federal regulators were more likely deny AT&T's petition(s) if their previous decision-making was in a pro-AT&T direction. This implies that the FCC Commissioners wanted to keep a balance of interests between AT&T and OCCs in the regulatory setting.

Political ideologies of federal legislators in the House and Senate authorization committees and subcommittees were effectively reflected in FCC policy-making. As expected, as liberalism increases among chairmen in the House authorization subcommittees, the FCC Commissioners acted to harm AT&T's interests when making decisions. However, unexpectedly, increased liberalism among the federal legislators, who are responsible for oversight over the FCC in House subcommittees, moved the FCC Commissioners to favor AT&T's interests. Meanwhile, liberal congresspersons, who are responsible for oversight over the federal agency in the *Senate Communications Subcommittees*, signaled their political preferences to the FCC so that the Commissioners did not favor AT&T's petition(s). This influence was possible only when interacted with the effect of public interest (against AT&T's monopolistic behavior) reflected in the daily newspaper (*The New York Times*).

Through their appointments or reappointments to the FCC Commissioners, three chief executives (Nixon, Ford and Carter), who all served before the AT&T break-up, had negative impacts upon FCC policy-making favoring AT&T, in comparison with the influence of the other presidential administrations (that is, Johnson, Reagan, Bush and Clinton). Meanwhile, the Clinton administration, which assumed office after the divestiture of AT&T, exerted positive influence on FCC decisions favoring AT&T,

compared to the influence of the other presidential administrations. This finding indicates that although American presidents, who served before the AT&T break-up, wanted to deregulate the U.S. telecommunications system, their political philosophy was to strongly regulate the monopolistic dominant carrier, no matter what their party affiliations were, while an American president, who served after the divestiture of AT&T, wanted to relax strong regulation over the long-term dominant carrier under the political philosophy of telecommunications deregulation.

Through the 31-year period of 1965-1995, the judiciary had a large negative impact upon FCC policy-making favoring AT&T. When AT&T won the cases in the federal courts for the previous years, the federal regulators, who always recognized AT&T's dominant position in the long-distance market, tried to keep a balance of interests between AT&T and OCCs in regulatory and market settings by hurting AT&T's interests when making decisions.

In short, the results of my analysis find that the roles of interest group politics and political institutions were very significant in affecting the dynamics of the U.S. federal long-distance telecommunications regulations for the total 31-year period of 1965-1995. However, all six contextual factors (that is, U.S. macroeconomic conditions such as GDP, unemployment rate and CPI, and telecommunications economic conditions such as MTS, WATS, and private line rates) were excluded from the logit model specification (**Model 2**) due to multicollinearity problems, so I could not examine the influence of the contextual factors on FCC policy decision for the total 31-year period.

Hence, the total analysis for Time Period I (1965-1995) provides the following political economic conditions under which the FCC Commissioners are less likely to

favor AT&T's interests when making decisions: (i) when other common carriers are filing more petitions against AT&T; (ii) if strong petitions requesting the FCC Commissioners to directly reject AT&T's petition(s) are filed by other business and public interest groups; (iii) when the American public's interest against AT&T's monopolistic behavior is recognized by the FCC Commissioners as more articles on the FCC regarding AT&T's activities in the long-distance service market are carried in the daily newspaper (i.e., *The New York Times*); (iv) if AT&T's petitions were more granted by the FCC itself in the previous year; (v) as liberalism increases among the key federal legislators (that is, chairpersons) who are responsible for oversight over the FCC in the House committees; (vi) as liberalism increases among the federal legislators who are responsible for oversight over the FCC in the Senate subcommittees and simultaneously the daily newspaper carries more articles on the FCC regarding AT&T's activities in the long-distance service market; (vii) when the chief executives (Nixon, Ford and Carter), who served before the break-up of AT&T, signaled its policy preferences to the FCC Commissioners so that they keep more strong regulatory policy-making unfavorable to AT&T that had been the only monopolistic dominant carrier; and (viii) unexpectedly, when AT&T's interests were more favored in the judiciary for the previous years.

In contrast, AT&T's interests were more likely favored in FCC policy decisions over the total 31-year period of 1965-1995 under the conditions opposite to the above conditions. In addition, AT&T were more likely to get what it wanted from FCC policy decisions under the following conditions: (i) when AT&T's market share in terms of the long-distance service revenues was relatively going up; (ii) when President Clinton, one of American presidents who served after the AT&T break-up, signaled its policy

preference of telecommunications deregulation to the FCC Commissioners; and (iii) unexpectedly, when more liberalism increased among some federal legislators in the House authorization subcommittees. However, when considering the findings for other congressional influence factors, I contend that the federal legislators acted independently with their own independent judgment or opinion on nationally important, specific regulatory matters like the long-distance telecommunications service regulation, no matter what their political preferences are (liberal or conservative).

For Time Period II (from 1965 to 1983) before the break-up of AT&T, the FCC's adjudicative rule-making decisions were also affected by both interest group politics and the roles of political institutions.

Other long-distance carriers and public interest groups as well made strong impacts upon FCC policy decisions. The variables indicating the influence of the dominant AT&T business group were excluded from the model specification for this subperiod due to multicollinearity problems.

Institutional influence from the federal agency itself (that is, its previous decisions) was found as significant in FCC policy-making. The influence of the federal legislators showed up as significant on FCC policy-making. That is, policy preferences of federal legislators who are responsible for oversight over the FCC in the House committees and subcommittees were effectively reflected in FCC policy decisions. In addition, the federal legislators who are responsible for oversight over the FCC in the Senate subcommittees effectively sent their policy preferences to the FCC Commissioners, only if their preferences act interactively with the influence of public interest reflected in the daily newspaper (*The New York Times*). Political influence from

the Nixon, Ford and Carter administrations and the judiciary was also very significant on FCC policy decisions.

The partial analysis for the 19-year period (1965-1983) before the AT&T break-up also provides the direction and relative strength in the influence of each economic and political factor on the FCC's adjudicative rule-making decisions with reference to odds and probabilities, as presented in **Figure 16** and **Figure 17**, respectively.

Figure 16. Relationships of Influence from Interest Group Politics and Political Institutions, in terms of Odds Ratios, for Time Period II (1965-1983)

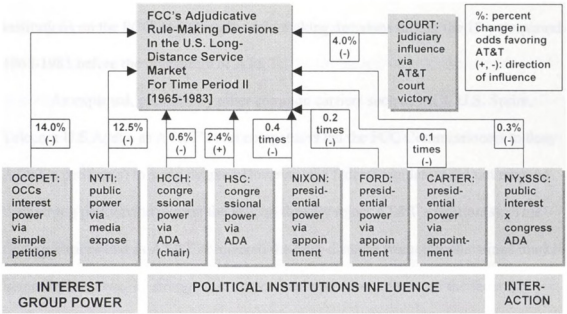
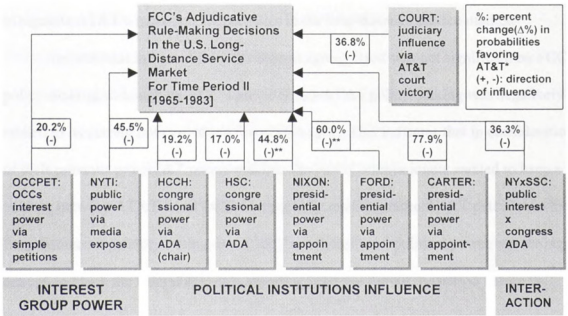


Figure 17. Relationships of Influence from Interest Group Politics and Political Institutions, in terms of Probabilities, for Time Period II (1965-1983)



*percent change in the probabilities of FCC's favoring AT&T when each regressor moves its 25th percentile value to its 75th percentile value in the model with the other regressors at their mean values: $(P^{*}_{25\%}/P^{*}_{75\%} - 1) \times 100$

**percent change in the probabilities when the 90th percentile value is used for the regressor

The two methods showing the relative influence of each factor on FCC policy-making confirmed the significant joint influence of interest group politics and political institutions on the FCC's adjudicative rule-making decisions during the 19-year period of 1965-1983 before the divestiture of AT&T.

As expected, petitions by other common carriers such as MCI, U.S. Sprint, Telecom U.S.A, etc. as AT&T's real competitors led the FCC Commissioners to deny AT&T's petition(s) to some degree. However, the federal regulators did not respond their strong petitions to request the FCC to directly reject AT&T's petition(s). This finding implies that as AT&T dominated the long-distance telecommunications market before its break-up, its strong political economic position influenced the federal regulators to prudently deal with such strong petitions, which could directly harm AT&T's interests, and ultimately disregard them. Meanwhile, public interest reflected in *The New York Times* was also strong enough to signal the federal regulators to continue to regulate AT&T's monopolistic activities in the long-distance service market.

Institutional influence from the federal agency itself was not significant on FCC policy-making, although the FCC's previous pro-AT&T policy-making was negatively related to its current policy-making favoring AT&T. This indicates that in consideration of their previous pro-AT&T policy-making, the FCC Commissioners wanted to keep a balance between AT&T's and OCCs' interests by rejecting more AT&T petitions in the long-distance regulatory setting, but AT&T's economic and political power was strong enough to block the federal agency's adjusting behavior during the period before its break-up.

Congressional control through the political preferences of federal legislators in the House authorization committees and subcommittees was significant over FCC policy-making. An increased liberalism among key federal legislators (that is, chairpersons) in the House authorization committees was negatively associated with favoring AT&T's interests in FCC policy decisions, as expected. Meanwhile, unexpectedly, as liberalism among the federal legislators, who are responsible for oversight over the FCC in *Senate Communications Subcommittees*, increases, the FCC Commissioners responded by protecting AT&T's interests when making decisions.

Three chief executives (Nixon, Ford and Carter), who sufficiently recognized the dominant position of AT&T before its break-up, could carry their political preferences to the FCC Commissioners so that they were more likely to reject AT&T's petition(s) when making decisions. Interestingly, the other president variables (JOHNSON, NIXON and REAGAN) were excluded from the final model due to multicollinearity problems, but show their negative relations to the probability that AT&T will be favored in FCC policy decisions before the historical AT&T break-up, too.

The influence of previous federal court decisions was appeared to be considerable on FCC policy-making, but surprisingly the fact that AT&T won many court cases in the previous years tended to act against AT&T's interests in FCC policy decisions for the current year. This negative influence of federal courts on FCC policy-making is also found in the total analysis for the full period (1965-1995) and the partial analysis for the second subperiod (1984-1995). Again, this implies the federal regulators, who always recognized AT&T's dominant position in the long-distance market, tried to keep a balance of interests between AT&T and OCCs in regulatory and market settings.

Hence, my analysis for the partial period (1965-1983) before the break-up of AT&T shows that institutional arrangements played very critical roles in FCC policy-making and suggests the importance of interest group politics and political institutions for understanding the dynamic politics of the U.S. federal long-distance telecommunications regulations. However, the influence of the factors (e.g., AT&T's market share, employees, filing of petitions) indicating AT&T interest group power on FCC policy-making could not be assessed in this partial analysis because they were excluded from the model specification due to multicollinearity problems. In addition, the partial analysis could not explore the impact of contextual factors (that is, U.S. macroeconomic conditions such as GDP, unemployment rate and CPI, and telecommunications economic conditions such as MTS, WATS, and private line rates) upon FCC policy-making since they were also excluded from the model specification.

As a result, my results find that the during the 19-year period (1965-1983) before its break-up, AT&T's interests were impeded by FCC policy decisions under the following conditions: (i) when OCCs are putting more petitions against AT&T; (ii) when more articles on the FCC regarding AT&T's activities are carried in the daily newspaper (i.e., *The New York Times*); (iii) as liberalism increases among the key federal legislators (that is, chairs) who are responsible for oversight over the FCC in the House committees; (iv) as liberalism increases among the federal legislators who are responsible for oversight over the FCC in the Senate subcommittees and simultaneously the daily newspaper carries more articles on the FCC regarding AT&T's activities in the long-distance service market; (v) when the Nixon, Ford and Carter administrations, in comparison with the influence of the other presidential administrations, signaled their

policy preferences to the federal regulators so that they keep more regulatory policy-making unfavorable to AT&T that had been the only dominant interest group before its break-up; and (vi) unexpectedly, when AT&T won more cases in the federal court for the previous years.

Accordingly, AT&T's interests were more likely to be favored in FCC policy decisions during the period of 1965-1983 under the settings contrary to the above conditions. In addition, unexpectedly, more liberalism among some federal legislators in the House authorization subcommittees acted as a condition favorable to AT&T. However, this finding may suggest that the federal legislators acted independently with their own independent judgment or opinion on national, specific regulatory matters like the long-distance telecommunications service regulation, no matter whether federal legislators were liberals or conservatives.

For Time Period III (from 1984 to 1995) after the historical divestiture of AT&T, both interest group politics and institutional arrangements exerted strong simultaneous impacts upon the FCC's adjudicative rule-making decisions, too.

Again, filing of petitions against AT&T by other long-distance carriers and public interest reflected in the daily newspaper played an important role in FCC policy decisions. Especially, during the subperiod after the AT&T break-up, strong petitions by other business and public organizations to directly reject AT&T petition(s) made really significant influence on FCC policy-making. Again, the variables indicating the influence of the dominant AT&T business group on the federal agency's policy-making were not included in the model specification due to multicollinearity problems.

Institutional influence from the federal agency itself (that is, its previous policy decisions) was detected as significant on FCC policy-making. The influence of federal legislators (authorization committee chairs and subcommittee members) through their ideologies showed up as significant on FCC policy-making. That is, policy preferences of congresspersons who are responsible for oversight over the FCC in the House authorization committees and subcommittees were effectively reflected in FCC policy-making, as expected. However, this partial analysis could not explore the evidence on direct budget control by Congress over the FCC and the influence of federal legislators in the Senate because they were excluded from the model specification due to multicollinearity problems. Presidential influence, especially from the Clinton administration, was also appeared as very significant, and institutional influence from the judiciary was also considerable on FCC policy decisions during the subperiod before the break-up of AT&T.

From the analysis for the 12-year period (1984-1995) after the divestiture of AT&T, I provide the direction and relative strength in the influence of each business or institutional factor on the FCC's adjudicative rule-making decisions with reference to odds and probabilities, as presented in **Figure 18** and **Figure 19**, respectively.

Figure 18. Relationships of Influence from Interest Group Politics and Political Institutions, in terms of Odds Ratios, for Time Period III (1984-1995)

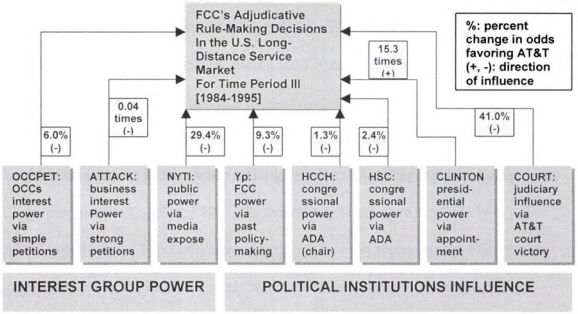
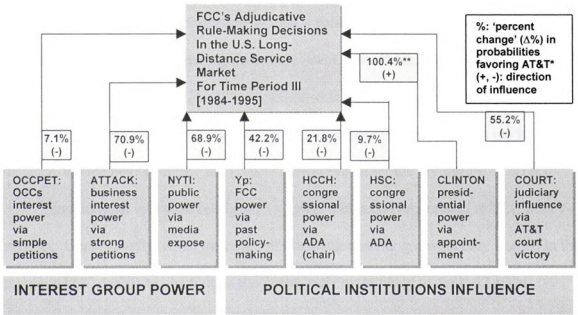


Figure 19. Relationships of Influence from Interest Group Politics and Political Institutions, in terms of Probabilities, for Time Period III (1984-1995)



***percent change in the probabilities of FCC's favoring AT&T when each regressor moves its 25th percentile value to its 75th percentile value in the model with the other regressors at their mean values: ($P^*_{25\%}/P^*_{75\%}$ - 1) x 100**
****percent change in the probabilities when the 90th percentile value is used for the regressor**

The results of the two methods showing the relative influence of each economic or political factor on FCC policy-making provided evidence supporting the significant simultaneous influence of interest group politics and political institutions on the FCC's adjudicative rule-making decisions during the 12-year period of 1984-1995 after the divestiture of AT&T, too.

The FCC Commissioners responded to business and public interests regarding the long-distance service matters when making decisions. As other common carriers were filing more petitions against AT&T, the federal regulators were more likely to reject AT&T's petition(s). Especially, strong petitions by other business or public interest groups requesting the FCC to directly reject AT&T's petition(s) exerted very large influence by sharply decreasing the rate of AT&T victories in FCC policy-making after the break-up of AT&T. This implies that as various competitors' dynamic activities in the long-distance telecommunications market after the divestiture of AT&T effectively damaged AT&T's market domination, AT&T's political economic power was not strong enough to influence the federal regulators to protect its interests. Public interest reflected in the daily newspaper (i.e., *The New York Times*) was also strong enough to signal the federal regulators to continue to regulate AT&T's monopolistic behavior in the long-distance service market during the 12-year period even after the divestiture of AT&T.

Institutional influence from the FCC itself was negatively related to FCC policy-making. Unexpectedly, when the long-term dominant carrier got what they wanted in the previous FCC decisions, the federal regulators were more likely to deny AT&T's petitions in the current year. In consideration of their previous policy-making, the FCC Commissioners, who sufficiently recognized AT&T's dominant position in the long-

distance service market even after its break-up, tried to keep a balance of interests between AT&T and OCCs in regulatory and market settings. Congressional control through the political preferences of federal legislators in the House authorization committees and subcommittees was also substantial over FCC policy-making. As expected, more liberal congresspersons (chairs and members) in the House committees and subcommittees could effectively send their political preferences to the FCC Commissioners so that they were more likely to deny AT&T's petition(s) when making decisions. President Clinton made a positive influence on FCC policy-making favoring AT&T. After the break-up of AT&T, the Clinton administration's political philosophy of deregulating the long-distance telecommunications system led the FCC Commissioners to mitigate strong regulation over the long-term dominant carrier. The judiciary had a large negative impact upon FCC policy-making favoring AT&T even after the divestiture of AT&T. The increased court victory rate of AT&T for the previous years did not act as a beneficial factor for AT&T itself in FCC policy-making. This evidence on this COURT's negative relation to FCC policy-making favoring AT&T has been found from the previous analyses for the first subperiod (1965-1983) as well as the full period (1965-1995). This again implies that the federal regulators, who recognized AT&T's ongoing dominant position even after its break-up, wanted to keep a balance of interests between AT&T and OCCs in regulatory and market settings by being more less likely to favor AT&T's interests when making decisions.

Hence, the results of my analysis show that the simultaneous roles of political institutions and interest group politics were critical in deciding the dynamics of the U.S. federal long-distance telecommunications regulations during the 12-year period (1984-

1995) after the divestiture of AT&T, too. However, this partial analysis could not explore the evidence on the impacts of the factors (e.g., AT&T's market share, employees, filing of petitions) indicating the AT&T interest group power and the contextual factors (that is, U.S. macroeconomic conditions such as GDP, unemployment rate and CPI, and telecommunications economic conditions such as MTS, WATS, and private line rates) upon FCC policy-making for the 12-year period after the break-up of AT&T since those factors were excluded from the model specification due to multicollinearity problems.

As a result, the partial analysis for Time Period III (1984-1995) after the historical break-up of AT&T finds that the FCC Commissioners were less likely to favor AT&T's interest when making decisions under the following conditions: (i) if OCCs are putting more petitions against AT&T; (ii) if strong petitions requesting the FCC to directly reject AT&T's petition(s) were filed by other business and public interest groups; (iii) when articles on the FCC regarding AT&T's activities were carried more in the daily newspaper (i.e., *The New York Times*); (iv) when AT&T's petitions were more favored by the FCC itself in the previous year; (v) as liberalism increased among the federal legislators (that is, chairs and members) who were responsible for oversight over the FCC in the House committees and subcommittees; and (vi) unexpectedly, if AT&T's court victory rate increased for the previous years.

In contrast, the conditions under which AT&T's interests were more likely to be favored in FCC policy-making during the 12-year period (1984-1995) after the divestiture of AT&T are contrary to the above conditions. In addition, through his policy philosophy and power to appoint or reappoint the FCC Commissioners, President Clinton

had a positive influence on FCC policy-making favoring AT&T. The Clinton administration's political philosophy of deregulating the long-distance telecommunications system signaled the federal regulators to apply more relaxed regulation over the long-term dominant carrier. From this analysis for the 12-year period after the break-up of AT&T, the variables REAGAN and BUSH were excluded from the final model specification due to multicollinearity problems, but their coefficients have positive signs, too. Accordingly, this may imply that AT&T's petition(s) were more likely to be favored by the federal agency if American presidents who served after the divestiture of AT&T signaled their policy preferences of telecommunications deregulation to the FCC Commissioners, no matter what their party affiliations are (Republicans or Democrats).

KEY POINTS FROM MY ANALYSES

I have explored the political economic factors determining the dynamics in the U.S. federal long-distance telecommunications service regulations regarding AT&T over the 31-year period from 1965 to 1995. My quantitative analysis allowed me to examine simultaneously the influence of interest group politics, political institutions' roles, and other contextual factors on the *Federal Communications Commission*'s adjudicative rule-making decisions. The results from three logit model specifications (**Model 2**, **Model 3** and **Model 4**) confirmed the simultaneous influence of interest group politics and political institutions on the federal telecommunications regulatory policy-making, although my analyses could not demonstrate the influence of contextual factors on FCC policy-making. Hence, my analysis supported several of my hypotheses and provided

some interesting, unexpected findings. From the results, I find the most key points of note as follows.

First, the impact of the long-term regulated dominant interest group (that is, AT&T) upon FCC policy decisions was substantial to some degree. This evidence was detected in the total analysis for the 31-year period of 1965-1995, but not in either partial analysis due to multicollinearity problems. AT&T's relatively high market share of the total long-distance service revenues led the FCC Commissioners to make decisions in ways consistent with AT&T's interests. This finding may illustrate some potential for the federal agency to be captured by the long-term regulated interest grouper. However, my analysis could not explore the evidence on the impacts of other indexes of AT&T interest group power (that is, its personnel including managerial-level employees and labor union members, and its petition drives) upon FCC policy-making since they were not included in the model specification for each period due to multicollinearity problems.

Second, the influence from other common carriers was found to be considerable on FCC policy decisions from all analyses for all three time periods. The FCC Commissioners did not disregard their voices against AT&T and thus acted to harm AT&T's interests in their policy-making. Above all, filing of strong petitions by them, requesting the FCC to directly reject AT&T's petition(s), had a relatively strong impact upon FCC policy-making over the total 31-year period of 1965-1995. The FCC Commissioners responded to the strong petitions by being more likely to reject AT&T's petition(s). Especially, the strong petitions' negative relation to FCC policy-making favoring AT&T was detected to be very significant in the analysis for the second subperiod (1984-1995) after the break-up of AT&T, while the influence of strong

petitions against AT&T was found to be insignificant on FCC policy-making favoring AT&T in the partial analysis for the first subperiod (1965-1983) before the divestiture of AT&T. This implies that AT&T's political economic power was strong enough to nullify the direct attack of OCCs and other public interest groups in FCC policy-making before the break-up of AT&T. It also implies that the federal regulators had to respond positively to strong petitions from various interest groups by being more likely to reject AT&T's petition(s) under the more competitive market setting constructed especially after the break-up of AT&T effective in 1984.

Third, the influence of public interest reflected in the daily newspaper (i.e., *The New York Times*) was also considerable on FCC policy-making in all three time periods. As more articles on FCC actions regarding AT&T's activities in the long-distance service matters were carried in the daily newspaper, the FCC Commissioners acted against AT&T's interests when making decisions. This finding indicates the federal agency's response to public interest and Congress as well. First, more media exposure of FCC actions regarding AT&T could indicate the American public's dislike of the monopolistic activities which had been mainly taken by AT&T. In addition, this media exposure of the federal agency's actions regarding AT&T could induce increased oversight over the FCC by federal legislators who must pay attention to the American public's desires expressed in the media for their reelection. Hence, recognizing this public interest and upcoming oversight by Congress, the FCC Commissioners acted to reject more the petition(s) filed by the long-term monopolistic carrier, AT&T, in their policy decisions. However, the influence of other public interest power factors (that is, number of long-distance carriers,

and petition drives by public interest groups) on FCC policy-making could not be detected in my analysis for each time period due to multicollinearity problems.

Fourth, the FCC's previous pro-AT&T trend of policy-making was negatively related to the FCC's current policy-making favoring AT&T. Unexpectedly, when AT&T got what it wanted in the previous FCC decisions, the FCC Commissioners were more likely to deny AT&T's petition(s) in the current year. This evidence was detected from all analyses for all three periods. However, this negative influence of previous FCC policy-making was found to be significant from the partial analysis for the later time period (1984-1995) and the total analysis for the full time period (1965-1995), while the negative influence of the federal agency's own policy-making appeared to be insignificant from the partial analysis for the early time period (1965-1983). These findings first imply that the federal regulators all the time sufficiently recognized AT&T's dominant position in the long-distance service market and estimated that AT&T's interests had been more favored. Hence, the FCC Commissioners tried to keep a balance of interests between AT&T and OCCs in the regulatory and market settings when making decisions. More specifically, the findings indicate that AT&T's political economic power before its break-up was strong enough to influence the FCC Commissioners not to make decisions to balance interests between the dominant firm and other common carriers by rejecting more AT&T petitions in consideration of their previous policy-making, while the federal regulators could keep a balance of interests between AT&T and OCCs in the regulatory policy-making as a more competitive market setting was facilitated after the break-up of AT&T.

Fifth, the findings for federal legislators' political preferences support some evidence of congressional dominance theory in all three time periods. The chairs of the House authorization committees, members of the House authorization subcommittees, and members of the Senate authorization subcommittees did effectively signal their political preferences to the FCC Commissioners. The ideological influence of federal legislators who were responsible for oversight over the FCC in the committees and subcommittees was significant on FCC policy-making, while their directions of influence appeared to be inconsistent in each analysis. Especially, the total analysis for the full period (1965-1995) and the partial analysis for the subperiod (1965-1983) before the break-up of AT&T finds unexpectedly that the more liberal federal legislators in the House authorization subcommittees influenced the FCC Commissioners to favor more AT&T's interests when making decisions, while the influence of the House subcommittee members went in the other direction in the partial analysis for the subperiod (1984-1995) after the divestiture of AT&T. In addition, the influence of other congressional variables indicating congresspersons' liberalism on FCC policy-making was found to be inconsistent for each time period, although they were excluded from the model specification for each period due to multicollinearity problems. Accordingly, these inconsistent findings on congressional influence do not sufficiently support a hypothesis that more liberal congresspersons with higher ADA ratings are more likely to vote for policy changes for American consumers and OCCs, thereby leading the FCC Commissioners to harm AT&T's interests when making decisions. Instead, when considering all other factors, this may indicate that federal legislators acted independently

when dealing with specific areas like long-distance telecommunications service matters, no matter whether their political preferences were liberal or conservative.

Sixth, the influence of American presidents through their political philosophy regarding telecommunications regulation was also very significant on FCC policy-making. The presidential influence on FCC policy-making substantially appears through the process of their appointments or reappointments of the FCC Commissioners. Overall presidents served to bring more deregulation in the long-distance telecommunications system, but the influence of presidents before the break-up of AT&T appeared to be the very opposite to that of presidents after the historical event. This finding indicates that presidential influence did not appear to follow their party affiliations (Republican or Democrat). In addition, this implies that some of American presidents who served before the historical break-up of AT&T wanted more strong regulation over AT&T, no matter what their affiliations are (Republicans or Democrats), while some of American presidents who assumed office after the divestiture of AT&T carried political signals to the FCC Commissioners so that they were more likely to make decisions in AT&T's favor, no matter what their affiliations are.

Seventh, the impact of the judiciary upon FCC policy decisions was found to be very significant in all analyses for the three time periods. However, unexpectedly, the increased court victory rates of AT&T moved the FCC Commissioners toward denying more AT&T's petitions. The federal regulators quoted many previous court cases regarding long-distance service matters to judge the petition(s) by each party and knew that AT&T won many cases in the courts. Apparently, the federal regulators tried to keep a balance of interests between AT&T and OCCs or other business/public interest groups

in the regulatory setting and the long-distance market. When the past court decisions accumulated in a pro-AT&T direction, the FCC Commissioners moved in an anti-AT&T direction in their policy-making. That is, the judiciary had a large negative impact upon FCC policy-making favoring AT&T before or even after the break-up of AT&T.

Finally, my analysis could not explore the impacts of the six contextual variables indicating macroeconomic and long-distance telecommunications conditions (that is, U.S. macroeconomic conditions such as GDP, unemployment rate and CPI, and telecommunications economic conditions such as MTS, WATS, and private line rates) on FCC policy-making for any time period as they were excluded from the model specification for each period due to multicollinearity problems.

CONDITIONS UNDER WHICH AT&T WILL BE RELATIVELY FAVORED IN FCC POLICY-MAKING

The results of my analyses provide that the FCC Commissioners were less likely to favor AT&T's interests when making decisions under the following political economic conditions:

- when other common carriers were filing more petitions against AT&T;
- if strong petitions requesting the FCC Commissioners to directly reject AT&T's petition(s) were filed by other business or public interest groups;
- when the American public's interest against AT&T's monopolistic behavior was recognized by the FCC Commissioners as more articles on the FCC regarding AT&T's activities in the long-distance service market were carried in the daily newspaper (i.e., *The New York Times*);

- if AT&T's petitions were more granted in FCC policy-making itself in the previous year;
- when federal legislators who were responsible for oversight over the FCC in the House or Senate committees and subcommittees acted independently with their own political preferences opposing the monopolistic activities by AT&T could effectively send such political signals to the federal agency, no matter what their ideologies are liberal or conservative;
- when American presidents who served before the break-up of AT&T signaled their policy preferences to the FCC Commissioners so that they kept more strong regulatory policy-making unfavorable to AT&T, no matter what their party affiliations were (Republicans or Democrats); and
- if AT&T won relatively many federal court cases regarding long-distance service matters for the previous years.

Hence, I contend that if these political economic conditions had not been effectively arranged, the long-term dominant interest group (AT&T)'s petitions would have been favored in FCC policy-making at a relatively high rate. The interests of AT&T were actually favored in many cases of FCC policy decisions as much as those of other long-distance carriers or/and other business and public interest groups. I have shown that over the 31-year period, about 50.1 percent of all the FCC's adjudicative rule-making decisions (i.e., *MO&Os* or *R&Os*) were decided in AT&T's favor (*see* **Chapter 5**).

As a result, my analyses also find that AT&T got what it wanted in FCC policy decisions under the following political economic conditions:

- when AT&T's market share in terms of the long-distance service revenues was relatively high;
- when other common carriers were not filing petitions against AT&T;
- if simple petitions complaining about AT&T's behavior and demanding the FCC Commissioners to investigate them were filed by other business or public interest groups;
- when the American public's interest against AT&T's monopolistic behavior was less recognized by the FCC Commissioners as low numbers of articles on the FCC regarding AT&T's activities in the long-distance service market were carried in the daily newspaper (i.e., *The New York Times*);
- when AT&T's petitions were less granted in FCC policy-making itself in the previous year;
- when federal legislators who were responsible for oversight over the FCC in any congressional committees and subcommittees, no matter what their political ideologies are liberal or conservative, acted independently with their own independent political preferences favoring AT&T's interest(s) in nationally important, specific long-distance telecommunications service regulation matters and could effectively send such political signals to the federal agency;
- when American presidents who served after the divestiture of AT&T signaled their policy preferences of telecommunications deregulation to the FCC Commissioners so that they put more relaxation of regulations on AT&T, no matter what their party affiliations were (Republicans or Democrats); and

- if AT&T's petitions had been relatively more denied in the federal court cases regarding long-distance service matters for the previous years.

CONTRIBUTIONS

My study has explored the simultaneous influence of various interest groups and political institutions on U.S. federal long-distance service regulation policy decisions over the 31-year period from 1965-1995. My analysis found out the political economic determinants of FCC policy-making regarding AT&T's activities in the long-distance telecommunications service market. Thus, my study contributes to contemporary empirical studies that explore the dynamics of political control of the bureaucratic agency policy-making by various institutional actors, industry interests, and contextual factors.

In addition, my study is the first to analyze the U.S. federal telecommunications policy-making by employing both statistical empirical and theoretical approaches. The analysis covers the 31-year regulatory period that may be long enough to assess the FCC's long-distance telecommunications service policy-making. The analysis was conducted by dividing the total period into two subperiods (1965-1983 before the break-up of AT&T and 1984-1995 after the historical event), thus comparing the differences of the influence of political economic factors on FCC policy-making.

My study is ground-breaking in that it compares the federal bureaucracy's 'adjudicative' decisions with 'rule-making' decisions and then analyzes the FCC's adjudicative rule-making decisions that are related to the rule-making proceedings but are actually closer to adjudicative decisions. Many past studies dealt with the agencies'

regulatory activities or outputs under the name of 'policy-making' or 'policy decisions' without making a distinction between policy decisions through rule-making and adjudication. My study of FCC policy-making regarding the long-distance telecommunications service matters (occurring between AT&T and its other common carriers) is the first to examine federal telecommunications rule-making policy decisions with the characteristics of adjudication (that is, adjudicative rule-making decisions) for evaluating political control of the bureaucracy in the arena of interstate long-distance service regulation, although it is not the first to suggest how political control relates with regulatory policy-making.

My methodological model for this study also developed some variables indicating media influence and court impact which policy analysts have not yet explored in their past studies on agency policy-making but could adopt in their future analyses. Furthermore, my study would provide a modeling strategy that could enhance political scientists' understanding of policy-making and policy change and be generally applied to specific policy studies in other arenas of social science.

Future research involving closer modeling of more valid indicators of federal political institutions and interest group activities could provide better and richer insights for policy analysts exploring the dynamics of the U.S. federal telecommunications policy-making.

APPENDICES

APPENDIX A

MATRICES OF CORRELATIONS AMONG INDEPENDENT VARIABLES

Correlations between Independent Variables in Model 2 (1965-1995)

	ATTMS	OCCPET	ATTACK	NYTI	Yp	HCCH	HSC
ATTMS	1.0000						
OCCPET	-0.0857	1.0000					
ATTACK	-0.0198	0.1459	1.0000				
NYTI	-0.0864	0.1384	0.2084	1.0000			
Yp	-0.3312	0.0956	-0.0401	-0.0460	1.0000		
HCCH	-0.6230	0.1098	-0.0169	-0.0057	0.4322	1.0000	
HSC	-0.3416	0.1587	0.0264	0.1781	0.1023	0.3699	1.0000
NIXON	0.4572	-0.0462	-0.0384	-0.0161	-0.4785	-0.4819	-0.4179
FORD	0.3246	-0.0855	0.0225	-0.0593	-0.2459	-0.1562	-0.0335
CARTER	0.3328	-0.0710	0.0234	-0.1346	-0.1311	-0.4674	0.0003
CLINTON	-0.4097	-0.0008	-0.0236	0.1426	0.1984	0.0781	0.1037
COURT	0.3131	-0.1070	-0.0768	-0.0593	-0.2684	-0.2503	-0.3863
NYxSSC	-0.2717	0.1071	0.1707	0.8377	-0.0546	0.1156	0.1403

	NIXON	FORD	CARTER	CLINTON	COURT	NYxSSC
NIXON	1.0000					
FORD	-0.0914	1.0000				
CARTER	-0.1184	-0.1057	1.0000			
CLINTON	-0.1076	-0.0961	-0.1245	1.0000		
COURT	0.6964	-0.0296	-0.4019	0.0545	1.0000	
NYxSSC	-0.0338	-0.0413	-0.2712	0.2263	0.0570	1.0000

(cont'd)

Correlations between Independent Variables in Model 3 (1965-1983)

	OCCPET	NYTI	HCCH	HSC	NIXON	FORD	CARTER
OCCPET	1.0000						
NYTI	0.2214	1.0000					
HCCH	0.0487	0.1881	1.0000				
HSC	0.1659	0.2887	0.2151	1.0000			
NIXON	-0.0079	-0.0280	-0.4103	-0.4247	1.0000		
FORD	-0.0963	-0.0930	0.1445	0.0634	-0.2611	1.0000	
CARTER	-0.0466	-0.2191	-0.3156	0.1451	-0.3550	-0.3115	1.0000
COURT	-0.1247	-0.0991	-0.2503	-0.4223	0.7158	-0.0825	-0.5283
NYxSSC	0.1661	0.7996	-0.0872	0.1150	0.1324	0.0937	-0.3325

	COURT	NYxSSC
COURT	1.0000	
NYxSSC	0.1438	1.0000

Correlations between Independent Variables in Model 4 (1984-1995)

	OCCPET	ATTACK	NYTI	Yp	HCCH	HSC	CLINTON
OCCPET	1.0000						
ATTACK	0.1821	1.0000					
NYTI	0.0952	0.2397	1.0000				
Yp	0.0327	-0.0763	-0.2556	1.0000			
HCCH	0.0545	-0.0669	-0.2423	0.1677	1.0000		
HSC	0.1413	-0.0664	0.0326	-0.0800	0.4573	1.0000	
CLINTON	-0.0384	-0.0237	0.2094	0.1703	-0.2525	0.0772	1.0000
COURT	-0.2034	-0.0078	0.0655	-0.1726	-0.2490	-0.1427	0.5775

	COURT
COURT	1.0000

APPENDIX B

RESULTS OF THREE DIAGNOSTIC TESTS FOR OUTLIER PROBLEMS IN LOGIT MODELS 3 & 4

Cases with above 5 $\Delta\chi_P^2$ Value in Model 3 (1965-1983)

Observation No.	Year	$\Delta\chi_P^2$ Value (dX2)	Predicted Probability (P^*)	Position
244	**1976**	**5.9759**	**0.1466**	**left**
188	**1982**	**5.4149**	**0.8404**	**right**

Cases with above 5 $\Delta\chi_D^2$ Value in Model 3 (1965-1983)

Observation No.	Year	$\Delta\chi_D^2$ Value (dD)	Predicted Probability (P^*)	Position
175	1982	6.3746	0.0531	left

Cases with above 1 ΔB Value in Model 3 (1965-1983)

Observation No.	Year	ΔB Value (dB)	Predicted Probability (P^*)	Position
175	1982	1.6598	0.0531	left

Cases with above 5 $\Delta\chi_P^2$ Value in Model 4 (1984-1995)

Observation No.	Year	$\Delta\chi_P^2$ Value (dX2)	Predicted Probability (P^*)	Position
239	**1986**	**5.7952**	**0.1494**	**left**
22	**1990**	**5.9235**	**0.8528**	**right**

Cases with above 5 $\Delta\chi_D^2$ Value in Model 4 (1984-1995)

Observation No.	Year	$\Delta\chi_D^2$ Value (dD)	Predicted Probability (P^*)	Position
198	1994	5.4670	0.0684	left
201	1985	5.2829	0.0740	left
113	1995	5.4801	0.9326	right

Cases with above 1 ΔB Value in Model 4 (1984-1995)

Observation No.	Year	ΔB Value (dB)	Predicted Probability (P^*)	Position
159	1992	1.4879	0.1292	left
160	1992	1.4879	0.1292	left
161	1992	1.4879	0.1292	left

APPENDIX C

COMMANDS AND STEPS BY THE *STATA* PROGRAM FOR LOGIT MODEL 2 (1965-1995)

As the STATA program drops variables with multicollinearity problems without theoretical bases in the complex decision model where all of the independent variables I employed for the study entered, I selected a few subsets of independent variables in consideration of multicollinearity problem and theoretical hypotheses. The final model (**Model 2**) resulted from the following best subset of 29 regressors by excluding statistically and theoretically insignificant variables one by one. For **Model 3** (1965-1983) and **Model 4** (1984-1995), these procedures were applied.

```
. use "C:\Stata60\6595.dta", clear
(FCC Decisions I [1965-1995])

. logit Y ATTPET ATTEMP ATTMS OCCPET ATTACK PUBPET LONG NYTI Yp FCCPER FCCBCH
FCCCON SASCCH SCCH SSC SSCCH HCCH HSC JOHNSON NIXON FORD CARTER REAGAN CLINTON
COURT UNEMP MTS NYxSSC NYxHC

Iteration 0:   log likelihood =  -477.4906
Iteration 1:   log likelihood = -324.90027
Iteration 2:   log likelihood = -305.13815
Iteration 3:   log likelihood = -303.21453
Iteration 4:   log likelihood = -303.18628
Iteration 5:   log likelihood = -303.18627

Logit estimates                                   Number of obs   =        689
                                                  LR chi2(29)     =     348.61
                                                  Prob > chi2     =     0.0000
Log likelihood = -303.18627                       Pseudo R2       =     0.3650

------------------------------------------------------------------------------
       Y |      Coef.   Std. Err.       z     P>|z|       [95% Conf. Interval]
---------+--------------------------------------------------------------------
  ATTPET |   -.092174    .308495     -0.299   0.765      -.6968131    .5124651
  ATTEMP |   1.17e-06   4.18e-06      0.280   0.780      -7.03e-06    9.37e-06
   ATTMS |   .2929318   .3728198      3.786   0.432      -.4377815    1.023645
  OCCPET |  -.0884693   .0274334     -3.225   0.001      -.1422378   -.0347009
  ATTACK |  -1.755317   .2218632     -7.912   0.000      -2.190161   -1.320473
  PUBPET |  -.0060512   .0280547     -0.216   0.829      -.0610374     .048935
    LONG |  -.0290274   .0135444     -0.143   0.032       -.055574   -.0024808
    NYTI |  -.1066826   .0995693     -4.071   0.284      -.3018348    .0884697
      Yp |  -.0376361   .0213023     -1.967   0.077      -.0793879    .0041158
  FCCPER |   .0008156   .0035853      0.227   0.820      -.0062114    .0078427
  FCCBCH |  -.0000185   .0000337     -0.548   0.584      -.0000846    .0000476
  FCCCON |   5.179822   3.359286      1.542   0.123      -1.404257     11.7639
  SASCCH |   .0004437   .0064211      0.069   0.945      -.0121414    .0130287
    SCCH |    .001216   .0046063      0.264   0.792      -.0078121    .0102442
     SSC |   .0688096   .0479117      1.436   0.151      -.0250956    .1627147
   SSCCH |  -.0021918    .004915     -0.446   0.656      -.0118251    .0074415
    HCCH |   -.013847   .0092117     -1.803   0.133      -.0319015    .0042076
     HSC |  -.0158525   .0235143     -1.974   0.500      -.0619398    .0302347
 JOHNSON |   -3.35625   4.273936     -0.785   0.432      -11.73301     5.02051
   NIXON |  -7.643561   3.857991     -1.981   0.048      -15.20508   -.0820384
    FORD |  -7.858191   3.226674     -2.435   0.015      -14.18236   -1.534027
  CARTER |  -8.006852   3.060706     -2.616   0.009      -14.00573   -2.007978
  REAGAN |  -3.536622   1.823323     -1.140   0.052       -7.11027    .0370258
 CLINTON |    2.47405   1.413853      3.750   0.080      -.2970514    5.245152
   COURT |  -.0404557   .0570745     -3.709   0.478      -.1523196    .0714083
   UNEMP |   .6665843    .396719      1.280   0.093      -.1109705    1.444139
     MTS |  -.2457336   .1686385     -1.457   0.145       -.576259    .0847918
  NYxSSC |  -.0051172   .0022886     -2.236   0.025      -.0096027   -.0006316
   NYxHC |    .000723   .0014342      0.504   0.614       -.002088     .003534
   _cons |   2.419818   12.37348      0.196   0.845      -21.83175    26.67139
------------------------------------------------------------------------------
```

(Several steps here)

```
. logit Y ATTMS OCCPET ATTACK NYTI Yp HCCH HSC NIXON FORD CARTER CLINTON COURT
NYxSSC

Iteration 0:   log likelihood =  -477.4906
Iteration 1:   log likelihood = -335.14142
Iteration 2:   log likelihood = -319.10278
Iteration 3:   log likelihood = -317.89776
Iteration 4:   log likelihood = -317.88769
Iteration 5:   log likelihood = -317.88768

Logit estimates                                   Number of obs   =        689
                                                  LR chi2(13)     =     319.21
                                                  Prob > chi2     =     0.0000
Log likelihood = -317.88768                       Pseudo R2       =     0.3343

------------------------------------------------------------------------------
           Y |      Coef.   Std. Err.       z     P>|z|       [95% Conf. Interval]
-------------+----------------------------------------------------------------
       ATTMS |   .0300012   .0124985      2.400   0.016       .0055046    .0544978
      OCCPET |   -.082199   .0249498     -3.295   0.001      -.1310996   -.0332983
      ATTACK |  -1.656101   .2103953     -7.871   0.000      -2.068468   -1.243734
        NYTI |  -.1782597   .0412293     -4.324   0.000      -.2590677   -.0974518
          Yp |  -.0328412   .0142321     -2.308   0.021      -.0607356   -.0049468
        HCCH |  -.0088032     .00379     -2.323   0.020      -.0162314    -.001375
         HSC |   .0181391   .0083406      2.175   0.030       .0017918    .0344864
       NIXON |  -1.647926   .6485497     -2.541   0.011       -2.91906   -.3767915
        FORD |  -2.179646   .5510721     -3.955   0.000      -3.259727   -1.099564
      CARTER |  -3.035783   .6089805     -4.985   0.000      -4.229363   -1.842203
     CLINTON |   1.440268   .4376219      3.291   0.001       .5825445    2.297991
       COURT |  -.0803568   .0220222     -3.649   0.000      -.1235195   -.0371942
      NYxSSC |  -.0017738   .0008494     -2.088   0.037      -.0034386   -.0001091
       _cons |    9.17592   1.782436      5.148   0.000        5.68241    12.66943
------------------------------------------------------------------------------
```

```
. correlate, _coef

         |    ATTMS   OCCPET   ATTACK     NYTI       Yp     HCCH      HSC
---------+------------------------------------------------------------------
   ATTMS |   1.0000
  OCCPET |  -0.0344   1.0000
  ATTACK |  -0.0147  -0.0708   1.0000
    NYTI |  -0.4436  -0.0356   0.0140   1.0000
      Yp |  -0.2243  -0.0290   0.0587   0.0250   1.0000
    HCCH |   0.0208   0.0040   0.1026   0.2796  -0.0346   1.0000
     HSC |   0.0928  -0.1357  -0.0008  -0.1671   0.1950  -0.1819   1.0000
   NIXON |  -0.2901  -0.0421   0.0769   0.0523   0.4965   0.3146   0.1862
    FORD |  -0.6090   0.0902   0.0598   0.3669   0.4283   0.3318  -0.0141
  CARTER |  -0.5231   0.1128   0.0912   0.3672   0.3009   0.5634  -0.0699
 CLINTON |   0.4510  -0.0343   0.0149  -0.1521  -0.2513   0.1045  -0.0217
   COURT |  -0.4729   0.1210   0.0986   0.4640   0.1426   0.2240   0.0096
  NYxSSC |   0.3922   0.0492   0.0633  -0.8083   0.0747  -0.1490   0.0895
   _cons |  -0.0688  -0.0520  -0.2174  -0.2521  -0.4738  -0.6139  -0.2412

         |    NIXON     FORD   CARTER  CLINTON    COURT   NYxSSC    _cons
---------+------------------------------------------------------------------
   NIXON |   1.0000
    FORD |   0.4814   1.0000
  CARTER |   0.3611   0.6445   1.0000
 CLINTON |  -0.0712  -0.2329  -0.2183   1.0000
   COURT |  -0.2145   0.3983   0.6009  -0.2897   1.0000
  NYxSSC |   0.0387  -0.2338  -0.1422   0.0122  -0.3396   1.0000
   _cons |  -0.2158  -0.3754  -0.5926   0.0500  -0.5787   0.0090   1.0000


. correlate ATTMS OCCPET ATTACK NYTI Yp HCCH HSC NIXON FORD CARTER CLINTON
COURT NYxSSC
(obs=689)

         |    ATTMS   OCCPET   ATTACK     NYTI       Yp     HCCH      HSC
---------+------------------------------------------------------------------
   ATTMS |   1.0000
  OCCPET |  -0.0857   1.0000
  ATTACK |  -0.0198   0.1459   1.0000
    NYTI |  -0.0864   0.1384   0.2084   1.0000
      Yp |  -0.3312   0.0956  -0.0401  -0.0460   1.0000
    HCCH |  -0.6230   0.1098  -0.0169  -0.0057   0.4322   1.0000
     HSC |  -0.3416   0.1587   0.0264   0.1781   0.1023   0.3699   1.0000
   NIXON |   0.4572  -0.0462  -0.0384  -0.0161  -0.4785  -0.4819  -0.4179
    FORD |   0.3246  -0.0855   0.0225  -0.0593  -0.2459  -0.1562  -0.0335
  CARTER |   0.3328  -0.0710   0.0234  -0.1346  -0.1311  -0.4674   0.0003
 CLINTON |  -0.4097  -0.0008  -0.0236   0.1426   0.1984   0.0781   0.1037
   COURT |   0.3131  -0.1070  -0.0768  -0.0593  -0.2684  -0.2503  -0.3863
  NYxSSC |  -0.2717   0.1071   0.1707   0.8377  -0.0546   0.1156   0.1403

         |    NIXON     FORD   CARTER  CLINTON    COURT   NYxSSC
---------+--------------------------------------------------------
   NIXON |   1.0000
    FORD |  -0.0914   1.0000
  CARTER |  -0.1184  -0.1057   1.0000
 CLINTON |  -0.1076  -0.0961  -0.1245   1.0000
   COURT |   0.6964  -0.0296  -0.4019   0.0545   1.0000
  NYxSSC |  -0.0338  -0.0413  -0.2712   0.2263   0.0570   1.0000
```

```
. predict Phat

. label variable Phat "Predicted Probability"

. generate Yhat = Phat

. label variable Yhat "Predicted Probability"

. replace Yhat = 1 if Phat > .5
(358 real changes made)

. replace Yhat = 0 if Phat < .5
(331 real changes made)

. tabulate Y Yhat, row

Probability|
(1=Favoring| Predicted Probability
     AT&T) |         0          1 |     Total
-----------+----------------------+----------
         0 |       258         81 |       339
           |     76.11      23.89 |    100.00
-----------+----------------------+----------
         1 |        73        277 |       350
           |     20.86      79.14 |    100.00
-----------+----------------------+----------
     Total |       331        358 |       689
           |     48.04      51.96 |    100.00
```

```
. logistic Y ATTMS OCCPET ATTACK NYTI Yp HCCH HSC NIXON FORD CARTER CLINTON
COURT NYxSSC

Logit estimates                                   Number of obs   =        689
                                                  LR chi2(13)     =     319.21
                                                  Prob > chi2     =     0.0000
Log likelihood = -317.88768                       Pseudo R2       =     0.3343

------------------------------------------------------------------------------
           Y | Odds Ratio   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
       ATTMS |   1.030456   .0128791     2.400   0.016      1.00552    1.05601
      OCCPET |   .9210887   .0229809    -3.295   0.001      .8771304   .9672499
      ATTACK |   .1908818   .0401606    -7.871   0.000      .1263793   .2883058
        NYTI |   .8367251   .0344976    -4.324   0.000      .7717708   .9071461
          Yp |   .9676923   .0137723    -2.308   0.021      .9410721   .9950655
        HCCH |   .9912354   .0037568    -2.323   0.020      .9838996    .998626
         HSC |   1.018305   .0084933     2.175   0.030      1.001793   1.035088
       NIXON |   .1924487   .1248126    -2.541   0.011      .0539844   .6860591
        FORD |   .1130816   .0623161    -3.955   0.000      .0383989   .3330161
      CARTER |    .048037   .0292536    -4.985   0.000      .0145617   .1584679
     CLINTON |   4.221825   1.847563     3.291   0.001      1.790589   9.954161
       COURT |    .922787   .0203218    -3.649   0.000      .8838044    .963489
      NYxSSC |   .9982277   .0008479    -2.088   0.037      .9965673   .9998909
------------------------------------------------------------------------------
```

(Below are the STATA commands used to check outlier problems for Model 1.)

```
. quietly logistic Y ATTMS OCCPET ATTACK NYTI Yp HCCH HSC NIXON FORD CARTER
CLINTON COURT NYxSSC

. lpredict Phat

. label variable Phat "Predicted Probability"

. lpredict dX2, dx2

. label variable dX2 "Change in Pearson Chi-Square"

. lpredict dD, ddeviance

. label variable dD "Change in Deviance"

. lpredict dB, dbeta

. label variable dB "Influence"

. graph dX2 Phat, yline (5) ylabel xlabel symbol ([Year])

. list Year dX2 Phat if dX2 > 5

. graph dD Phat, yline (5) ylabel xlabel symbol ([Year])

. list Year dD Phat if dD > 5

. graph dD Phat [iweight=dB], yline (5) ylabel xlabel symbol ([Year])

. list dB Phat if dB > 1
```

APPENDIX D

INITITAL LOGIT REGRESSIONS FOR TIME PERIOD II (1965-1983) AND TIME PERIOD III (1984-1995)

Initial Logit Model for Time Period II (1965-1983)

```
Logit estimates                                   Number of obs   =        279
                                                  LR chi2(12)     =      98.04
                                                  Prob > chi2     =     0.0000
Log likelihood = -144.22043                       Pseudo R2       =     0.2537
```

Y	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
ATTMS	-.1618098	.062768	-2.578	0.010	-.2848327	-.0387869
OCCPET	-.1671079	.0582987	-2.866	0.004	-.2813713	-.0528445
ATTACK	-.2695086	.3065929	-0.879	0.379	-.8704197	.3314025
NYTI	-.1410928	.0632264	-2.232	0.026	-.2650142	-.0171714
Yp	-.0150975	.0222135	-0.680	0.497	-.0586351	.0284401
HCCH	-.0139669	.0063409	-2.203	0.028	-.0263948	-.0015391
HSC	-.0060615	.0146173	-0.415	0.678	-.0347109	.0225878
NIXON	-3.070634	1.08812	-2.822	0.005	-5.203311	-.9379572
FORD	-1.493317	.6082114	-2.455	0.014	-2.685389	-.3012447
CARTER	-2.434964	.7002564	-3.477	0.001	-3.807442	-1.062487
COURT	.0520003	.0415772	1.251	0.211	-.0294895	.13349
NYxSSC	-.0035479	.001672	-2.122	0.034	-.0068249	-.0002709
_cons	19.60501	5.403597	3.628	0.000	9.014155	30.19587

Note: CLINTON dropped due to collinearity.

Matrix of Correlations between Estimated Coefficients (1965-1983)

	ATTMS	OCCPET	ATTACK	NYTI	Yp	HCCH	HSC
ATTMS	1.0000						
OCCPET	0.1401	1.0000					
ATTACK	0.1395	-0.0448	1.0000				
NYTI	0.1195	-0.0504	0.0068	1.0000			
Yp	0.0406	0.0383	-0.0234	-0.2557	1.0000		
HCCH	0.4200	0.1176	0.0376	-0.2894	0.2025	1.0000	
HSC	0.7140	-0.0257	0.0819	-0.1538	0.2565	0.3931	1.0000
NIXON	0.6368	0.1021	0.0573	-0.1194	0.5650	0.5982	0.6415
FORD	-0.0530	0.2062	-0.0460	0.2505	0.4791	0.1638	-0.0212
CARTER	-0.0262	0.2616	-0.0531	0.0120	0.3795	0.5366	0.0093
COURT	-0.8667	0.0105	-0.0940	0.0689	-0.0550	-0.3184	-0.6308
NYxSSC	0.0812	0.1170	-0.0594	-0.7963	0.2815	0.4850	0.2012
_cons	-0.8884	-0.2137	-0.1409	-0.0500	-0.3330	-0.6511	-0.7411

	NIXON	FORD	CARTER	COURT	NYxSSC	_cons
NIXON	1.0000					
FORD	0.3731	1.0000				
CARTER	0.3695	0.6347	1.0000			
COURT	-0.6594	0.1877	0.2559	1.0000		
NYxSSC	0.3016	-0.1276	0.2544	-0.1737	1.0000	
_cons	-0.7730	-0.2228	-0.3539	0.6553	-0.2279	1.0000

Initial Logit Model for Time Period III (1984-1995)

```
Logit estimates                                   Number of obs   =        410
                                                  LR chi2(10)     =     295.50
                                                  Prob > chi2     =     0.0000
Log likelihood = -135.95269                       Pseudo R2       =     0.5208

------------------------------------------------------------------------------
           Y |      Coef.   Std. Err.       z     P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
       ATTMS |   .1194294   .1314601     0.908   0.364    -.1382276    .3770865
      OCCPET |   -.059732   .0299617    -1.994   0.046    -.1184559   -.0010081
      ATTACK |  -3.213313   .3669744    -8.756   0.000     -3.93257   -2.494056
        NYTI |  -.4991156   .1275599    -3.913   0.000    -.7491285   -.2491027
          Yp |  -.0844204   .0293285    -2.878   0.004    -.1419033   -.0269375
        HCCH |  -.0239971   .0110182    -2.178   0.029    -.0455923    -.002402
         HSC |  -.0243595   .0208583    -1.168   0.243    -.0652411    .0165221
     CLINTON |   2.546997   .6879411     3.702   0.000     1.198658    3.895337
       COURT |  -.1628999   .4437309    -0.367   0.714    -1.032597    .7067968
      NYxSSC |   .0029517   .0023252     1.269   0.204    -.0016056     .007509
       _cons |   18.34825   25.96964     0.707   0.480    -32.55131     69.2478
------------------------------------------------------------------------------
Note: NIXON dropped due to collinearity.
Note: FORD dropped due to collinearity.
Note: CARTER dropped due to collinearity.
```

Matrix of Correlations between Estimated Coefficients (1984-1995)

	ATTMS	OCCPET	ATTACK	NYTI	Yp	HCCH	HSC
ATTMS	1.0000						
OCCPET	0.0124	1.0000					
ATTACK	0.0762	-0.0541	1.0000				
NYTI	-0.5353	-0.0132	0.0814	1.0000			
Yp	0.4773	0.0473	0.2291	-0.1157	1.0000		
HCCH	-0.6358	-0.0108	0.0285	0.7394	-0.3751	1.0000	
HSC	-0.1650	-0.0739	0.1450	0.0343	0.2172	-0.2335	1.0000
CLINTON	-0.2548	-0.1457	-0.1488	0.0143	-0.5881	0.2780	-0.2733
COURT	0.9579	0.0614	0.1345	-0.4255	0.5873	-0.5786	-0.0840
NYxSSC	0.5971	0.0341	0.0495	-0.9420	0.2597	-0.7321	-0.0063
_cons	-0.9575	-0.0526	-0.1615	0.3904	-0.6147	0.5385	0.0766

	CLINTON	COURT	NYxSSC	_cons
CLINTON	1.0000			
COURT	-0.4275	1.0000		
NYxSSC	-0.1487	0.5196	1.0000	
_cons	0.4179	-0.9960	-0.4964	1.0000

BIBLIOGRAPHY

Bibliography

Aldrich, John H., and Forrest D. Nelson. 1984. *Linear Probability, Logit, and Probit Models*. Beverly Hills, CA: Sage.

Alt, James E., and A. Chrystal. 1983. *Political Economy*. Berkeley: University of California Press.

Anderson, John H., Paul J. O'Neil, and James E. Gwinn. 1993. "Telecommunications: FCC's Handlings of Formal Complaints Filed Against Common Carriers." *Report to the Chairman, Information, Justice, Transportation, and Agriculture Subcommittee, Committee on Government Operations, House of Representatives*. Washington, D.C.: U.S. General Accounting Office.

Barton, Margaret F. "Conditional Logit Analysis of FCC Decisionmaking." *Bell Journal of Economics* 10, 2 (Autumn): 399-411.

Baumgartner, Frank R. 1993. *Agendas and Instability in American Politics*. Chicago: University of Chicago Press.

Bawn, Kathleen. 1995. "Political Control versus Expertise: Congressional Choices about Administrative Procedures." *American Political Science Review* 89, 1 (March): 62-73.

Beard, Charles A. 1913. *An Economic Interpretation of the Constitution of the United States*. New York: MacMillan.

Becker, Gary S. 1983. "A Theory of Competition Among Pressure Groups for Political Influence." *Quarterly Journal of Economics* 98: 371-400.

_____. 1985. "Public Policies, Pressure Groups, and Dead Weight Costs." *Journal of Public Economics* 28: 330-347.

Bentley, Arthur F. 1908. *The Process of Government*. Cambridge, MA: Harvard University Press.

Berry, Jeffrey M. 1989. "Subgovernments, Issue Networks, and Political Conflict." In Richard A. Harris and Sidney M. Milkis. (eds.). *Remaking American Politics*. Boulder, Colorado: Westview Press, Inc.

Berry, William D. 1979. "Utility Regulation in the States: The Policy Effects of Professionalism and Salience to the Consumer." *American Journal of Political Science* 23: 263-277.

_____. 1984. "An Alternative to the Capture Theory of Regulation: The Case of Public Utility Commissioners." *American Journal of Political Science* 28: 534-558.

Bernstein, Marver H. 1955. *Regulating Business by Independent Commission*. Princeton: Princeton University Press.

Blakely, Eleanor Harrell. 1990. *Participation and Patterns of Participation in the Policy Process in North Carolina*. Ph.D. Dissertation. Chapel Hill, NC: The University of North Carolina.

Bonbright, James C. 1961. *Principles of Public Utility Rates*. New York: Columbia University Press.

Bowe, Frank G. 1993. "Access to the Information Age: Fundamental Decisions in Telecommunications Policy." *Policy Studies Journal* 21, 4: 765-774.

Brenner, Daniel L. 1992. *Law and Regulation of Common Carriers in the Communications Industry*. Boulder, CO: Westview Press, Inc.

Breyer, Stephen G., and Richard B. Stewart. 1985. *Administrative Law and Regulatory Policy: Problems, Text, and Cases*. (2nd ed.). Boston: Little, Brown.

_____, and _____. 1992. *Administrative Law and Regulatory Policy: Problems, Text, and Cases*. (3rd ed.). Boston: Little, Brown.

Brock, Gerald W. 1981. *The Telecommunications Industry: The Dynamics of Market Structure*. Cambridge, MA: Harvard University Press.

_____. 1994. *Telecommunication Policy for the Information Age: From Monopoly to Competition*. Cambridge, MA: Harvard University Press.

_____, and Gregory L. Rosston. (eds.). 1996. *The Internet and Telecommunications Policy: Selected Papers from the 1995 Telecommunications Policy Research Conference*. Mahwah, NJ: Lawrence Erlbaum Associates, Inc.

Brown, C.L. 1983. "AT&T and the Consent Decree." *Telecommunications Policy* (June): 91-95.

Browne, William P. 1987. "Policy-Making in the American States: Examining Institutional Variables from a Subsystem's Perspective." *American Politics Quarterly* 15: 47-86.

Bryner, Gary C. 1987. *Bureaucratic Discretion: Law and Policy in Federal Regulatory Agencies*. New York: Pergamon Press.

Business Week. 1991 (June 3).

Calvert, Randall L., Mark J. Moran, and Barry R. Weingast. 1987. "Congressional Influence over Policy-Making: The Case of the FTC." In Matthew D. McCubbins and Terry Sullivan. (eds.). *Congress: Structure and Policy.* Cambridge, MA: Cambridge University Press.

Carlisle, Douglas Hilton, Jr. 1991. *The Legislative Veto, Diffuseness, And Constitutional Mandated Friction.* Ph.D. Dissertation. Arlington, Virginia: The University of Virginia.

Carpenter, Daniel P. 1996. "Adaptive Signal Processing, Hierarchy, and Budgetary Control in Federal Regulation." *American Political Science Review* 90, 2 (June): 283-302.

Cater, Douglas. 1964. *Power in Washington: A Critical Look ad Today's Struggle in the Nation's Capital.* New York: Random House.

Code of Federal Regulations Title 47-Telecommunication (47 C.F.R.), Part 0 to 19. 1997. Washington, D.C.: U.S. General Services Administration, National Archives and Records Service, Office of the Federal Register: 1-748.

Coll, Steve. 1986. *The Deal of the Century: The Break-up of AT&T.* New York: Athenaeum.

Communications Week. 1985 (May 27); 1985 (June 3); 1989 (Oct. 30).

Congressional Directory. 1972 through 1995.

Cornell, Nina W., and Douglas W. Webbink. 1983. "The Present Direction of the FCC: An Appraisal." *American Economic Review* 73, 2: 194-197.

Crandall, Robert W. 1988. "Surprises from Telephone Deregulation and the AT&T Divestiture." *American Economic Review* 78: 323-327.

_____. 1991. *After the Breakup: U.S. Telecommunications in a More Competitive Era.* Washington, D.C.: The Brookings Institution.

Dahl, Robert A., and Charles E. Lindblom. 1953. *Politics, Economics, and Welfare.* New York: Harper and Row.

Datapro Information Service Group. 1993. "A History of Telecommunications Regulation." *Issues & Trends* (July): 1-15.

Davidson, R. 1976. "Breaking Up Those Cozy Triangles: An Impossible Dream?"

Symposium on Legislative Reform and Public Policy.

Davis, Kenneth C. 1958. *Administrative Law Treatise*. St. Paul, MN: West Publishing Co.

_____. 1975. *Administrative Law and Government*. St. Paul, MN: West Publishing Co.

_____. 1977. *Administrative Law: Cases-Texts-Problems*. (6th ed.). St. Paul, MN: West Publishing Co.

_____, and Richard J. Pierce Jr. 1994. *Administrative Law Treatise*. (3rd ed.). Boston: Little, Brown.

Derthick, Martha, and Paul Quirk. 1985. *The Politics of Deregulation*. Washington, D.C.: The Brookings Institution.

Durant, Robert F. 1991. "Wither Bureaucratic Influence?: A Cautionary Note." *Journal of Public Administration Research and Theory* 1: 461-476.

Edelman, Murray. 1967. *The Symbolic Uses of Politics*. Urbana, IL: University of Illinois Press.

Edelman, Susan. 1997. "The FCC and the Decline in AT&T's Long Distance Residential Rates, 1980-1992: Did Price Cap Do It?" *Review of Industrial Organization* 12: 537-553.

Eliason, Scott R. 1993. *Maximum Likelihood Estimation: Logic and Practice*. Newbury Park, CA: Sage.

Faulhaber, Gerald R. 1987. *Telecommunications in Turmoil: Technology and Public Policy*. Cambridge, Mass.: Ballinger Publishing Co.

_____. 1995. "Public Policy in Telecommunications: The Third Revolution." *Information Economics and Policy* 7: 251-282.

Federal Communications Commission. *FCC Reports*. Vol. 28 (1960) through Vol. 38 (1965). Washington, D.C.: United States Government Printing Office.

_____. *FCC Reports, Second Series*. Vol. 1 (1965) through Vol. 104 (1986). Washington, D.C.: United States Government Printing Office.

_____. *FCC Records*. Vol. 1, No. 1 (1986) through Vol. 11, No. 6 (1996). Washington, D.C.: United States Government Printing Office.

_____, Common Carrier Bureau, Industry Analysis Division. 1965-1995. *Trends in*

Telephone Service. Washington, D.C.: United States Government Printing Office.

_____, _____, _____. 1965-1995. *Long-Distance Market Share*. Washington, D.C.: United States Government Printing Office.

_____, _____, _____. 1996. *Statistics of Communications Common Carriers*. Washington, D.C.: United States Government Printing Office.

_____, _____. 1988-1997. "Monitoring Report of the Federal-State Joint Board." *FCC CC Docket 87-339*. Washington, D.C.: United States Government Printing Office.

Ferejohn, John A., and Charles Shipan. 1990. "Congressional Influence on Bureaucracy." *Journal of Law, Economics, and Organization* 6 (Special Issue): 1-20.

Fiorina, Morris P. 1977. *Congress: Keystone of the Washington Establishment*. New Haven, CT: Yale University Press.

_____. 1995. *Divided Government*. New York: MacMillan Publishing Company.

Flannery, Gerald V. (ed.). 1995. *Commissioners of the FCC, 1927-1994*. Lanham, Maryland: University Press of America, Inc.

Fox, Eleanor M. 1987. "Chairman Miller, The Federal Trade Commission, Economics, and *Rashomon*." *Law and Contemporary Problems* 50, 4 (Autumn): 33-55.

Freeman, J. 1965. *The Political Process: Executive Bureau-Legislative Committee Relations*.

Friendly, Henry J. 1962. *The Federal Administrative Agencies: The Need for Better Definition of Standards*. Cambridge, MA: Harvard University Press.

Gais, Thomas, Mark Peterson, and Jack Walker. 1984. "Interest Groups, Iron Triangles and Representative Institutions in American National Government." *British Journal of Political Science* 14: 161-185.

Gambescia, Stephen F. 1996. *Tobacco and Politics: The Public's Response To Policy Making*. Ph.D. Dissertation. The Temple University.

General Accounting Office. 1986. *Telephone Communications: Bypass of the Local Telephone Companies*. Washington, D.C.

Gormley, William T., Jr. 1983. *The Politics of Public Utility Regulation*. Pittsburgh: Pittsburgh University Press.

_____. 1986. "Regulatory Issue Networks in a Federal System." *Polity* 18: 595-620.

Graham, Michael H. 1991. "The Case for Model Rules of Evidence in Administrative Adjudications." *Federal Bar News and Journal* 38 (May): 189-191.

Gujarati, Damodar N. 1995. *Basic Econometrics*. (3rd ed.). New York: McGraw-Hill, Inc.

Hansen, Wendy L. 1990. "The International Trade Commission and the Politics of Protectionism." *American Political Science Review* 84: 21-43.

Hanushek, Eric A., and John E. Jackson. 1977. *Statistical Methods of Social Scientists*. San Diego, CA: Academic Press, Inc.

Hamilton, Lawrence C. 1992. *Regression with Graphics: A Second Course in Applied Statistics*. Belmont, CA: Duxbury Press.

_____. 1993. *Statistics with Stata 3*. Belmont, CA: Duxbury Press.

Hamm, Keith. 1986. "The Role of Subgovernments in U.S. State Policy Making: An Exploratory Analysis." *Legislative Studies Quarterly* 11: 321-351.

Hammond, Thomas H., and Jack H. Knott. 1988. "The Deregulatory Snowball: Explaining Deregulation in the Financial Industry." *Journal of Politics* 50: 3-30.

_____. 1996. "Who Controls the Bureaucracy? Presidential Power, Congressional Dominance, Legal Constraints, and Bureaucratic Autonomy in a Model of Multi-Dimensional Policy-Making." *Journal of Law, Economics and Organization* 12 (April): 119-166.

Haring, John R., and Kathleen B. Levitz. 1987. "The Law and Economics of Federalism in Telecommunications." *Federal Communications Law Journal* 41: 261-330.

Harris, Richard A., and Sidney M. Milkis. 1989. *The Politics of Regulatory Change: A Tale of Two Agencies*. New York: Oxford University Press.

_____. 1996. *The Politics of Regulatory Change: A Tale of Two Agencies*. New York: Oxford University Press.

Harris, Ronald Alan. 1996. *Regulation By Subgovernment: The Interstate Commerce Commission and Motor Carrier Entry, 1935 To 1980*. Ph.D. Dissertation. St. Louis, Missouri: The Washington University.

Hayes, Michael T. 1978. "The Semi-Sovereign Pressure Groups: A Critique of Current Theory and an Alternative Typology." *Journal of Politics* 40: 134-161.

Heffron, Florence, and Neil McFeeley. 1983. *The Administrative Regulatory Process*. New York: Longman Inc.

Helco, Hugh. 1974. *Modern Social Politics in Britain and Sweden: From Relief to Income Maintenance*. New Haven, CT: Yale University Press.

_____. 1978. "Issue Networks and the Executive Establishment." In Anthony King, ed. *The New American Political System*. Washington, D.C.: American Enterprise Institute for Public Policy Research.

Hibbs, D. A. 1977. "Political Parties and Macroeconomic Policy." *American Political Science Review* 71: 1467-1487.

Hiliard, Robert L. 1991. *The Federal Communications Commission: a primer*. Stoneham, MA: Butterworth-Heinemann, a division of Reed Publishing, Inc.

Hillman. 1984-1985. "Telecommunications Deregulation: The Martyrdom of the Regulated Monopolist." *Northwestern Univ. Law Review* 79.

Himmelstein, Jerome L. 1990. *To the Right: The Transformation of American Conservatism*. Berkeley: University of California Press.

Horwitz, Robert Britt. 1989. *The Irony of Regulatory Reform: The Deregulation of American Telecommunications*. New York: Oxford University Press.

Hosmer, David W., and Stanley Lemeshow. 1989. *Applied Logistic Regression*. New York: Wiley.

Howlett, Michael, and M. Ramesh. 1995. *Studying Public Policy: Policy Cycles and Policy Subsystem*. Ontario, Canada: Oxford University Press.

Hundt, Reed E. 1994. *Statement before the Committee on Commerce, Science, and Transportation in the Senate*. (Feb. 23). Washington, D.C.: United States Government Printing Office.

Huntington, Samuel P. 1952. "The Marasmus of the ICC: The Commissions, the Railroads and the Public Interests." *Yale Law Journal* 61: 467-509.

Inter-University Consortium for Political and Social Research. 1984. *Voting Scores for Members of the United States Congress, 1945-1982*.

Irwin, Manley. 1984. *Telecommunications America: Markets Without Boundaries*. Westport, CT: Quorum Books.

Johnson, Elizabeth. 1986. "Telecommunications Market Structure in the USA: The Effects of Deregulation and Divestiture." *Telecommunications Policy* (March): 57-67.

Kahn. 1990. "Telecommunications, Competitiveness and Economic Development--What Makes Us Competitive?" *Public Utilities Fortnightly* (Sept.).

Kaserman, David L., and John W. Mayo. 1988. "The Economics of Regulation: Theory and Policy in the Postdivestiture Telecommunications Industry." In Arnold A. Heggestad. (ed.). *Public Policy Toward Corporations*. Gainesville, Florida: University Presses of Florida.

Kelley, Daniel. 1982. "Deregulation after Divestiture: the Effect of the AT&T Settlement on Competition." *FCC Office of Plans and Policy Working Paper* #8. (April). Washington, D.C.: Federal Communications Commission Printing Office.

Kellogg, Michael K., John Thorne, and Peter W. Huber. 1992. *Federal Telecommunications Law*. Boston, Toronto, and London: Little, Brown and Company.

Kelman, Steven. 1980. "Occupational Safety and Health Administration." In James Q. Wilson. (ed.). *The Politics of Regulation*. New York: Basic Books.

Kerwin, Cornelius M. 1994. *Rulemaking: How Government Agencies Write Law and Make Policy*. Washington, D.C.: Congressional Quarterly.

Kiewiet, D. Roderick, and Matthew D. McCubbins. 1988. "Presidential Influence on Congressional Appropriations Decisions." *American Journal of Political Science* 32: 713-736.

King, Anthony. 1990. "The American Polity in the 1990s." In Anthony S. King. (ed.). *The New American Political System*. (2nd ver.). Washington, D.C.: American Enterprise Institute for Public Policy Research.

Kinney, Eleanor D. 1990. "In search of bureaucratic justice—adjudicating medicare home health benefits in the 1980s." *Administrative Law Review* 42 (Spring).

Knott, Jack, and Gary Miller. 1987. *Reforming Bureaucracy: The Politics of Institutional Choice*. Englewood Cliffs, NJ: Prentice Hall.

_____, and Thomas Hammond. 1988. "The Deregulatory Snowball: Explaining Deregulation in the Financial Industry." *Journal of Politics* (February): 3-30.

Krasnow, Erwin, and Lawrence Longley. 1978. *The Politics of Broadcast Regulation*. Second Edition. New York: St. Martin's Press.

Lapin, Lawrence L. 1993. *Statistics for Modern Business Decisions*. (6th ed.). Orland, FL: Harcourt Brace Jovanovich Publishers, The Dryden Press.

Latham, Earl. 1952. *The Group Basis of Politics: A Study in Base Point Legislation.* Ithaca, N.Y.: Cornell University Press.

Levitz. 1987. "Loosening the Ties That Bind: Regulating the Interexchange Services Market for the 1990s." Working Paper 23. Office of Plans of Policy, FCC.

Linhart, P. B., and R. Radner. 1984. "Deregulations of Long-Distance Telecommunications." In Vincent Mosco. (ed.). *Telecommunications Policy Research Conference* (11th: 1983: Annapolis, MD.). Norwood, NJ: Ablex Publishing Corp.

Loomi, Burdett A. 1996. "Narrative and Networks: Telecommunications Lobbying, 1992-1996." presented at the Midwest Political Science Meeting.

Lorch, Robert S. 1980. *Democratic Process and Administrative Law.* Detroit: Wayne State University Press.

Lowi, Theodore. 1969. *The End of Liberalism: Ideology, Policy and the Crisis of Public Authority.* New York: Norton.

Lubbers, Jeffrey S. 1994. "The Federal Administrative Judiciary: Establishing an Appropriate System of Performance Evaluation for ALJs." *Administrative Law Journal of the American University* 7 (Fall/Winter): 589-628.

Macey, Jonathan R. 1992. "Separated Powers and Positive Political Theory: The Tug of War over Administrative Agencies." *Georgetown Law Journal* 80: 671-703.

Madaj, Edwin J. 1990. "Agency Investigations: Adjudication or Rulemaking?--The ITC's Material Inquiry Determinations under the Antidumping and Countervailing Duty Laws." *N.C.J. Int'l and Com. Reg.* 15.

Mashaw, Jerry L. 1994. "Improving the Environment of Agency Rulemaking: An Essay on Management, Games, and Accountability." *Law and Contemporary Problems* 57: 185-257.

McConnell, Grant. 1966. *Private Power and American Democracy.* New York: Alfred A. Knopf.

McCubbins, Matthew D. 1985. "The Legislative Design of Regulatory Structure." *American Journal of Political Science* 29: 721-748.

_____, and Thomas Schwartz. 1984. "Congressional Oversight Overlooked: Police Patrols versus Fire Alarms." *American Journal of Political Science* 28: 165-179.

_____, Roger Noll, and Barry Weingast. 1987. "Administrative Procedures as

Instruments of Political Control." *Journal of Law, Economics, and Organization* 3: 243-277.

McKenna, Richard. 1985. "Pre-Emption Under the Communications Act." *Federal Communications Law Journal* 37, 1 (Jan.): 1-69.

McKelvey, R. D., and W. Zavoina. 1976. "A Statistical Model for the Analysis of Ordinal Level Dependent Variables." *Journal of Mathematical Sociology* 4: 103-120.

Meacham, Scott. 1987. "Evidence: The Exclusionary Rule in Civil Administrative Hearings: *Turner v. City of Lawton.*" *Oklahoma Law Review* 40: 321-337.

Melnick, R. Shep. 1983. *Regulation and the Courts: The Case of the Clean Air Act.* Washington, D.C.: The Brookings Institution.

Miller, Gary J. 1992. *Managerial Dilemmas: The Political Economy of Hierarchy.* New York: Cambridge University Press.

Moe, Terry M. 1984. "The New Economics of Organization." *American Journal of Political Science* 28: 739-777.

_____. 1985. "Control and Feedback in Economic Regulation: The Case of the NLRB." *American Political Science Review* 79 (December): 1094-1116.

_____. 1987. "An Assessment of the Positive Theory of 'Congressional Dominance.'" *Legislative Studies Quarterly* 12: 475-520.

Mosco, Vincent. (ed.). 1983. *Policy Research in Telecommunications.* Norwood, NJ: Ablex Publishing Corporation.

Mott, Basil J. 1952. "The Effect of Political Interest Groups on C.A.B. Policies." *The Journal of Air Law and Commerce* 19.

The New York Times Index each year: A Book of Record. New York: The New York Times Company.

The New York Times. 1964 through 1995.

Noam. 1983. "Federal and State Roles in Telecommunications: The Effects of Deregulation." *Vand. L. Rev.* 36.

Noll, A., and F. Rogers. 1990. *Telecommunications in the United States in 2001: A Strategic Forecast.*

Olson, Mancur. 1965. *The Logic of Collective Action.* Cambridge, MA: Harvard

University Press.

_____. 1982. *The Rise and Decline of Nations: Economic Growth, Stagflation, and Social Rigidities*. New Haven, CT: Yale University Press.

Olson, Mary. 1996. "Substitution in Regulatory Agencies: FDA Enforcement Alternatives." *Journal of Law, Economics, and Organization* 12, 2 (October): 376-407.

Palamountain, Joseph C., Jr. 1955. *The Politics of Distribution*. Cambridge, MA: Harvard University Press.

Peltzman, Sam. 1976. "Toward a More General Theory of Regulation." *Journal of Law and Economics* 19: 211-240.

_____. 1989. "The Economic Theory of Regulation after a Decade of Deregulation." In Martin Neil Bailey and Clifford Winston. (eds.). *Brookings Papers on Economic Activity: Microeconomics*. Washington, D.C.: The Brookings Institution.

Philips, Almarin. 1991. "Changing Markets and Institutional Inertia." *Telecommunications Policy* (Feb.): 49-61.

Philips, Charles F. 1984. *The Regulation of Public Utilities*. Arlington, VA: Public Utilities Reports, Inc.

Pigou, Arthur. 1932. *The Economics of Welfare*. Fourth Edition. London: MacMillan.

Posner, Richard A. 1974. "Theories of Economic Regulation." *Bell Journal of Economic and Management Science* 5 (Autumn): 337-352.

Quirk, Paul. 1981. *Industry Influence in Federal Regulatory Agencies*. Princeton, NJ: Princeton University Press.

Ripley, Randall B., and Grace A. Franklin. 1980. *Congress, the Bureaucracy, and Public Policy*. Homewood, Illinois: The Dorsey Press.

_____, and _____. 1984. *Congress, the Bureaucracy, and Public Policy*. (3rd ed.). Homewood, Illinois: The Dorsey Press.

_____, and _____. 1987. *Congress, the Bureaucracy, and Public Policy*. (4th ed.). Homewood, Illinois: The Dorsey Press.

Robinson, Glen O. 1970. "The Making of Administrative Policy: Another Look at Rulemaking and Adjudication and Administrative Procedure Reform." *University of Pennsylvania Law Review* 118.

Robyn, Dorothy. 1987. *Braking the Special Interests*. Chicago: University of Chicago Press.

Rothenberg, Lawrence S. 1994. *Regulation, Organizations, and Politics: Motor Freight Policy at the Interstate Commerce Commission*. Ann Arbor, Michigan: The University of Michigan Press.

Rourke, Francis. 1991. "American Bureaucracy in a Changing Political Setting." *Journal of Public Administration Research and Theory* 1: 111-129.

Rundquist, Barry S., and John A. Ferejohn. 1975. "Observations on a Distributive Theory of Policy Making: Two American Expenditure Programs Compared." In Craig Liske et al. (eds.). *Comparative Public Policy: Issues, Theories, Methods*. New York: Halsted Press.

Sabatier, Paul A. 1975. "Social Movements and Regulatory Agencies: Toward a More Adequate--and Less Pessimistic--Theory of "Clientele Capture." *Policy Sciences* 6: 301-342.

_____, John Loomis, and Catherine McCarthy. 1995. "Hierarchical Controls, Professional Norms, Local Constituencies, and Budget Maximization: An Analysis of U.S. Forest Service Planning Decisions." *American Journal of Political Science* 39 (February): 204-242.

Scholz, John T. 1991. "Cooperative Regulatory Enforcement and the Politics of Administrative Effectiveness." *American Political Science Review* 85, 1 (March): 115-136.

Schlozman, Kay Lehman, and John T. Tierney. 1986. *Organized Interests and American Democracy*. New York: Harper & Row, Publishers, Inc.

Schwartz, Bernard. 1984. *Administrative Law*. (2nd. ed.). Boston: Little, Brown.

Schwartz, Thomas, and Matthew McCubbins. 1984. "Congressional Oversight Overlooked: Fire Alarms and Police Patrols." *American Journal of Political Science* 2: 165-179.

Sharp, J. Michael. 1988. *Directory of Congressional Voting Scores and Interest Group Ratings*. Washington, D.C.: Congressional Quarterly.

_____. 1997. *Directory of Congressional Voting Scores and Interest Group Ratings*. Washington, D.C.: Congressional Quarterly.

Shattschneider, E.E. 1960. *The Semi-Sovereign People*. New York: Holt, Rinehart and Winston.

Shepsle, Kenneth. 1982. "The Politics of Regulation." (Book Review). *Journal of Political Economy* 90: 216-221.

_____. 1989. "Studying Institutions: Some Lessons from the Rational Choice Approach." *Journal of Theoretical Politics* 1: 131-148.

Shields, Peter. 1991. "The Politics of the Telecommunications Policy Process: The Example of the FCC's Price Cap Initiative." *Policy Studies Journal* 19: 495-513.

Shoosan, Harry M, III. (ed.). 1984. *Disconnecting Bell: The Impact of the AT&T Divestiture*. New York: Pergamon Press.

Stigler, George J. 1971. "The Theory of Economic Regulation." *Bell Journal of Economics and Management Science* 2 (Spring): 3-21.

Telecommunications Report. 1986 (June 2).

Telephone Engineer and Management. 1985 (October 15).

Temin, Peter. 1987. *The Fall of the Bell System: A Study in Prices and Politics*. Cambridge: Cambridge University Press.

Teske, Paul E. 1987. "State Telecommunications Regulation: Assessing Issues and Options in the Midst of Changing Circumstances." *Report of an Aspen Institute Conference*, August 11-15, Aspen, Colorado.

_____. 1990. *After Divestiture: The Political Economy of State Telecommunications Regulation*. Albany, N.Y.: State University of New York Press.

_____. 1991. "Interests and Institutions in State Regulation." *American Journal of Political Science* 35: 139-154.

Tierney, John T. 1988. *The U.S. Postal Service: Status and Prospects of a Public Enterprise*. Dover, Massachusetts: Auburn Publishing Company.

Timony, James P. 1994. "Performance Evaluation of Federal Administrative Law Judges." *Administrative Law Journal of the American University* 7 (Fall/Winter): 629-657.

Toubman, Allan A. 1990. "The ABCs of Hearsay in Administrative Proceedings." *Maine Bar Journal* (November): 352-356.

Truman, David B. 1951. *The Governmental Process*. New York: Alfred A. Knopf.

U.S. Bureau of the Census. 1997. *Statistical Abstract of the United States*. Austin, TX:

Hoover's Business Press.

U.S. Bureau of Labor Statistics. 1997. *Statistical Abstract of the United States*. (117th ed.). Austin, TX: Hoover's Business Press.

U.S. General Accounting Office. *The Budget for Fiscal Year* 1964 to 1995. Washington, D.C.: The Office.

United States Court of Appeals, United States Court of Claims, and United States Court of Customs and Patent Appeals. 1959-1992. *Federal Reporter Second Series* (F.2d). Vols. 258-999. St. Paul, MN: West Publishing Co.

_____, _____, and _____. 1993-1995. *Federal Reporter Third Series* (F.3d). Vols. 1-66. St. Paul, MN: West Publishing Co.

United States District Court and United States Customs Court. 1959-1995. *Federal Supplement* (F.Supp.). Vols. 164-931. St. Paul, MN: West Publishing Co.

United States Supreme Court. 1959-1995. *Supreme Court Reporter* (SCt). Vols. 80-117. St. Paul, MN: West Publishing Co.

Vietor, Richard, and Dekkers Davidson. 1985. "Economics and Politics of Deregulation." *Journal of Policy Analysis and Management* 5: 3-22.

_____, and Davis Dyer. (eds.). 1986. *Telecommunications in Transition: Managing Business and Regulatory Change*. Boston: Harvard Business School Press.

Wall Street Journal. July 12, 1991.

Warren, Kenneth F. 1996. *Administrative Law in the Political System*. (3rd ed.). Upper Saddle River, NJ: Prentice Hall.

Waterman, Richard W. 1989. *Presidential Influence and the Administrative State*. Knoxville: University of Tennessee Press.

Weingast, Barry R. 1981. "Regulation, Reregulation, and Deregulation: The Political Foundations of Agency Clientele Relationships." *Law and Contemporary Problems* 44: 147-177.

_____. 1984. "The Congressional-Bureaucratic System: A Principal-Agent Perspective with Applications to the SEC." *Public Choice* 41: 141-191.

_____, and Mark J. Moran. 1983. "Bureaucratic Discretion or Congressional Control? Regulatory Policymaking by the Federal Trade Commission." *Journal of Political Economy* 91 (October): 765-800.

_____, _____, and Randall Calvert. 1987. "Congressional Influence over Policy-making: The Case of the FTC." In Matthew McCubbins and Terry Sullivan. (eds.). *Congress: Structure and Policy*. Cambridge: Cambridge University Press.

Weiss, Leonard W., and Allyn D. Stickland. 1982. *Regulation: A Case Approach*. Second Edition. New York: McGraw-Hill Book Company.

Wenders, John T., and Bruce L. Egan. 1986. "The Implications of Economic Efficiency for U.S. Telecommunications Policy." *Telecommunications Policy* 10 (March): 33-40.

_____. 1989. "Deregulating Telecommunications." In Roger E. Meiners and Bruce Yandle. (eds.). *Regulation and the Reagan Era: Politics, Bureaucracy, and the Public Interest*. New York: Holmes & Meier Publishers, Inc.: 104-131.

West, William F. 1995. *Controlling the Bureaucracy: Institutional Constraints in Theory and Practice*. Armonk, N.Y.: M. E. Sharpe.

Wildavsky, Aaron. 1964. *The Politics of the Budgetary Process*. Boston, MA: Little, Brown.

_____. 1978. *The Politics of the Budgetary Process*. (3rd ed.). Boston, MA: Little, Brown.

Wilson, James Q. 1980. "The Politics of Regulation." In James Q. Wilson. (ed.). *The Politics of Regulation*. New York: Basic Books.

Wood, B. Dan. 1988. "Principles, Bureaucrats, and Responsiveness in Clean Air Enforcements." *American Political Science Review* 82: 21-34.

_____, and James E. Anderson. 1993. "The Politics of U.S. Antitrust Regulation." *American Journal of Political Science* 37 (Feb.): 1-39.

_____, and Richard W. Waterman. 1991. "The Dynamics of Political Control of the Bureaucracy." *American Political Science Review* 85, 3 (Sep.): 801-828.

_____, and Richard W. Waterman. 1993. "The Dynamics of Political-Bureaucratic Adaptation." *American Journal of Political Science* 37: 497-528.

Wright, Charles R. 1975. *Mass Communication: A Sociological Perspective*. (2nd ed.) New York: Random House, Inc.

MICHIGAN STATE UNIV. LIBRARIES
31293018128631