CHAPTER

4

STATE GOVERNMENT ACTORS BEYOND THE REGULATORS

Paul Teske
Mallika Bhattacharya
State University of New York
at Stony Brook

Contributors to this book are addressing the question of whether there are already too many actors on two different levels of American government—national and state—who collectively are fragmenting telecommunications regulation. It is important, therefore, to assess the role of actors beyond the public utility commission regulators at the state level. We believe that the active involvement in telecommunications policy of other state political actors—governors, legislators, task forces, and economic development agencies—stimulates greater policy experimentation than the PUCs alone would implement.

In many states, the question of whether legislators, governors, or economic development agencies *should* be involved has become moot; they are already playing an important role in telecommunications. The critical questions are: What have they done? What should they be doing in the future?

Politicians have become attracted to telecommunications, as it promises productivity, high-technology economic development, and a comparative advantage in the information economy. Many of their business constituents recognize the increasing importance of the telecommunications infrastructure.[1]

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[1]It is true that many industry stakeholders try to use these other actors and the economic development potential of telecommunications to gain more favorable regulatory policies than they might get from the PUC. Although this second set of "rent-seeking" activities can distort policy, attempting to link self-interest to the public good is a common practice in our American political system with multiple forums for policy, checks and balances, and political pluralism.

WHY STATES HAVE PUCs

Before examining other actors, it is important to remember why and how PUCs were established. They are a compromise between two ideas, expert policymaking and political accountability. Society needs regulators who have expertise and the political insulation to make difficult decisions, if necessary. However, society does not want to have completely insulated regulators who are not accountable to larger political influences.

PUC regulators do have the *expertise* and the resources that other actors, especially legislators and governors, do not have. The politicians delegate power to the PUC bureaucracy, but provide a general framework in law about how to progress and what decision-making procedures to utilize. PUC bureaucrats must base their decisions on facts and law, or face being overturned in court. Also, legislators can pass new laws if they do not like the direction in which bureaucrats are interpreting laws, and, at least in theory, they can reward and punish bureaucratic behavior with future budgets (although some PUC budgets come out of utility receipts rather than from legislative authorizations). Similarly, governors appoint the PUC regulators in most states, which presumably gives governors some influence or at least knowledge of what to expect from regulators.

Consequently, according to this model, about three fourths of our state regulatory commissioners are appointed by governors and approved by state senates, and the remaining one fourth of states elect their commissioners directly, for a more direct form of political accountability. We might expect this difference in direct versus indirect political accountability to affect policy choices, but a wide range of research is largely inconclusive on this issue.[2]

Recent scholarship points out that legislators do not always delegate for reasons of expertise, but often for *political-electoral reasons*. Legislators (and governors) sometimes prefer *not* to make difficult political choices that can harm influential interest groups and constituents, so they pass the "hot potato" issue on to bureaucrats. These politicians are assuming that voters will be less likely to blame them for harmful choices made by bureaucrats, particularly if these choices are made incrementally over time and if they involve a high degree of technical detail and complexity (as with much of telecommunications regulation; see Gormley, 1986). Certainly this has been true for Congress and telecommunications policy over the past several decades, as they have not been able to pass significant legislation with so many powerful interests lobbying them in different directions.

Delegating to bureaucrats is not an *unconstrained* strategy. At least sophisticated interest groups and some voters will realize that legislators passed the hot potato and may expect their elected officials to solve the problems that are created

[2]See Teske (1990) and especially Cohen (1992) for a contingent theory and more detailed study of elections and state telecommunications regulators.

by subsequent bureaucratic choices. Still, most PUC regulatory choices in telecommunications are not overturned by the politicians, and state regulators seem to make most of the important decisions.

WHY ARE OTHER ACTORS INVOLVED?

Since state telecommunications re-emerged as an important policy area after the agreement to breakup AT&T in 1982, many state legislatures and governors have approved laws to restructure regulation and to allow deregulation. In some cases, their action was necessary, as public utility enabling laws in these states were half a century old and did not anticipate the need for flexibility or deregulation. Some state politicians have taken this opportunity to pass laws that go beyond simply giving regulators authority to deregulate, but instead prescribe more detailed regulatory practices, as in Illinois and Florida, for example.

However, governors and legislators have not limited their role in telecommunications policy to regulation. Some have seized on telecommunications as *the* crucial infrastructure for state economic development in the information economy. As Cole noted in chapter 3, in several states economic development agencies or task forces also have become involved in telecommunications policy. As the U.S. Congressional Office of Technology Assessment (1990) noted: "Also steering the States in diverse directions is the fact that many State officials are now beginning to recognize the economic development potential of telecommunications" (p. 364).

As the American economy has shifted to information-intensive services and as the international competitiveness of our firms has become an increasing concern, policymakers have looked to telecommunications as a vital infrastructure for economic growth. Although the common analogy of telecommunications networks as the highways of the 21st century is far too simplistic, it does have a compelling logic that has galvanized policymakers. Vice President Al Gore claims to have coined the term "information superhighway" and it has become part of common usage.

Evidence from numerous studies illustrates that telecommunications is a *necessary condition* for economic development, though probably not a sufficient one. As with any single factor in economic growth, it is difficult to isolate the precise impact of telecommunications. See, for example, Wilson and Teske (1990), New York City Partnership (1990), Parker et al. (1989), Schmandt, Williams, and Wilson (1989), Coopers and Lybrand (1989), Smilor, Kozmetsky, and Gibson (1988), Arnheim (1988), Coalition of Northeastern Governors (1987), Moss (1986, 1987), Hanneman (1986), Blazar (1985), Saunders, Warford, and Wellenius (1983), and Hardy (1980).

Even if advanced telecommunications networks and services had no positive effect on economic growth or productivity, a position that even most skeptics

would suggest is extreme, as long as policymakers think that voters believe in this linkage, states will pursue such policies. And, in the multistate competition for jobs, each state faces prisoner's dilemma incentives that can force them to compete even if they do not see a link, because competitor states are taking such actions.

Thus, a new issue has emerged at the state level. *Should* these other policy actors (governors, legislators, and economic development agencies) step aside and let the regulators use their own expertise to make telecommunications policy within the traditional public utility regulation framework or do they have a legitimate role to play, particularly in the modernization of infrastructure for economic development? To provide some perspective on this question, we assess what these other actors have done in actual practice.

WHAT HAS THEIR INVOLVEMENT MEANT?

This section assesses the role played by new laws, gubernatorial task forces, and development agencies in state telecommunications policy. How do policy choices by these actors differ from PUC choices and how do they influence the PUC regulators?

Legislatures

Between 1982 and 1992, 29 states passed important bills affecting state telecommunications regulation. Some state legislatures, including Washington, North Dakota, Minnesota, Utah, Mississippi, and Florida passed more than one major telecommunications law in this period. Thus, at least in 29 states, legislatures and governors have been directly involved in the telecommunications regulatory policy since divestiture.

As Table 4.1 illustrates, 21 state laws explicitly allow their respective utility commissions to deregulate or modify regulation on a service-by-service basis, often specifying three categories to be considered: competitive, partially competitive, and noncompetitive. Some of these laws are more explicit than others about which services fall in which category. Another eight state laws are enabling statutes that give authority to the PUCs to deregulate or to develop alternative rate making plans, but do not specify how or when to do so. Seven state laws mandate the study of alternatives to rate-of-return regulation. Another four state laws, led by Vermont in 1987, can be classified as oriented toward social contracts, where prices for basic services are held down and network modernization is ensured in return for more regulatory flexibility for the local telephone companies. Nebraska's famous 1986 law stands in a class by itself that could be

TABLE 4.1
State Deregulation Laws

Service by Service Statute	*Modified Service by Service Statute*	*Enabling Statute*	*Social Contract Legislation*	*Study of Alternatives to Regulation*
Iowa	Colorado	Connecticut	Vermont	Indiana
Arizona	Minnesota	Mississippi	Idaho	Florida
South Carolina	Missouri	Ohio	North Dakota	Utah
Indiana	South Dakota	Washington	Minnesota	Colorado
Mississippi	Nevada	North Carolina		Nevada
Montana		Florida		North Carolina
Georgia		Utah		Washington
Nevada		West Virginia		
Texas				
New Mexico				
Wisconsin				
North Dakota				
Oregon				
Utah				
Michigan				
Washington				
Illinois				

Source: Authors' analysis of state laws.

labeled radical deregulation by legislative fiat (see Mueller, 1993, for an analysis of Nebraska's law).

To try to understand these laws, and the motivations behind them, we need to examine past research. Some scholars believe that, because legislators face elections and most state regulators do not (because about three fourths are appointed), legislative decisions will be oriented more toward short-term political incentives than bureaucratic choices would be. We might also expect different political parties to develop different telecommunications policies, based on the interests of their core supporters. Although empirical evidence from other areas of state regulation is mixed, in telecommunications there is evidence that legislators do influence policy and that party control is important and in the expected direction. Teske (1990), analyzing policy choices made from 1984–1987, found that state legislatures controlled by Republicans were significantly more likely to favor higher local rates and lower toll rates, but less likely to favor intraLATA competition than legislatures controlled by Democrats. Similarly, Cohen (1992) found that, from 1977–1985, Democratic majorities in state legislatures led to larger cross-subsidies in local flat rates from business to residential consumers.

When we analyze state legislative actions, it is important to note that nearly half of the laws passed were in the 14 states served by the most aggressive Baby

Bell company, U S West. U S West had an explicit strategy to pass legislation and "bypass" the regulators (and for good political reasons, see Teske, 1990). Therefore, a large percentage of these bills resulted from strong pressure from a powerful interest group on relatively willing (and Republican) legislatures that are among the nation's *least* professional, by most measures of salary, staff, resources, and time in session.

That such strong political pressure can be effective is not surprising. Hudson's (1990) survey found that state legislative staff expertise in telecommunications was limited; 27 states had no professionals working on telecommunications, most had one or two, and the maximum number was 6. In part, this was because no state had a legislative committee devoted exclusively to telecommunications, but usually as a part of utility or commerce committee. Hudson also found that legislators rely heavily on telephone lobbyists and PUC staff for their telecommunications expertise.

To further understand legislative motivation and delegation of authority to PUCS, we performed an in-depth comparison of all 50 state laws. As illustrated in the Appendix, we measured legislative involvement in two ways—legislative delegation of authority to PUC bureaucrats and oversight provisions in the legislation. Some state legislatures wrote telecommunication laws that defined in very specific terms what the agency was supposed to do under specific conditions. Other state legislatures passed laws that defined in vague terms what the agency was supposed to do, leaving more freedom for PUC regulators to interpret and enforce the laws. Furthermore, legislators can delegate authority, but retain power by oversight provisions. Some legislatures have done this, whereas others have not included strict oversight of the PUC in their laws.

In Table 4.2 we present a cross-tabulation of the specificity of scope of telecommunication laws. Very often state legislatures write vague telecommunications laws that are open to different interpretations. In the category of the regulation laws, approximately one third of the states (18 out of 50) have laws that are not specific about the role of the PUC regulators. In the category of the deregulation laws also, again about one third of the states (10 out of 29) do not clearly define bureaucratic scope.

TABLE 4.2
Specificity of Scope of Regulation and Deregulation Laws

		Number of Regulation Laws	*Number of Deregulation Laws*
Laws Present	No Authority	0	0
	Very Specific	13	6
	Medium Specific	19	13
	Not Specific	18	10
	Total	50	29
Laws Absent		0	21
Total States		50	50

Looking at instruments of regulation, we find that 38 state legislatures have given many regulatory instruments to their regulators.[3] None of the state legislatures that have written deregulation laws have left their PUC with few regulatory instruments, and most instruments are retained to regulate local telecommunication services. Thus, there is much less variation in legislative control over the bureaucrats in this area.

The oversight requirements in the state telecommunication laws are skewed in the direction of being very stringent. About half of the laws provide for strict oversight requirements for their respective PUCs. Still, there is considerable variation in the oversight requirements across the various state legislatures because the remaining states are evenly split between medium and relaxed oversight requirements.

Now, we address the question of why legislatures have been involved in telecommunications in different ways. Political science theory suggests that the concepts of uncertainty and conflict are critical. As uncertainty increases, legislators have more difficulty in deciding the best policy for their state and for their own political futures. McCubbins (1985) argued that under increasing uncertainty, legislatures will try to be less involved, and delegate broader authority, so that if something goes wrong in the future, the bureaucrats can be blamed for it. They expect broader delegation of authority to be linked with more strict oversight provisions, to constrain bureaucrats.

Others, like Moe (1989), argued that with increasing uncertainty, the existing legislative majority will try to insulate the agency from future interference from the current political opposition (who might later be in power) by writing more specific laws with less delegation of authority and less oversight provisions.

We analyze the impact of both political and economic uncertainty on legislative activity.[4] By using a multiple regression methodology, we find that political uncertainty, as measured by turnover rates, had statistically significant negative effects on both the scope of the law (see Table 4.3) and oversight requirements (see Table 4.5), thus confirming Moe's expectations. Economic uncertainty also had statistically significant negative effects on both the scope of the law (Table 4.3) and oversight requirements (Table 4.5), also confirmimg Moe's expectation.[5]

Conflict is the second factor that political scientists expect to affect legislative involvement. As Congress has shown, if the interests of legislators and their constituents conflict greatly, passing a law will be difficult. McCubbins (1985)

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[3]Here, it is difficult to split up the set of laws into regulation and deregulation categories simply because 29 states have both regulation and deregulation laws, and although the regulatory instruments usually come from the regulation laws, few of them are described in the deregulation laws.

[4]We measure political uncertainty by the turnover rates in the state legislatures and economic uncertainty by the average change in personal income over the 5 years before the passage of the law.

[5]The coefficient for economic uncertainty is positive due to the specific measure used, but the relationship is as predicted by Moe.

TABLE 4.3
Effect of Independent Variables on Specificity of Scope of Law

	Variable	*Coefficient*	*Standard Error*	*t Statistic*
Uncertainty	Income	3.4528e–03	2.01124e–03	1.71660**
	Turnover	–4.00619e–02	2.07828e–02	–1.92765**
Conflict	Conflict1	–0.56177	0.83370	–0.67383
	Party	–9.48720e–02	0.66669	–0.14230*
	USWest	–1.64909	0.79523	–2.07373***
	Loop	1.59617e–02	9.22300e–03	1.76974**

$R^2 = 0.393$
$N = 48$
*Significant at 90% level; **Significant at 95% level; ***Significant at 99% level.

argued that with conflict, legislators delegate more to bureaucrats, forcing them to make the hard choices. He also expected a tightening of the oversight requirements to ensure that the bureaucracy does not abuse this power. On the other hand, Moe (1989) expected that because policy involves compromises between the majority and the minority groups, the majority will have to yield to the opposition's demands for higher delegation and less strict oversight to some extent. As a result, McCubbins and Moe expect the similar delegation behavior but different oversight requirements under conflict.

We examine three different conflict variables. One captures the conflict between business telecommunications users and consumer groups in each state.[6] The second captures conflict between urban and rural consumers, who face dif-

[6]Business power in a given state is measured from the number of headquarters of Fortune Service 450 firms in that state. These Fortune Service 450 firms represent the industries with largest average toll usage. Firm headquarters are used because they are the places from where the largest amount of telecommunication traffic flows, and because they carry political clout in the state where their headquarters are located. If the number of headquarters of Fortune 450 firms in a particular state is above the average for all the states (in this case, it works out to be 8), then business power is considered to be high in that particular state. Conversely, if it falls below that average, then business power is considered low in that particular state.

According to Teske (1990), lobbyists representing the widely dispersed small consumers have become increasingly active since 1980. These consumer advocates lobby for groups like the elderly, poor households, and rural members. Gormley (1983) categorized the level of activity of such grassroots consumer groups in the late 1970s across the 50 states as either high or low. Consumers are also represented by advocates funded by state governments. Another measure for the consumer power in any given state can be the level of activity of these government-funded consumer advocates in that state. Gormley also categorized the government-funded consumer advocacy in each state as either high or low. We used Gormley's categorization as a measure of consumer power in any state. If both business and consumer groups are strong in a state, we assume that there is high conflict. Any other combination of business and consumer power is considered as low conflict.

TABLE 4.4
Effect of Independent Variables on Regulatory Instruments

	Variable	*Coefficient*	*Standard Error*	*t Statistic*
Uncertainty	Economy	1.33225e–03	1.13374e–03	1.17510
	Turnover	–1.05517e–02	1.17153e–02	–0.90068
Conflict	Conflict1	0.3181	0.4699	0.67697
	Party	–0.1301	0.3758	–0.34638
	USWest	0.4692	0.4482	1.04689
	Loop	8.40313e–03	5.08590e–03	1.65224*

$R^2 = 0.196$
$N = 48$
*Significant at 95% level.

ferent local telecommunications costs.[7] The third measure captures conflict related to U S West's aggressive behavior in its 14 states.[8]

Again, by using multiple regression methodology, we find that the presence of U S West has a significant effect on the specificity of scope of the law (Table

[7]Urban consumers have to subsidize the rural consumers so that the rates for the rural consumer do not become astronomical because of the relatively high access costs of reaching remote parts of the country. This conflict can be measured by the percentage of the total population of a state living in metropolitan areas. The hypothesis is that the lower the percentage, the greater is the possibility of conflict because the cost of subsidization will be higher and the relatively small urban population would not like to subsidize the vast rural population. On the other hand, the higher this percentage, the lower will be the possibility of conflict because it will be an accepted value in states with a large urban population that the urban majority will have to subsidize the rural minority. Another measure would be the access loop costs. Higher access loop costs indicate higher percentage of rural population and consequently, higher conflict. But these two are highly correlated, so using any one is sufficient.

[8]Sometimes a single organization or interest can be so overwhelmingly powerful in affecting policies in the states in which it is present, that it can be labeled as the dominant interest in those states. Its presence itself will determine the level of conflict in the state. One such powerful actor in the telecommunication arena is U S West. As Teske (1991a, 1991b) pointed out, it pursued a very aggressive political strategy. It went directly to the legislators and got passed the legislation of its own choice, thereby bypassing the regulators altogether. He also pointed out that the 14 U S West–controlled states were fundamentally different from the remaining states in many respects. It was serving states that are sparsely populated with few large cities. U S West states had few headquarters of large companies, which use telecommunications intensively and have political clout to influence government policies. On the other hand, the consumer advocacy in the regulatory proceedings was also consistently lower in the U S West states than the rest of the country. In other words, U S West was relatively free of pressure from the large business users, as well as consumer groups, and was the sole interest group dominating the political scene in these states. Therefore, we assume that the U S West states are low on the conflict scale, whereas the rest are considered high.

TABLE 4.5
Effect of Independent Variables on Oversight Requirements

	Variable	*Coefficient*	*Standard Error*	*t Statistic*
Uncertainty	Economy	4.84234e–03	2.34376e–03	2.06606**
	Turnover	–6.84186e–02	2.44298e–02	–2.80062**
Conflict	Conflict1	–2.49185	0.94358	–2.64084**
	Party	–0.45524	0.75060	–0.60650
	USWest	0.49505	0.94087	0.52616
	Loop	8.17465e–03	1.05361e–02	0.77587
Delegation	Scope	–0.32084	0.17579	–1.82525*

$R^2 = 0.292$
$N = 48$
*Significant at 95% level; **Significant at 99% level.

4.3).[9] This finding confirms anecdotal evidence that U S West went directly to state legislatures to get detailed laws that would minimize PUC regulators' discretion and power.

We also find that rural–urban conflict has a significant positive effect on both specificity of scope of law (Table 4.3) and regulatory instruments (Table 4.4) provided in the law, confirming McCubbins' and Moe's expectations. Business users and consumer conflict has a significant impact only the oversight requirements (Table 4.5), in the direction expected by Moe.

In addition to uncertainty and conflict, we also measured the impact of political party differences between the branches of state government. This brings the governor into the decision-making process, which we also explore more in the next section. We expect that if the same party controls both houses of the legislature and the governor's office, these politicians will trust each other more, and legislators will delegate more authority to bureaucrats, some of whom are appointed by the governor. We find that party differences reduce the specificity of the scope of the law (see Table 4.3).

Thus, the evidence is clear that legislators take political factors related to uncertainty and conflict into account when they delegate power to PUC regulators. They show concern for their re-election prospects and they show that legislative action is a compromise. The powers they do and do not give to regulators no doubt influence the policies that regulators develop, as Cole illustrated in chapter 3.

Governors and Economic Development Agencies or Task Forces

The previous analysis shows indirect evidence that the governor's political party influences telecommunications regulatory legislation. In addition to legislation,

[9]U S West did not, however, have a significant impact on the number of regulatory instruments or on oversight provisions.

several governors have played an active role in commissioning major reports, organizing economic development task forces, or establishing new departments within economic development agencies to deal with telecommunications issues outside of the public utility commissions.

State activity of this type is increasing rapidly. Williams and Barnaby (1992) surveyed state telecommunications economic development activities. They found that, as of mid-1992, 16 states (of 51) had developed infrastructure modernization plans, 14 had implemented infrastructure studies, 6 had held task forces,[10] and 9 had developed explicit quality standards. We analyze briefly these activities in a few major states.

As early as 1986 the New York State Department of Economic Development funded a major consulting study of telecommunications economic development, regulatory and tax issues, which was independent of, but included input from, PUC regulators.[11] In his 1992 State of the State message, Governor Mario Cuomo called for establishment of a "Telecommunications Exchange," which led to a 37-member task force. The Exchange's report called for regulatory changes, including moving toward an open "network of networks," a new universal service funding mechansim, a level regulatory playing field putting CATV under PUC regulation, and benchmarks for modern infrastructure. It also called for economic development applications, including the strategic use of government networks, the promotion of telecommunications services diffusion, and the establishment of a new Office of Telecommunications within the Department of Economic Development to manage and promote these efforts.

For many years, California was known for considerable consumer-oriented telecommunications legislation, particularly from Assemblywoman Moore in life-line services (see Jacobson, 1989). Harris (1988a) wrote a telecommunications report for the California Economic Development Commission and Pacific Bell established its Intelligent Network Task Force in 1987 to bring social and economic issues related to the network to the forefront. Still, regulatory change in California lagged behind many other states. With the 1990s economic decline in California, telecommunications issues have taken on a new urgency. Governor Pete Wilson's 1993 State of the State address challenged the PUC to use telecommunications to improve the economy and a 1994 plan will aim toward more competition in the next few years to advance new services.

These large states have not been the only ones to link telecommunications and economic development. In addition to its radical deregulatory legislation, in Nebraska former Governor Bob Kerrey made the Center for Telecommunications and Information a division of the state Department of Economic Development

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[10]The composition of these task forces varies by state, depending on who sets it up and for what purpose, but they often include members of the telephone industry, state government officials, consumer advocates, and representatives of the disabled, elderly, and minorities.

[11]The most important immediate motivation for the study was to deal with a telecommunications equipment/real property tax issue that had implications for New York businesses.

in 1986 and emphasized telecommunications-based development, a strategy that his successor, Governor Orr, also followed.

Maine Governor Brennan's Task Force in 1985, based in the state Planning Office, took aggressive steps to focus on economic development and the telecommunications infrastructure, as well as examining more traditional regulatory issues. The state has offered free access to its own rights-of-way as an incentive for carriers to extend fiber optic networks. State Planning Office Director Richard Silkman argued that "public utility commissions generally do not have the statutory authority to consider rural economic development when developing rate structures. That authority belongs with state legislatures" (quoted in Parker et al., 1989, p. 31).[12]

In Michigan, former Governor Blanchard assembled a task force, largely outside the PUC, to determine what could be done to upgrade the state's telecommunications infrastructure to stimulate economic development. Their report proposed linking the state together with a broadband network and leveraging state agencies and other private actors to get them involved in telecommunications. Blanchard's successor has been less active in telecommunications.

Although many of these tasks forces were established to address economic development issues that PUCs seemed to be ignoring, not all PUCs are uninterested in this issues. Members of PUCs in states with large cities, like New York and Illinois, and some regulators in very rural states, have been concerned and aggressive about economic development issues. Hudson's (1990) survey showed that *most* utility regulators see their role as telecommunications policymakers rather than simply as focusing on narrow regulatory issues, and this view of proactive regulatory approaches largely is confirmed by the telephone associations in each state. Still, as Hudson (1990) noted, "PUCs may be seriously understaffed, and may have little awareness of development issues" (p. 49).

HOW SHOULD STATE POLICYMAKING BE STRUCTURED?

Should states adopt the federal telecommunications policymaking model? That model includes the traditional three branches of government—the President, Congress, and Judge Greene—as well as two agencies, the FCC and the National Telecommunications and Information Administration (NTIA). Of course, the FCC is analogous to the state PUCs; it is *the* regulatory agency for interstate communications and has a parallel (though much broader, including broadcasting and

[12]And, "Silkman pointed out that public utility commissions could play a role in telecommunications and economic development," but "we have abrogated responsibility for making them focus on that." For example, when the Maine PUC had a $3 million windfall to dispense—more than the legislature ever spends for economic development—it chose merely to lower residential rates by 50 cents a month. And, "My only point . . . is that PUCs are making their decisions with no input from legislatures arguing for rural economic development" (Parker et al., 1989, p. 33).

media) role. FCC regulators, like most PUC members, are appointed by the executive and approved by legislators, and presumably are responsive to both (Ferejohn & Shipan, 1989, show their responsiveness to Congress).

The NTIA is part of the Department of Commerce. NTIA was established by President Carter's Executive Order 12046 in 1978 to provide for the coordination of the telecommunications activities of the Executive branch, and was previously called the Office of Telecommunications Policy, established within the President's office by Nixon in 1970 (Geller, 1989). NTIA advocates economic development for telecommunications and focuses on our international competitiveness in this area, by issuing industry analyses, defense concerns, and assisting with international trade negotiations.

Relations between the FCC and NTIA have not always been smooth. In its *Telecom 2000* (NTIA, 1988) report NTIA argued that FCC decisions should be overruled by the executive branch on issues of "overriding national security, foreign policy, international trade, or economic policy" (p. 20), a potentially broad set of areas. Similarly, the FCC and Congress have been concerned about an overly imperialistic role by the NTIA, although this has largely not materialized.

In comparing states to the federal model, of course, Congress is analogous to the state legislatures. The most obvious point about Congress and telecommunications in recent years is that it has not been active in passing laws. Congress, especially its subcommittee members, continually sends important signals to regulatory agencies, which have been heeded by the FCC (Ferejohn & Shipan, 1989). The telecommunications interest group environment (see Berry, 1989) is one of the most complex, which makes it extremely difficult for Congress to legislate without causing substantial harm to one or another powerful group.

The federal level actor that does *not* have a parallel at the state level is Judge Greene and the Department of Justice regulatory apparatus related to the divestiture, nor are we suggesting that their should there be such a role at the state level. Although activity by Congress, the FCC, and NTIA can make policy coordination difficult, it is the additional influence of Judge Greene that most critics find problematic in the current regulatory regime in Washington.

We believe that it is appropriate to have these other actors involved at the state level. The changes in telecommunications markets and policy after 1984 have been substantial, not incremental. PUCs are often not given a mandate to consider economic development and perhaps they should not be given it. Regulators set rates and monitor service quality, balancing the financial health of producers with the desire to keep consumer rates low. Such choices certainly *affect* economic development. They affect economic efficiency directly through rate structures, and they affect the future network through allowing or disallowing specific investments and through depreciation policy, even if the concept of economic and infrastructure development is not an explicit factor in many of these decisions.

If the main political incentive PUCs have is to maintain low local rates to the detriment of economic efficiency (Noll, 1986), a matter of some controversy, but something we have some evidence for (Teske, 1990), then economic development pressure from other actors may stimulate innovative regulatory policy. Interstate competition for mobile firms can help stimulate innovation if other states succeed with regulatory and related policies that advance economic development.

After the energy crisis in 1973, a number of states established energy policy agencies outside of the PUCs, to promote conservation, new sources of energy, new means of transportation, and to coordinate state government usage of energy. The role of these agencies is similar to new state economic development agencies or task forces; to look beyond the more narrow issues of rates in telecommunications regulation. Partly, as with energy, these agencies can take a longer run planning perspective as they are even more insulated, in contrast to the pressure on PUCs to be concerned about the short-run political issues involved in rate making. What may sometimes appear to be uncoordinated policy fragmentation in a state can actually be positive redundancy (Landau, 1969), providing a different perspective on related issues.

CONCLUSIONS

State actors beyond PUC regulators are now very much involved in telecommunication issues. Most are not involved on a daily basis, as the PUCs are, but telecommunications has become a more salient issue, as the economic development aspect and the information superhighway ideas have emphasized. As a result, governors have become involved in many states. Legislators were already involved because of the need for new laws after divestiture. The type of laws that legislators passed were influenced by political pressures in their states, in predictable ways, as we illustrated in our analysis.

Many state PUC regulators are wary of increased activity by politicians. Gail Garfield Schwartz, former New York State regulator, argued against state legislative involvement: "Once they get in there it is very hard to get them out so I look at our mission as being one of trying to keep ahead of any potential legislative regulatory prescriptions. We do need legislative authority to give us the widest scope for our activities" (quoted in Entman, 1988, p. 14). Other state regulators, such as Bruce Hagan of North Dakota, feel that regulators, like legislators, are political actors, and that legislative intervention is not necessarily bad (Teske, 1987).

Much of the negative perception of non-PUC state actors may come from the legislative bill passed in Nebraska in 1986, which involved extreme pressure politics by U S West. Although this law is seriously flawed, even in this case Mueller (1993) found no strong evidence that Nebraskans have suffered grave consequences from it.

A miniature NTIA on the state level to advise policymakers will stimulate further innovations in the states. It can also provide governors and legislators with a separate set of information and expertise, outside of the rate case environment. The PUC can not really do it because economic development often is construed to mean helping businesses, at least in the short run. Hudson (1990) also noted: "PUCs generally don't have well formulated criteria for assessing socio-economic effects of their decisions and policies" (p. 50).

Economic development competition gives states an incentive to imitate good regulatory changes. As the technological environment of telecommunications changes, continued regulatory changes and innovations will be needed. Many changes are blocked by overly short-term political concerns for those ratepayers who could afford to pay the "real" costs of their service. But if some regulatory changes stimulate economic development,[13] then other states will have an incentive to imitate them, when they see the policy work. State economic development units can analyze and pressure for these changes without appearing to favor one of the entrenched telecommunications interest groups.

As Kahn (1990) recently noted: "In telecommunications it [the cumulative process of deregulation] is reinforced by the competition among the states to attract high-tech industry, which subjects them to the technological imperatives of economic growth, in conflict with historic regulatory policies and goals" (p. 21).

As American businesses and residents become more dependent upon telecommunications to solve problems and coordinate activities, state decision making will become even more important. Getting actors outside of the PUCs more involved can lead to greater experimentation by the states, and as with more narrow regulatory policy issues, each state can handle these problems as they see fit for their particular concerns. Perhaps a model of innovative and well-integrated telecommunications policymaking by governors, legislators, PUCs, and economic development agencies that is superior to that presented by Congress, Judge Greene, the FCC, and the NTIA will emerge from the states.

APPENDIX: MEASURES OF DEPENDENT VARIABLES

1. Specificity of Scope of Law

Q1. Are the PUCs allowed to regulate the telecommunications firms?
Yes = 1 No = 0

[13]And economic theory says they should, if they eliminate dead-weight losses and provide incentives for innovation. See Egan and Wenders for this argument in chapter 5.

Q2. How much specificity is written into the telecommunication rate regulation law? Take into account the following: (a) Does the law say which particular actors to regulate and who not to? (b) Does it say how to regulate (c) Does it say under what conditions to regulate?

Not applicable (no regulation law) = 0
Very specific = 1
Somewhat specific = 2
Not specific = 3

Q3. Does the law mandate the PUCs to deregulate rates and market entry of telecommunication firms?

Yes = 0 No = 1

Q4. How much specificity is written into the telecommunication deregulation law? Take into account the following: (a) Does the law say which particular actors to deregulate and who not to? (b) Does it say how to deregulate? (c) Does it say under what conditions to deregulate?

Very specific = 0
Somewhat specific = 1
Not specific = 2
Not applicable (no deregulation law) = 3

Q5. Does the law allow the PUC to consider alternatives to regulation?

Yes = 1 No = 0

Q6. Does the PUC have the power to reregulate deregulated telecommunication firms?

Not applicable (no deregulation law) = 2
Yes = 1 No = 0

2. Regulatory Instruments

Q7. Do the telecommunication firms have to file price schedules with the PUC?

Yes = 1 No = 0

Q8. Do the telecommunications firms require any certification or permit for operation from the PUC?

Yes = 1 No = 0

Q9. Does the law provide the PUC with the right to inspect all documents of telecommunications firms at any time?

Yes = 1 No = 0

Q10. What kind of investigation process is allowed by the law to the PUC?
Not applicable (no regulation law) = 0
Complaint only = 1
Own initiative under given conditions or complaint and own initiative under given conditions = 2
Own free initiative or complaints and own free initiative = 3
No mention of any specifics = 4

Q11. What kind of hearing process is allowed by the law to the PUC?
Not applicable (no regulation law) = 0
Mandatory on receiving complaint = 1
Partly mandatory = 2
Entirely discretionary = 3

Q12. Do the telecommunication firms have to file a report with the PUCs?
Yes = 1 No = 0

3. Oversight Provisions

Q13. Is the PUC required to file a report with the legislature?
Yes = 0 No and No regulation law = 1

Q14. Does the law specify what the contents of the report shall be?
Specific = 2
Not specific = 1
No reporting requirement = 0
Not applicable (no regulation law) = 0

Q15. How frequently do the companies have to file reports?
More than one annually = 3
Annually = 2
Biennially = 1
No reporting requirements = 0

Q16. Does the law mandate the schedules filed by the companies to be open for public inspection?
Open = 1 Closed = 0

Q17. Does the law provide for a public counsel?
Yes = 1 No = 0