



PLACE IN RETURN BOX to remove this checkout from your record.
TO AVOID FINES return on or before date due.

DATE DUE	DATE DUE	DATE DUE
JUL 08 1999	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

MSU Is An Affirmative Action/Equal Opportunity Institution

c:\crlc\datedue.pm3-p.1

**COMPETITION IN THE LONG-DISTANCE MARKET:
A COMPARATIVE STUDY OF THE UNITED STATES AND CANADA**

By

Naqi Abbas Jaffery

A THESIS

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

MASTER OF ARTS

Department of Telecommunication

1991

ABSTRACT

COMPETITION IN THE LONG-DISTANCE MARKET: A COMPARATIVE STUDY OF THE UNITED STATES AND CANADA

By

Naqi Abbas Jaffery

This thesis compares and contrasts the approaches adopted in the United States and Canada in opening up the long-distance market to competition. It carries out a historical review of the regulation of telephony and examines the economic rationale for the traditional regulatory framework. The movement for a competitive long-distance marketplace was propelled by technological developments, although other factors played the role of catalysts. The federal governments/regulators in both the countries actively pursued the deregulatory path, but met with opposition from the provinces/states. Canada generally lagged behind developments in the United States, which has a deregulated long-distance market. In the United States, local rates have increased and long-distance rates have dropped. Bypass has not emerged in a substantial way and universal service is in place. The number of long-distance carriers has substantially increased and they are offering greater and more diversified service offerings.

To my mother and father

ACKNOWLEDGMENTS

I gratefully acknowledge the guidance provided by my thesis advisors, Dr. Steinfield and Dr. Muth, in the preparation of this thesis. I would also like to thank by academic advisor, Dr. Straubhar, for his constant encouragement and help throughout my stay at Michigan State.

TABLE OF CONTENTS

Chapter

1.	<u>INTRODUCTION</u>	1
2.	<u>REGULATED MONOPOLY</u>	4
	<u>Historical Basis for Regulation</u>	4
	United States	4
	Canada	5
	<u>Constitutional Basis for Regulation</u>	6
	United States	6
	Canada	6
	<u>Concept of Universal Service</u>	7
	Definitional Distinctions	7
	U.S. Communications Act	8
	Canadian Railway Act	8
	<u>Public Interest and Regulation</u>	9
	Regulation and Economic Efficiency	10
	Nature of Public Utility Industries	11
	<u>Economic Basis for Regulation</u>	11
	Local Telephony	12
	Long-distance Telephony	15
	<u>Deregulatory Movement</u>	17

3.	<u>UNLEASHING THE COMPETITION</u>	18
	<u>Private-line Telephony: U.S.</u>	18
	"Above 890" Microwave Decision	19
	MCI's Private-line Service	20
	Specialized Common Carrier Decision	21
	<u>Private-line Telephony: Canada</u>	22
	Trans Canada Telephone System	22
	Canadian Pacific Railway Application	23
	<u>Public Long-distance Telephony: U.S.</u>	24
	MCI's Execunet Tariff	24
	MTS/WATS Competition	25
	<u>Public Long-distance Telephony: Canada</u>	26
	CNCP's Application	26
	CRTC's 1985 Decision on Resale and Sharing	26
	CRTC's 1989 Public Notice	27
	<u>Role of Technology</u>	28
4.	<u>JURISDICTIONAL DEBATE</u>	32
	<u>Regulatory Jurisdiction: U.S.</u>	32
	Post Roads Act	32
	Mann-Elkins Act	33
	Communication Act of 1934	33
	Federal-State Conflict	35
	<u>Regulatory Jurisdiction: Canada</u>	37
	British North America Act	38
	1973 Green Paper	38

	1975 Grey Paper	39
	Canadian Radio-television and Telecommunications Act	39
	Task Force Report	40
	Federal-Provincial Conflict	42
5.	<u>CURRENT REGULATORY TRENDS</u>	45
	<u>Regulatory Trends: U.S.</u>	45
	Consent Decree	45
	Dominant-Non-dominant Dichotomy	47
	<u>Regulatory Trends: Canada</u>	53
	Toronto v. Bell Telephone Co.	53
	Long-distance Market	54
	Supreme Court Decision	55
6.	<u>IMPLICATIONS OF COMPETITION</u>	57
	<u>Structure</u>	57
	Local Segment	57
	Long-distance Segment	58
	<u>Impact on Efficiency and Innovation</u>	61
	Service Offerings	61
	Performance	63
	<u>Pricing: U.S.</u>	65
	Pricing Principles	65
	Cross-subsidization	66
	Current Pricing Trends	70

Mitigating Mechanisms	71
Implications for Household Penetration . . .	72
<u>Pricing: Canada</u>	73
Local Measured Service	73
Extended Area Service	74
Implications of Long-distance	
Rate Increases	74
<u>Bypass</u>	76
Economic and Uneconomic Bypass	76
Potential Implications for	
Universal Service	77
Bypass in U.S.	78
Bypass in Canada	79
Cross-border Resale	80
7. <u>CONCLUSIONS</u>	82
<u>SELECTED BIBLIOGRAPHY</u>	84

CHAPTER 1
INTRODUCTION

The purpose of this thesis is to make a comparative study of the regulation of telephony in the United States and Canada and examine its implications for competition in the long-distance marketplace. It will be shown that long-distance telephony has traditionally been regulated as a monopoly but a confluence of several factors are making regulators revisit past policies.

This thesis will examine how the responses of the federal governments, on the one hand, and that of state/provincial governments, on the other, have been at variance so far as competition in the long-distance marketplace is concerned. The analysis will focus on how the responses have varied within each of the two countries and how they have varied between the two countries. It will be shown that the federal governments in both the countries have favored competition on long-distance routes, but that the state/provincial governments have generally opposed it.

It will also be demonstrated that the United States has permitted greater federal role in telecommunications than Canada. Greater federal role has resulted in a more cohesive

regulatory structure, greater competition in the long-distance marketplace, and lower long-distance rates. In Canada, on the other hand, greater autonomy to provinces in regulating telecommunications has led to a fragmented regulatory structure, less competition in the long-distance marketplace and higher long-distance rates. The study will also look at the implications of long-distance competition for the bypass of the public switched network.

Chapter 2 will examine the basis for regulating telecommunications in the United States and Canada from historical, constitutional, and economic perspectives. It will be demonstrated that the regulation of telephony as a natural monopoly is rooted in the desire to provide universal access to all segments of the population at affordable rates.

Chapter 3 will trace the developments since the early nineteen-fifties that led to the demolition of regulatory barriers erected to preserve telephone company monopolies. It will be shown that the federal regulators in both Canada and the United States have been responsive to pressures to relax regulation in favor of a competitive long-distance marketplace. It will also be demonstrated that Canada has generally lagged behind developments in the United States.

Chapter 4 will look at issues relating to regulatory jurisdiction of federal government, on the one hand, and state/provincial governments, on the other. It will be

contended that in both countries the states/provinces have favored the continuation of regulated monopolies and unsuccessfully battled against the swing to competition fostered by the federal regulators.

Chapter 5 will examine the trends in the regulation of long-distance marketplace. It will be argued that the movement toward a deregulated marketplace is inexorable.

Chapter 6 will look at implications of competition. It will be shown that both the long-distance and local segments of the telecommunications carrier industry are structurally more competitive in the United States than in Canada. It will be demonstrated that competition in the provision of long-distance telephony has inflated the prices of local services. It will also be shown that whereas in the United States a bypass threat is emerging, in Canada, the extent of bypass of telecommunications carriers' facilities is minimal.

Chapter 7 will provide a summary of the conclusions of the study.

CHAPTER 2

REGULATED MONOPOLY

This chapter will examine the historical, constitutional, and economic basis for regulating telephony in the United States and Canada. It will be shown that telephony has traditionally been regulated as a natural monopoly. It will be contended that the regulation of telephony has been rooted in the desire to provide universal access to all segments of the population at affordable rates.

Historical Basis for Regulation

Both the United States and Canada have historically regulated telephony due to the perception that it would serve the public interest. Government intervention has particularly been pronounced in Canada.

United States

The Fourteenth Amendment to the United States constitution states: "No state shall ... deprive any person

of life, liberty, or property, without due process of law."¹ Notwithstanding this stipulation, however, the United States supreme court has traditionally taken the position that there were certain more or less readily identifiable industries, peculiarly and sufficiently "clothed" or "affected with a public interest" to justify legislatures subjecting them to regulation.² In a series of landmark decisions in the field of constitutional law, it drew tight boundaries around that group of industries, including telephony. It held that outside those boundaries the Fourteenth Amendment prohibited any drastic interferences with the freedom of contract.

Canada

In Canada, the pattern of regulated monopoly has been very much in tune with the national tradition, which has seen government take an active part in promoting the development and integration of Canadian nation-state and where the play of competitive market forces has been considerably more limited than in the United States.³

¹ Alfred E. Kahn, The Economics of Regulation: Principles and Institutions (New York, NY: Wiley, 1970), 3.

² Ibid.

³ Brian Woodrow and others, Conflict over Communications Policy: A Study of Federal-Provincial Relations and Public Policy (Quebec: C.D. Howe Institute, 1980), 113.

Government involvement has particularly been pronounced in the sectors of transportation and communication.

Constitutional Basis for Regulation

In both the United States and Canada, the rationale for regulating telephony was derived from the constitutions of the two countries.

United States

The regulation of telephony in the United States is based on Article 1, Section 8 of the Constitution under which Congress is granted the power "to regulate Commerce with foreign Nations, and among the several States..."⁴ The regulation of telecommunications by individual states is based on the Tenth Amendment to the Constitution which allows that "the powers not delegated to the United States by the Constitution, nor prohibited by it to the States, are reserved to the States respectively, or to the people."

Canada

In Canada, the federal government can lay claim to legislate in the area of telephony through its residual power under the "peace, order and good government" clause, as well as through other heads of power, including its

⁴ Datapro Research Corporation, Datapro Reports on Telecommunications (Delran, NJ: Datapro Research Corporation, 1985), TC05-001A-405.

"trade and commerce," "declaratory," and "treaty-making" powers.⁵ For their part, provincial governments can base jurisdictional claims upon heads of power that authorize them to legislate with regard to "local works and undertakings," "property and civil rights," and "matters of a merely local and private nature within the province."

Concept of Universal Service

A major concern of regulators both in the United States and Canada has been the availability of telephone service to the widest possible segment of population. This goal was encapsulated under the term "universal availability of telephone service," or briefly, "universal service."

Definitional Distinctions

There are, however, two interpretations of the term - one implying that universal service simply means access to the network, and the other suggesting that universal service stands for both access to and usage of the telephone system. While the telephone companies seem to consider universal service as merely access to the network, most policy makers' concept of universal service apparently includes both access

⁵ Gregory T. Kane, "The Constitutional Basis for Jurisdiction: Evolving Federal and Provincial Rules," in Communication in the Eighties: Major Issues, ed. Thomas McPhail and S. Hamilton (Calgary: University of Calgary, 1984), 4.

and usage.⁶ For the purposes of this discussion, we will adhere to the latter definition since we believe that full benefit of the service can only be attained by both access and usage.

U.S. Communications Act

The U.S. Communications Act stated that its purpose was "to make available, so far as possible, to all the people of the United States, a rapid, efficient, Nationwide, and worldwide wire and radio communications service with adequate facilities at reasonable charges. The act pronounced any unjust or unreasonable discrimination in charges to be unlawful.⁷ The act, therefore, forms the basis of the concept of universal service in the United States.⁸

Canadian Railway Act

The Canadian Railway Act stipulates that "(a)ll tolls shall be just and reasonable and shall always under substantially similar circumstances and conditions with

⁶ Walter Bolter, ed., The Transition to Competition: Telecommunications Policy for the 1980s (Englewood Cliffs, NJ: Prentice-Hall, 1984), 13-15.

⁷ Peter Temin, The Fall of the Bell System: A Study in Prices and Politics (New York, NY: Cambridge University Press, 1987), 11.

⁸ Manley R. Irwin, Telecommunications America: Markets Without Boundaries (West Port, CT: Quorum Books, 1984), 27.

respect to the traffic of the same description carried over the same route, be equally charged to all persons at the same rate." This stipulation is interpreted as providing the foundation of the concept of universal service in Canada.

Public Interest and Regulation

One interpretation of public interest that has been used by economists derived from the idea that regulation was to act as a surrogate for competition in industries where competition was not feasible.⁹ Regulation is seen as a vehicle for guarding against the potential abuses associated with monopolistic power.¹⁰ In the public interest framework, the regulator performs the task of maximizing social welfare through proper pricing and entry policies. When it comes to issues of economic and social justice, the regulator's ability to affect social goals makes it potentially more effective than the competitive marketplace.¹¹

⁹ Gerald R. Faulhaber, Telecommunications in Turmoil: Technology and Public Policy (Cambridge, MA: Ballinger Publishing Company, 1987), 41.

¹⁰ Sanford V. Berg and John Tschirhart, Natural Monopoly Regulation: Principles and Practice (New York, NY: Cambridge University Press, 1988), 285-286.

¹¹ Edward E. Zajac, Fairness or Efficiency: An Introduction to Public Utility Pricing (Cambridge, MA: Ballinger Publishing Company, 1978), 104-105.

Regulation and Economic Efficiency

Three critical economic relationships - the nature of the industry's cost function, the relationship between local service costs and revenues, and the enhanced potential for predation when competitive and monopoly services are provided by the same firm - are central to the regulation debate both in the United States and Canada.¹²

Many of the regulated monopolies are "natural monopolies": their costs will be lower if they consist of a single supplier.¹³ This creates the efficiency case for the monopolistic organization and, along with the importance of service and the consequent inelasticity of demand, the need for regulation to protect the consuming public. For a regulated firm believed to be a natural monopoly, the job of the regulator is implicit in the theory: constrain the monopolist from charging above cost prices and thus force an increase in output and consumption to the point where all resources are efficiently deployed.¹⁴ In the special case where the monopolist produces only one good, economic theory suggests that the regulator must ensure that the price of

¹² Steven Globerman, "Economic Factors in Telecommunications Policy and Regulation," in Telecommunications Policy and Regulation: The Impact of Competition and Technological Change, ed. W. T. Stanbury, (Montreal: Institute for Research on Public Policy, 1986), 2-3.

¹³ Kahn, Economics of Regulation, 11.

¹⁴ Faulhaber, Telecommunications in Turmoil, 106-107.

this good is equal to the marginal cost of producing it - that is, the cost of producing the last unit of that good. If the regulator adheres to this pricing policy, then, society's resources will be used at maximum efficiency.

Nature of Public Utility Industries

Public utility industries are preeminently characterized in important respects by decreasing unit costs - or increasing returns - with increasing levels of output.¹⁵ This is indeed one important reason why they are organized as natural monopolies.

It has been established that, in the presence of significant economies of scale and scope, policies that promote entry into the industry may contribute to higher costs. Therefore, the nature of the industry's cost function is seen to have an important bearing upon whether allowing open entry into various segments of the telephone industry will raise or lower cost.¹⁶

Economic Basis for Regulation

The "natural monopoly" argument is the economic foundation for much of the public utility regulation, and has been certainly important in telephone regulation.

¹⁵ Kahn, Economics of Regulation, 123-124.

¹⁶ Globerman, "Economic Factors in Telecommunications Policy and Regulation," 2.

However, before examining the application of the public interest framework to telephony, a distinction needs to be drawn between local telephony and long-distance telephony. Local telephony in its strictest sense encompasses the territory spanned by a particular exchange. In its broader sense, local telephony can encompass a given calling area. Long-distance telephony emerged with the invention of loading coil, a technological advance that permitted transmission of analog electrical signals over much greater distances than was previously possible.¹⁷ Again, in its strictest sense, long-distance telephony should cover communication between any two exchanges. In its broader sense, it covers communication involving unlimited exchanges.

Local Telephony

From the outset, competition was held to be impractical in local telephony because of the heavy embedded costs in exchanges and local loop (i.e. the telephone connection connecting the exchange to the home). Competition was deterred not only by the high start up costs but also because duplication of exchange facilities was considered unnecessary.¹⁸ Implicit in the concept of natural monopoly has been the assumption that the service provider would own

¹⁷ Faulhaber, Telecommunications in Turmoil, 2-3.

¹⁸ Manley Irwin, Telecommunications America, 9.

the transmission facilities, switching equipment, and the local loop.¹⁹ It also implied a lack of access to the network by competing service providers. Moreover, the public demand for telephone services is relatively inelastic, i.e. a company having a monopoly in the field could raise its prices drastically without eliciting a proportionate decrease in demand.

In return for the privileged position of monopoly, the telephone companies have had their profits regulated to reasonable levels, and have purportedly served as instruments of social control in extending service to unprofitable areas.²⁰ Discussing the rationale for treating local telephony as a natural monopoly, Temin says that clearly telephone companies have local monopolies in exchange for telephone service to households and small businesses.²¹

Economic studies have tended to support the natural monopoly argument by showing the realization of economies of

¹⁹ Gordon E. Kaiser, "Developments in Canadian Telecommunications Regulation," in Marketplace for Telecommunications: Regulation and Deregulation in Industrialized Democracies, ed. Marcellus Snow (White Plains, NY: Longman, 1986), 173.

²⁰ William Mellody, "Implications of U.S. Competition," in Telecom 2000: Canada's Telecommunications Future, ed. Thomas McPhail (Calgary: University of Calgary, 1986), 57.

²¹ Temin, The Fall of the Bell System, 354.

scale.²² Data problems make it questionable whether tests for economies of scope have any statistical value. The majority of the studies that examined scale economies by estimating production functions show overall economies of scale.²³ A second set of studies considers the presence or absence of scale-economies by estimating cost functions. The majority of these studies also show the presence of economies of scale. In econometric studies, most single and two-output models for Bell Canada and the U.S. Bell system show robust results with scale elasticity estimates in the range of 1.3 and 1.7.

At the state level in the United States, regulators sought to control the profits of Bell companies in their jurisdiction. Prior to its divestiture, AT&T agreed to submit to regulation in return for which the regulators would prohibit entry.²⁴ In Canada, local telephone companies have been virtual monopoly providers of telephone service in a largely non-competitive and regulated environment. Telephone companies, regulators and governments alike have subscribed to the objective of universal availability of affordable telephone service, and have developed pricing arrangements to make access to the network attractive.

²² Globerman, "Economic Factors in Telecommunications Policy and Regulation," 10-12.

²³ Ibid.

²⁴ Faulhaber, Telecommunications in Turmoil, 6.

Long-distance Telephony

In the case of longer-haul routes, econometric studies show the scale elasticity co-efficient tending upward over time. According to Temin, "It is far from clear that the provision of intercity telecommunications services has the cost characteristics needed to sustain active competition - as opposed to an oligopoly of a few dominant firms...It may not even be reasonable to expect the market to be composed of a few similarly sized firms."²⁵

However, Wenders questions the assumptions under which the toll network evolved as a natural monopoly, and argues:

"The presumption was that reserving the toll market for a single supplier, AT&T, would allow the realization of economies of scale and result in improved economic welfare. There is no evidence, however, that an unprotected monopolist would do worse than the present system of regulated monopoly. On the contrary, the events of the past decade conclusively demonstrate that the economic performance of the toll market will be better under unprotected monopoly than under the kind of regulation that was in force in the past."²⁶

AT&T's emergence as a monopoly in the long-distance market dates back to 1912 when the Justice Department threatened to bring an anti-trust suit against it if it

²⁵ Temin, Fall of the Bell System, 355.

²⁶ John T. Wenders, The Economics of Telecommunications: Theory and Policy (Cambridge, MA: Ballinger Publishing Company, 1987), 216.

continued its practice of acquiring independents.²⁷ At the same time, the Interstate Commerce Commission launched an investigation of AT&T's practices. Under Kingsbury commitment, AT&T agreed to stop buying competing telephone companies. The Kingsbury commitment did not maintain competition in interstate telephone service, but it obligated AT&T to connect local telephone companies to its long-distance lines.²⁸ AT&T, in effect, acquired the status of a regulated monopoly. The focus of public policy shifted with the onset of World War I from the preservation of competition to the achievement of efficiency. In 1921, Congress passed legislation giving the Interstate Commerce Commission the power to exempt AT&T from anti-trust laws for the purpose of acquiring other telephone companies.²⁹

In Canada, the local telephone companies worked together to implement an equitable sharing of long-distance revenues through the Trans-Canada Telephone System, now known as Telecom Canada.³⁰ Originally formed in 1931 to provide a cross-Canada telephone system, Telecom Canada served as a monopoly in the provision of long-distance telephony. Telecom Canada comprises Canada's ten major carriers, some of which operate under federal charter and

²⁷ Faulhaber, Telecommunications in Turmoil, 2-3.

²⁸ Temin, Fall of the Bell System, 9-10.

²⁹ Ibid., 11.

³⁰ Datapro, Telecommunications, TC05-001A-502.

regulations, while others are regulated provincially. Through joint planning and management, and shared network costs and resources, the member companies co-operate in a variety of common policies and practices.

Deregulatory Movement

Both in the United States and Canada, telecommunications regulation is undergoing a transition as traditional regulatory objectives and approaches are re-examined by regulators, the industry and government. The deregulatory movement began in the United States as expanding technology created products and services demanded by the public. At the same time, pressures for competition within the telecommunications industry challenged the historically established patterns of monopoly and competition.

In Canada, the American deregulatory movement is often cited by those advocating a more open telecommunications market and a removal of regulatory restrictions.³¹ Kaiser contends that competition developed in Canadian telecommunications as it did in the United States, but it was much more limited and delayed by almost a decade.³²

³¹ Ibid.

³² Gordon E. Kaiser, "Developments in Canadian Telecommunications Regulation," 192-193.

CHAPTER 3

UNLEASHING THE COMPETITION

The onset of the 1950s began to demolish the regulatory barriers that had been erected to preserve the telephone company monopolies. This chapter will look at the gradual chipping away of regulation and the emergence of competition in long-distance markets. It will be contended that the main propellant of competition was technological change, although other factors - economic, social, political - definitely played the role of catalysts.

This chapter will show that the federal regulators in both the countries have been responsive to pressures to relax regulation in favor of a competitive long-distance marketplace. It will also be shown that Canada has generally lagged behind developments in the United States.

Private-line Telephony: U.S.

Since the 1930s, AT&T and the independent telephones have been interconnected to each other's facilities to provide a nationwide system of telephony. However, AT&T held a monopoly in most of the domestic transmission markets. Until the late 1950s, it controlled the bulk of transmission

facilities and services with Western Union offering only token competition.

Cracks began to appear in AT&T's transmission monopoly as new technology made the up-front costs of competition with AT&T less overwhelming. New microwave transmission equipment greatly increased the availability of radio frequencies for communications and provided businesses the impetus to build their own networks as a cost effective alternative to using telephone company lines.

"Above 890" Microwave Decision

The first breach came in July, 1959 when in its "Above 890" microwave decision, the FCC allowed microwave private lines for large business users. The FCC concluded that no purpose would be served by prohibiting private entities from establishing point-to-point microwave systems to meet their own internal needs. The commission found this to be the case even where carrier provided services were already available. AT&T considered the "Above 890" decision a threat to Vail's "one system, universal service" policy and responded with full vigor. It attempted to brand competitive entry as "cream-skimming" lucrative markets, which would result in higher prices to the telephone ratepayer.³³

³³ Faulhaber, Telecommunications in Turmoil, 24.

The strength of the argument to protect AT&T from competition came from shared social goal of universal service, and by 1960 that goal had largely been achieved. For fifty years, it had been the common touchstone of regulators and regulatees alike.³⁴ With universal service in place, the need to protect AT&T became much less obvious.³⁵

The FCC did not accept AT&T's arguments that the use of private transmission systems would lead to "cream-skimming" and would undermine the average pricing of the common carrier systems. The "Above 890" ruling heralded the beginning of competition in the private-line service industry, ending the earlier practice of restricting microwave licenses to established carriers and broadcasters. For the first time, customers could employ private microwave technology to meet their communication needs in direct competition with telephone company provided service. The ruling marked the beginning of FCC's opening of AT&T's markets to entry.³⁶

MCI's Private-line Service

In 1969, the FCC authorized Microwave Communications, Inc. (MCI) to offer a competitive private-line service

³⁴ Ibid., 34.

³⁵ Ibid., 48.

³⁶ Ibid., 24.

between Chicago and St. Louis by microwave in direct competition with AT&T. AT&T opposed MCI's application on the ground that it would result in "cream-skimming" and a diversion of revenues needed to support basic services. Rejecting these arguments, the FCC found that it was in the public interest to allow MCI to provide such services. Pitted against the AT&T and other land line carriers were the large business users, computer service organizations, and equipment manufacturers.³⁷

Specialized Common Carrier Decision

In its Specialized Common Carrier decision in 1971, the FCC adopted a policy of allowing entry of new carriers into the private-line market. This permitted increased competition among existing and new common carriers in the sale of data transmission and other specialized communications services to the public.³⁸ The markets opened by the Specialized Common carrier decision were far larger than those opened by the "Above 890" decision, so the stakes were much higher. Consequently, AT&T responded more strongly to potential entry.³⁹

³⁷ Jill Hills, Deregulating Telecoms: Competition and Control in the United States, Japan, and Britain (London: Frances Pinter, 1986), 59.

³⁸ Datapro, Telecommunications, TC05-001A-406.

³⁹ Faulhaber, Telecommunications in Turmoil, 33.

The commission reached the conclusion that there was a public need and demand for new and diverse sources of supply in this area, that competition in specialized services was feasible, and that entry by new sources would benefit the public. According to the commission, the adverse impact of new specialized carriers on service to the public by existing carriers would not outweigh the considerations supporting a new entry.

Private-line Telephony: Canada

In Canada, the responses of the federal regulators have been similar to that in the United States.

Trans Canada Telephone System

In 1958, the Trans Canada Telephone System (TCTS) developed a transcontinental microwave system. In response, CNCP, a consortium of Canadian Pacific Railway and Canadian National Railway, applied to the federal cabinet and obtained approval to build a competing system.⁴⁰ The TCTS opposed the CNCP application on a number of grounds, including the allegation that it would result in higher telephone rates. The Canadian government, however, acknowledged the importance of competition in this sector of

⁴⁰ Kaiser, "Developments in Canadian Telecommunications Regulation," 184.

telecommunications services by permitting CNCP to establish its Trans Continental System.

Canadian Pacific Railway Application

Five years after the FCC Specialized Common Carrier decision, the Canadian Pacific Railway filed an application before the CRTC seeking an order that Bell Canada "forward all reasonable and proper facilities for the receiving, forwarding, and delivering of telegraphic and telephonic messages on or from telegraph systems and lines for the interexchange of telecommunications traffic and for the interconnection of their respective telephone systems."⁴¹ A year later, the commission joined the Canadian National Railway to the proceeding.

CNCP argued that effective competition in computer communications required that users be able to access the system through the telephone.⁴² In response, Bell Canada argued that granting interconnection to competing carriers would adversely affect its revenues by some \$235 million. The commission found that this potential revenue loss had been greatly overstated and granted the application. It adopted the principle that regulated companies controlling essential facilities may not refuse to supply facilities to

⁴¹ Ibid., 185.

⁴² Ibid., 186.

undermine competitors. This was essentially the same language the FCC adopted in 1971 in the Specialized Common Carrier Decision. CNCP was granted access to local loops of Bell Canada and B.C. Tel.⁴³ But the provincially regulated carriers were united in refusing system interconnection.

Public Long-distance Telephony: U.S.

In the United States, long-distance market was opened to competition not without controversy. FCC initially sought to protect AT&T's monopoly position, but eventually relented and became an advocate of competition in the MTS and WATS markets.

MCI's Execunet Tariff

In January 1975, MCI introduced "shared" private-line service (i.e., switched long-distance service) under the name of "Execunet". Opposing the move, AT&T contended that the service was in direct competition with its switched long-distance services, MTS and WATS. Such switched message service markets were not yet open to competitive entry. The FCC refused MCI's Execunet tariff and appears thereby to have drawn the line at public long-distance telephone service.

⁴³ Ibid.

MCI sought recourse through the courts and succeeded in July 1977 in having the FCC order overturned by the appellate court.⁴⁴ In its landmark decision, the court ruled that since the FCC had never made an affirmative determination that the public interest required a monopoly supplier to provide interstate long-distance service, a competitor's service could not be excluded.

AT&T responded by refusing interconnection and the FCC concurred, applying for leave to appeal its case before the U.S. Supreme Court. In January 1978, the Supreme Court declined to grant FCC's application and in April that year the appellate court ordered AT&T to provide interconnection to MCI.

MTS/WATS Competition

Following the Court's intervention in Execunet, the FCC opened an inquiry to determine whether public interest required that interstate MTS/WATS should be provided on a sole-source basis, and to examine the possible effects of competition on these services. In August 1980, the FCC declared MTS/WATS competition to be in the public interest. The FCC opened up the resale market in June 1981, when it allowed resale and shared use of PSTN for the provision of MTS and WATS-like services. Subsequently, it permitted resale in MTS and WATS markets. Thus, the FCC has gradually

⁴⁴ Bolter, Transition to Competition, 159.

opened up the long-distance marketplace to greater competition.

Public Long-distance Telephony: Canada

In Canada, competition has not been permitted in the provision of MTS/WATS, except with respect to mobile radio and cellular mobile telephone service.

CNCP's Application

The issue of whether to allow MTS/WATS competition was extensively addressed by the CRTC in response to a CNCP application to interconnect its facilities with the public switched telephone networks of Bell Canada and B.C. Tel in order to compete with these companies in providing public long-distance telephone service. The CRTC concluded that while there are a number of potential benefits associated with the introduction of MTS/WATS competition, it would not be in the public interest to grant CNCP's application.

CRTC's 1985 Decision on Resale and Sharing

In August, 1985, the CRTC had concluded that resale and sharing to provide MTS/WATS was not in the public interest. At that time, the rates for MTS and WATS substantially exceeded their cost and the CRTC was concerned that allowing resale and sharing to provide MTS/WATS could result in

uneconomic entry and a significant erosion of MTS/WATS revenues.

However, the discrepancy between rates and costs for non-MTS/WATS interexchange services was not as significant as it was in case of MTS/WATS services. The CRTC noted that rates for some such services might not be cost-related. In such cases, that discrepancy could also contribute to uneconomic entry. Accordingly, the CRTC allowed carriers to restructure their rates prior permitting resale and sharing. In February 1987, the CRTC permitted the sharing of interconnected private-line voice services, as well as their resale when individual circuits are dedicated to the end user.

CRTC's 1989 Public Notice

In January 1989, the CRTC issued a public notice seeking comments on whether it is appropriate to modify its rules applying to the resale and sharing of private-line services.⁴⁵ The CRTC noted that the rate relationships within the interexchange service categories of Bell Canada and B.C. Tel have been substantially altered. In particular, there have been major reductions in MTS rates in the order of 30% for both Bell Canada and B.C. Tel since the beginning

⁴⁵ Canadian Radio-television and Telecommunications Commission, Telecom Public Notice 1989-1: Resale and Sharing of Private Line Voice Services (Ottawa: Canadian Radio-television and Telecommunications Commission, 11 January 1989), 1-3.

of 1987. Moreover, the CRTC has approved increases in the rates for certain Bell Canada and B.C. Tel private-line services, thereby significantly reducing rate differentials between MTS/WATS and private-line services. Therefore, the CRTC sought comments on whether it was appropriate to modify the current rules governing the resale and sharing and, if so, the nature and extent of such modifications.

CRTC has indicated that as a result of the current review, it will allow resale and sharing of MTS. It will also permit resale and sharing of private-line voice services. The commission is also expected to permit resale and sharing of WATS for data services.⁴⁶

Role of Technology

Baughcum emphasizes the role of technology in forcing telecommunications in the direction of increasingly competitive markets.⁴⁷ But Hills regards the deregulation of telecommunications markets as a primary mechanism of industrial policy when looked at as part of a process of gaining comparative advantage in the information technology sector.

⁴⁶ Naqi A. Jaffery, "Canadian Telecommunications Marketplace: Trends and Developments," in Link Client Memo (New York, NY: LINK Resources Corporation, November 1989), 5-6.

⁴⁷ Alan Bughcum, "Implications of Technological and Policy Developments for Telecommunications Markets," chap. in Telecommunications Access and Public Policy (Norwood, NJ: Ablex Publishing Corporation, 1984), 127-144.

"The goal is the world market. The argument put forward is that innovation lags under public control. 'Technological convergence' is a seemingly neutral justification for deregulation. Yet it masks the implication that technology should be allowed to serve private interests, that it should be under social control. Arguments citing the 'freedom' in technological innovation conceal the political interests of those who develop, manufacture and use that technology."⁴⁸

However, the fact remains that but for the availability of technology, the attainment of the the objectives outlined by Hill would have been virtually impossible. Snow contends that ideology certainly played a role in the movement toward deregulation in the United States, although support for deregulation has been by and large bipartisan.

"In retrospect it seems fair to argue that considerations of economic efficiency, drawn from the patient advocacy of neoclassical welfare economists and others, have been more important in the American deregulatory experience than ideological concerns per se."⁴⁹

In Canada, the potential for competition has come not just from technological change but from other sources as well. The factors that swung the balance in favor of competition include demands of the user communities and especially big business, and the "demonstration effect" of the U.S. experience, not to mention the changing attitudes

⁴⁸ Hills, Deregulating Telecoms, 25-45.

⁴⁹ Marcellus Snow, "Communications Policy in Seven Developed Countries: Introduction, Background, and Conclusions," chap. in Marketplace for Telecommunications: Regulation and Deregulation in Industrialized Democracies (Amsterdam: North-Holland, 1986), 3-17.

of many policy-makers and regulators.⁵⁰ At the same time, there are distinctive features of the Canadian situation which will shape and influence pressures for increased competition.⁵¹ Among these are:

1. A very different jurisdictional and regulatory structure where the scope of federal jurisdiction over interprovincial telecommunications and the role of regulatory authority is much less clear
2. No telecommunications company that is equivalent in size or function to AT&T before or after divestiture
3. No effective anti-trust tradition which might be used as an alternative to regulation
4. A historic disposition to accept greater government intervention in the economy

The demonstration effect of the U.S. experience on Canadian policy-makers and regulators, at least at the federal level, has been considerable as they have been persuaded in varying degrees, to respond similarly to pressures for increased competition.⁵² Canada has followed the American deregulatory timetable with a few years lag. Snow says that similar to the Americans the Canadians can also be presumed to be acting according to

⁵⁰ Woodrow, Conflict over Communications Policy, 113.

⁵¹ Ibid.

⁵² Ibid., 115.

arguments that a competitive marketplace would produce greater welfare and efficiency.

CHAPTER 4

JURISDICTIONAL DEBATE

This chapter will examine the approaches of the federal regulators, on the one hand, and the provincial/state regulators, on the other, to the regulation of telephony. It will be shown that while federal regulators have favored a competitive marketplace, the provincial/state regulators have opted for a regulatory framework.

Regulatory Jurisdiction: U.S.

This section will examine the legislative actions that helped shape the jurisdictional boundaries of the regulation of telephony. It will also look at the differences in the approaches of the federal and state regulators over regulating telephony as a monopoly.

Post Roads Act

Telecommunications regulation in the United States dates back to the Post Roads Act of 1886, which gave telegraph companies certain construction rights related to public lands and waters.⁵³ The regulation of rates for

⁵³ Bolter, Transition to Competition, 9.

government telegrams was also authorized under this statute. In the United States, the Interstate Commerce Commission (ICC) was authorized by Congress in 1887 to assume responsibility for telegraph company interconnection.⁵⁴

Mann-Elkins Act

The regulation of telephony was initially confined to the local level. Formal regulation of telecommunications began with the Mann-Elkins Act passed in 1910.⁵⁵ The Act granted ICC authority over interstate and foreign telephone services, telegraphy, and cable operations. In the United States, the legislative actions that impacted on telecommunications regulation at the federal level included the Transportation Act of 1920 and the Willis-Graham Act of 1921. As a result of these and other measures, the ICC was made responsible for monitoring rates, establishing accounting system studies, evaluating rate base, and periodic reporting of the common carriers.

Communication Act of 1934

The formation of the Federal Radio Commission in 1927 was short-lived and in 1934 Congress enacted the Communication Act of 1934 and created the FCC. The Communications Act reformalized early legislative

⁵⁴ Ibid.

⁵⁵ Irwin, Telecommunications America, 27.

developments at both the state and federal level and assigned FCC with jurisdiction over telephone company's rates, service facilities and construction facilities.⁵⁶ The Communications Act provides FCC with jurisdiction over "connecting carriers," which do not engage in interstate or foreign offerings except through interconnection of their facilities with those of other carriers.

In the United States, Congress seems to have intended that the states regulate local and interstate rates.⁵⁷ Section 410(c), added to the Communications Act in 1971, demonstrates congressional concern for state interests over distribution of costs and revenues between state and federal jurisdictions. Thus, a substantive role was retained for state regulation under the Communications Act of 1934 - in contrast to the situation under the ICC wherein state authority was largely preempted.⁵⁸ The regulation of telecommunications was divided between state agencies and the FCC.⁵⁹ Each agency exercised its jurisdiction in determining the costing, pricing, and profits of their respective carriers. The public utility commission became institutionalized as an instrument of social control. It tried to strike a balance between the carriers' financial

⁵⁶ Ibid.

⁵⁷ Bolter, Transition to Competition, 9.

⁵⁸ Ibid.

⁵⁹ Irwin, Telecommunications America, 5.

needs against the subscribing public's requirements for universal telephone service.

Federal-State Conflict

In the United States, the applicability of the Communications Act has been extended since its passage partly due to the influence of federal interconnection, pricing and financial policies.⁶⁰ Moreover, actions by FCC have served to extend its influence over intrastate services. It has brought many areas under federal preemption that were formerly left to the local public service commissions. These include terminal equipment, depreciation, and resale prohibitions for intrastate offerings that connect to intrastate WATS. Increased federal government involvement can also be seen in the anti-trust suits instituted in the United States by the Department of Justice against AT&T. Irwin contends that the dismantling of the Bell system resulted in part from the perceived failure of state and federal regulation.⁶¹

Today, the FCC is responsible for interstate long-distance services and for the associated access services. In the majority of cases, this corresponds to interstate

⁶⁰ Bolter, Transition to Competition, 10.

⁶¹ Manley R. Irwin, "U.S. Telecommunications: Searching for an Optimum Policy, Telecommunications Policy, March 1988, 13.

interLATA service. In cases where LATAs cross state boundaries, the FCC regulates the interstate intraLATA component as well. State regulators are responsible for all intrastate services, including local exchange services provided by the local telephone companies, intrastate interLATA and intrastate intraLATA services whether provided by the local telephone companies or by long-distance carriers. State commissions oppose FCC's actions in preempting plant depreciation practices - a quarrel that has spilled into the courts.⁶² The FCC complains that its mandate has been curtailed by the Department of Justice or the courts.

Throughout the 1970s, many PUCs, favoring continuation of a policy of regulated monopoly, unsuccessfully battled against the swing to competition fostered by FCC. They adopted state regulations inconsistent with competition that were preempted by the FCC. They appealed the FCC preemption decisions to the courts, but their appeals were denied. The FCC maintained its overall control of policy and established its view that the public would be served better by competing companies providing interstate long-distance services. The PUCs were "pro-monopoly" because they implicitly recognized that monopoly was a necessary condition to exercise effective government control over the prices of all telephone services.

⁶² Ibid., 14.

The conflict between federal and state regulators is already apparent in the context of the debate over access charges and the growing concern over "bypass" technology.⁶³ The consent decree that led to the divestiture of AT&T brought the conflict between the PUCs and the FCC to its inevitable conclusion. The PUCs have vigorously opposed the FCC access charge decision. They argued that prices to consumers for "access" to the network will increase, making subscription less affordable and threatening "universal access." Opposing the loss of government control on egalitarian grounds, the PUCs argued that the government should have the power to hold the price for subscription or "access" to the telephone network below its cost so that poor people could afford access. Otherwise, they argued, the prices to consumers for "access" to the network will increase, making subscription less affordable and threatening "universal access."

Regulatory Jurisdiction: Canada

Canada has had a fragmented regulatory structure which has given rise to conflicts between the federal and provincial governments. There has been considerable provincial

⁶³ Harry M. Shooshan III, Disconnecting Bell: The Impact of the AT&T Divestiture (New York, NY: Pergamon Press, 1984), 164.

resistance to any moves by the federal government to preempt telecommunications regulation.⁶⁴

British North America Act

The legal basis for telecommunications policy-making goes back to the British North America Act of 1867 which makes direct reference to telegraph lines as coming under federal jurisdiction.⁶⁵ The regulation of the telephone in Canada dates back to the Railway Act of 1903.⁶⁶ The federal government exercises regulatory authority over the telephone system with regard to services and pricing where one company may "interconnect" with another across provincial and international boundaries.

1973 Green Paper

The Canadian government moved in the early seventies to give cohesion to telecommunications policy-making. In 1973, the federal government tabled its Green Paper outlining proposals for a communications policy for Canada." Pointing out that the achievement of national objectives is impeded by de facto division in the exercise of authority between Parliament and the provincial legislatures, the Paper stressed the "urgency to state and follow a communications

⁶⁴ Datapro, Telecommunications, TC05-001A-501.

⁶⁵ Woodrow, Conflict over Communications Policy, 9.

⁶⁶ Datapro, Telecommunications, TC05-001A-507.

policy that is national in scope." It proposed a single federal regulatory agency for telecommunications, including broadcasting. The Green Paper brought to a head the federal-provincial conflict over communications policy. The provincial governments decided to oppose federal initiatives and to move toward the development of a common position.

1975 Grey Paper

In April 1975, the federal government released its Grey Paper - "Communications: Some Federal Proposals" - which basically reiterated its 1973 position but did provide greater detail on several matters. During the second Federal-Provincial Conference on Communications, the provincial governments presented a "common front" and submitted a Joint Provincial Statement that directly and explicitly challenged the federal position, and provided an interprovincial alternative to centralized nationwide control. These proposals were rejected by the federal government and the conflict over communications policy reached an impasse.

Canadian Radio-television and Telecommunications Act

Nevertheless, the federal government went ahead with the passage in 1976 of the Canadian Radio-television and Telecommunications Act. Under the Act, the Canadian Radio-television and Telecommunications Commission (CRTC) was

given the regulatory power over federally regulated telecommunication carriers. The Act provided that all present and proposed amended rates and tariffs of the federally regulated common carriers be filed for approval with the Commission. For many of the provinces, says Schultz, the only apparent alternative to perceived federal ineptitude and discrimination was to claim a much larger role and voice for provincial government in decisions about goals and objectives.⁶⁷

Task Force Report

At a meeting in Edmonton on April 2-3, 1987, Canada's federal and provincial ministers responsible for communications decided to review the desirability of competition in public long-distance telephone service in Canada. The ministers also decided to ask a Task Force of federal, provincial, and territorial telecommunications regulators and, in some cases, government representatives to begin an investigation of the empirical evidence necessary for the development of sound public policy on the issue.⁶⁸

⁶⁷ Schultz, "Partners in a Game Without Masters: Reconstructing the Telecommunications Regulatory System," in Telecommunications Regulation and the Constitution, ed. Robert J. Buchan and others (Montreal: Institute for Research on Public Policy, 1982), 61.

⁶⁸ Federal-Provincial-Territorial Task Force on Telecommunications, Competition in Public Long-distance Telephone Service in Canada (Ottawa: Minister of Supply and Services, 1988), 1.

In its report released in December, 1988, the Task Force did not submit any recommendation on whether competition should be allowed in public long-distance service. The Task Force examined the introduction of competition in public long-distance telephone service as one of the options for the future of telecommunications in Canada.⁶⁹ It confined its activities to the collection and review of information and the provision of objective analysis relating to competition in public long-distance telephone service. It considered its role to be one of information gathering and analysis which could contribute to the policy-making role of the ministers. The work of the Task Force was oriented towards providing governments with a common base of information upon which to consider and determine policies. The failure of the Task Force to produce a recommendation on the desirability or otherwise of long-distance competition is understandable when one considers the diversity of interests it represented.⁷⁰ At one end of the spectrum were those who do not subscribe to long-distance competition, namely, the provincial regulators, and at the other end was the CRTC that favors such competition.

⁶⁹ Ibid., 3.

⁷⁰ Jaffery, "Canadian Telecommunication Marketplace," 3.

Federal-Provincial Conflict

Since its formation, the CRTC has been pursuing the deregulatory path following, in most cases, American deregulatory developments. However, it has not been a very effective regulatory body since federal government regulated carriers operate in two provinces only with the rest of the provinces having their own regulatory regimes.

Telecommunications regulation is conducted by ten different regulatory authorities which gives rise to the potential for different, and in some instances, contradictory decisions. According to Kane, participation in a policy-making role by the various provincial governments as well as the federal government has made it extremely difficult to talk in a coherent fashion about uniformity in regulation.⁷¹ The moves by the federal government to assert its control over telecommunications in the rest of the country have been effectively thwarted by the provincial governments who oppose competition in the long-distance marketplace.

The provincial governments exercise jurisdiction over the telephone system in seven provinces, at least in so far as the provision of local services is concerned. The federal government jurisdiction is limited to certain aspects of the telephone companies, such as joint use of their facilities

⁷¹ Gregory T. Kane, "Breaking an Impasse: A Joint Panel Proposal for Telecommunications Regulation," in Telecommunications Regulation and the Constitution, ed. Buchan and others, (Montreal: Institute for Research on Public Policy, 1982), 3.

by other carriers. Woodrow contends that there may be grounds for an expanded and more assertive exercise of federal jurisdiction in telecommunications matters.⁷²

The debate in Canada is complicated by several "non-economic" considerations. A major one is the continuing preoccupation of the policy-makers with Canadian sovereignty. This sovereignty concern was manifested by the mandate given the Clyne Committee to produce specific recommendations on a strategy to restructure the Canadian telecommunications system.⁷³

Another especially Canadian complication is the strong regional flavor of the problem. One aspect of this regional focus is the balkanized regulatory structure of the industry, which includes the lack of a single authority over Telecom Canada. The balkanization led to, among other things, regional differences in the boundaries drawn between monopoly and competitive segments. It also led to obstacles and delays in the interconnection of telephone networks, including cellular interconnection.⁷⁴

There has also been concern that substantive moves to introduce competition in MTS will threaten the viability of smaller, regional telephone companies by reducing their toll

⁷² Woodrow, Conflict over Communications Policy, 10.

⁷³ Globerman, "Economic Factors in Telecommunications Policy and Regulation," 3-4.

⁷⁴ Ibid., 4.

revenues from Telecom Canada settlements. Concern about the economic survival of rural communities in the less densely populated provinces has also been linked to restructured telephone rates attending increased competition in long-haul segments of the industry.⁷⁵

In October 1989, the Canadian Communications Minister tabled in the House of Commons as amendment to the Railway Act. The effect of the amendment is to give CRTC authority over all member companies of Telecom Canada. Thus, the regulatory framework in Canada is clearly moving toward a more all-embracing role for the federal government, something that is likely to further propel competition. Already, the federal government is contemplating allowing CNCP to offer MTS in competition with Telecom Canada.

⁷⁵ Ibid.

CHAPTER 5

CURRENT REGULATORY TRENDS

This chapter will examine the current trends in the regulation of long-distance marketplace. The major players and their competitive position as providers of long-distance telephony will be examined. It will be argued that the movement toward a deregulated marketplace is inexorable.

Regulatory Trends: U.S.

The Consent Decree opened up the long-distance market to competition but imposed restrictions on AT&T as the "dominant" carrier. However, it is only a matter of time when these restrictions are done away with.

Consent Decree

The 1956 Department of Justice's anti-trust suit lead to the divestiture of AT&T and the break-up of its monopoly in the long-distance marketplace. The consent decree permitted competition in the long-distance market in lieu of allowing AT&T to enter the field of information processing. According to Bruce, the Modified Final Judgement (MFJ) embodying the terms of that settlement has become a regulatory instrument

rivalling the Communications Act in establishing the industry structure and service arrangements.

Following the consent decree, capacity is flocking to the long-distance portion of the market as is evidenced by the growth of AT&T's competitors, the so-called other common carriers (OCCs).⁷⁶ MCI and US Sprint, the leading competitors, have grown very rapidly into very large corporations. Moreover, several of the nation's railroads have announced plans to provide a billion-dollar nationwide carriers' carrier network. In addition, the existence of WATS and private-line reselling makes facility-based entry easier by allowing even a limited facility-based entrant to enjoy the advantages of large networking.

The MFJ required the FCC to develop a policy to govern the "access" charges that AT&T and OCCs will pay the divested BOCs for delivering interstate inter-LATA calls to them and for carrying those calls to their ultimate destination. The FCC decided that AT&T and the OCC should pay what amounts to gradually diminishing rates for the BOCs "local transportation" service. Gradually, subscribers have assumed more of the costs caused by their demand for access to the telephone network.

In reaching this decision, the FCC recognized that competition will not permit regulated prices for interstate services to AT&T and the OCCs that are far above the cost of

⁷⁶ Wenders, Economics of Telecommunications, 208-210.

providing those services. If AT&T and the OCCs are required to pay far more than the cost of using BOC facilities, they will "bypass" the BOCs by developing their own "local transportation" facilities. To compete against bypass facilities, the BOCs would ultimately have to bring their prices for service closer to their cost of service.

Because AT&T and the OCCs will be permitted to pay prices closer to the costs BOCs incur, subscribers will have to pay prices closer to the costs of providing access to the network. At least in the short run, the shift in cost responsibility from AT&T and the OCCs to subscribers will lead to price increases for subscriber access to the telephone network. In other words, subscribers will pay higher rates without regard to the number of calls they place. At the same time, prices for long-distance calls between states should decline because "local transportation" costs for these calls will also decline.

Dominant-Non-dominant Dichotomy

In its Competitive Carrier Decision, the FCC ordered that common carriers be classified as either "dominant" or "non-dominant" in their respective markets. Only dominant carriers are subject to traditional rate base rate-of-return regulation. Non-dominant carriers are free to enter and exit the marketplace, build or acquire facilities, introduce new services and set rates without regulatory approval. Only

AT&T has been regulated by the FCC as a dominant carrier. The dominant/nondominant characterization of the interstate toll markets essentially relieved the OCCs of any interstate regulation while AT&T continued to be regulated in detail. Wenders says the adoption by the FCC of a so-called dominant/non-dominant characterization of the interstate toll market was, from an economic perspective, a mistake.⁷⁷ By taking this action, he says, the FCC has started down a road that in the past has led to the throttling of real competition by the regulatory process.

"The FCC has given the market a signal that it is apparently more interested in protecting competitors than competition. In open markets, where all competitors are free to prosper, survive, or fail on their own merits, maximizing economic efficiency is congruent with the competitive outcome. In a market where umbrella pricing is practiced, by regulating some firms and not others, survival of the unfit will ultimately result, and economic efficiency will not be enforced by such artificial competition".⁷⁸

By imposing regulatory restrictions on AT&T the FCC has not opened the long-distance market completely to deregulation. However, it is considering as to how this might best be accomplished. The FCC ostensibly feels that

⁷⁷ Ibid., 222-223.

⁷⁸ Ibid.

AT&T's market power must be constrained in order to protect the competitive process.⁷⁹

The OCCs have indicated that they favor complete deregulation of the toll markets once it is shown that AT&T no longer has "market power as evidenced by its market share. But a large market share is generally considered to be a very poor indicator of market advantage, especially in a dynamic telecommunications market, and this is especially true in a market where that share was largely achieved when the market was closed to entry by regulation - a situation that no longer exists. A large market share can be eroded rapidly when entry is easy and usage is concentrated, so entrants can gain market share rapidly by focusing on only the large customers in the market.⁸⁰

By 1984 the OCCs served the urban areas of the United States that contain 60% to 70% of the households. This amounted to about fifty million subscribers, of which about 10% had monthly toll bills exceeding \$25. The OCCs target market was only about five million residence households, of which they served about 1.6 million by 1984. In terms of their target market, the OCCs had already achieved about a 30% market penetration in a few years. In business located

⁷⁹ Alan Baughcum, "Deregulation, Divesture, and Competition in U.S. Telecommunications: Lessons for Other Countries," in Marketplace for Telecommunications: Regulation and Deregulation in Industrialized Democracies, ed. Marcellus Snow (White Plains, NY: Longman, 1986), 73.

⁸⁰ Wenders, Economics of Telecommunications, 218.

in metropolitan areas, 46% of customers with monthly toll bills of over \$50 used OCC's toll services. Clearly, AT&T's previous 100 share of these markets was not a good indicator of market advantage.

According to Wenders, market share, especially in a dynamic market such as telecommunications, has little meaning in terms of market advantage and future competition.⁸¹ Actual and potential entry, not market share is the key to competitive discipline in a market. Fisher et al. contend that the dominant firm model, however, is very misleading when competitors can expand their supply.⁸² "When either new or existing competitors can readily expand, the firm is not "dominant" and does not have monopoly power even though it has a much larger share than those of its rivals."⁸³ According to Temin, however, technical factors suggest that AT&T is still likely to have a natural monopoly in intercity telecommunications or at least be the dominant member of a very small oligopoly.⁸⁴

Restrictions on AT&T and the hesitation to open markets fully to competition may reflect a genuine concern on the part of policy makers that consumers will not benefit from

⁸¹ Ibid., 221-222.

⁸² Franklin M. Fisher, John J. McGowan, and Joen E. Greenwood, Folded, Spindled and Mutilated: Economic Analysis and U.S. vs. IBM, (Cambridge, MA: MIT Press, 1983), 26.

⁸³ Ibid.

⁸⁴ Temin, Fall of the Bell System, 356.

unfettered competition between an elephant (AT&T) and several mice (AT&T's competitors).⁸⁵ However, Baughcum questions the economic analysis used to demonstrate a concentrated market structure in the telecommunications industry which encourage a cautious policy toward deregulation.⁸⁶ He contends that such calculations are valid, if at all, only if these static measures of market characteristics are likely to persist. Since technological developments are rapidly eliminating distinctions between markets and services in the telecommunications industry, a policy resting on static measures will be counterproductive and will not facilitate an adjustment to efficient markets.

In May 1989, FCC's Office of Plans and Policy released a working paper that concludes AT&T is no longer a dominant carrier and should not be subject to greater regulation than its competitors.⁸⁷ The report bases its findings on two criteria: (1) transmission capacity and (2) ability to supply the market's total transmission needs. The report points out that the combined networks of AT&T's main rivals, MCI and US Sprint, represent 47% of the industry's total investment in plant. AT&T's investment in plant represents about 40% of the total market. The report says that if AT&T

⁸⁵ Baughcum, "Deregulation, Divesture, and Competition in U.S. Telecommunications: Lessons for Other Countries," 73.

⁸⁶ Ibid., 73-74.

⁸⁷ Anita Taft, "Washington Update: Report Finds AT&T Not Dominant," Network World (8 May 1989): 11.

is assumed to be capable of serving 100% of the market, MCI can serve 71% and US Sprint can serve 44%. With other competitors facilities factored in, the report indicates that AT&T's rivals can serve 146% of the market.⁸⁸

By the post-war period, the technology that Bell Labs created was diffusing to other engineers and other firms, helped along by its free availability under the 1956 consent decree. As Bell Labs scientists made transmission cheaper and better, they inadvertently made technology more accessible. The very nature of scientific research also contributed to this diffusion. After 1959, more competitors had the technical wherewithal to challenge AT&T in its markets, they had more reason to want to compete, and they found regulators willing to experiment cautiously with competition, now that universal service was within reach.

But less regulatory willingness to exclude entrants stemmed from more than mere technological diffusion. Potential competitors saw bigger profit possibilities than had previously existed.⁸⁹ Since 1930, the difference between rates and costs in the long-distance market had been growing in order to help support local exchange service. To the potential competitors, this disparity between rates and costs meant profits.

⁸⁸ The report includes a disclaimer stating that the views expressed do not necessarily reflect those of the FCC.

⁸⁹ Faulhaber, Telecommunications in Turmoil, 34-35.

Regulatory Trends: Canada

In Canada, the federal government has cautiously followed the American example in opening telephony to competition. But the provincial governments resisted the efforts of the federal government to preempt telecommunications regulation.

Toronto v. Bell Telephone Co.

Toronto v. Bell Telephone Co. (1905) went a long way toward establishing federal jurisdiction over telecommunications.⁹⁰ The Court expressly rejected the contention that the local and long-distance business might be divided so as to put local service within the legislative competence of the provinces and leave long-distance services under federal jurisdiction.⁹¹

However, Bell Canada opted not to extend its operation to other provinces. Subsequently, British Columbia Telephone Company was also incorporated under federal jurisdiction but its operations were also confined to British Columbia province. In the rest of the country, provincially and privately owned telephone companies were established under a mix of federal, provincial, and municipal jurisdictions.

In subsequent years despite serious federal-provincial differences, neither side sought recourse to courts. Buchan

⁹⁰ Woodrow, Conflict over Communications Policy, 10.

⁹¹ Gregory T. Kane, "Constitutional Basis for Jurisdiction," 4-5.

contends that both sides have had grave and well-founded reservations as to the desirability of the jurisdictional and regulatory framework that might be imposed if a court challenge was sustained.⁹²

Long-distance Market

In the long-distance market, Telecom Canada has met with competition for a number of years from CNCP in the provision of private-line services. CNCP is federally incorporated and in recently years, it has emerged as a major player in the Canadian long-distance marketplace.

In May 1979, CRTC granted CNCP the right to interconnect its private-line intercity facilities to the local telephone network of Bell Canada. This decision was later extended to include British Columbia Telephone Co. Provincial regulators have resisted efforts by CNCP for access to carriers within their jurisdiction. Thunder Bay Telephone and "edmonton telephones" are the only other local carriers to provide access to CNCP on a limited basis.

In October 1983, CNCP applied to the CRTC for authority to connect its facilities to the telephone networks of Bell Canada and B.C. Tel so as to compete with these carriers in

⁹² Buchan, Robert J., and C. Christopher Johnston, "Telecommunications Regulation and the Constitution: A Lawyer's Perspective," in Telecommunications Regulation and the Constitution, eds. Robert J. Buchan and others (Montreal: Institute for Research on Public Policy, 1982), 119-120.

the provision of MTS and WATS. In its decision rendered in August 1985, the commission did not grant the CNCP application. Observing that it was rejecting the application for economic reasons, the commission stated that it had not reached any conclusion as to whether MTS and WATS was a natural monopoly. However, CNCP was to have applied to CRTC by year-end 1989 for permission to provide long-distance services in competition with Telecom Canada. CRTC was expected to move expeditiously in granting the application.

Supreme Court Decision

However, until recently, any competition permitted by the CRTC in the long-distance marketplace would have remained confined to the federally regulated areas. But a landmark Supreme Court ruling, has hastened the emergence of greater competition in telecommunications markets.⁹³ The ruling was handed down in August, 1989, in response to an appeal by AGT against a CRTC order requiring it to provide CNCP with access to its network.

The ruling clearly stated that the federal government has the constitutional power to regulate all domestic telephone companies. At the same time, the Supreme Court found that the provincially owned carriers - AGT, SaskTel,

⁹³ Jaffery, "Canadian Telecommunications Marketplace", 3-4.

and Manitoba Tel - are exempt from federal regulation because of their provincial crown status.

The Supreme Court ruling, consequently, produced a legal lacuna by saying, in effect, that although the provincially owned carriers are theoretically subject to federal regulation, they cannot be regulated by the federal government until they are stripped of their crown immunity. As pointed out earlier, the federal government has moved a bill in parliament to amend the Railway Act which gives provincial crown corporations immunity from federal jurisdiction. This will enable it to impose a national set of rules on AGT, SaskTel and Manitoba Tel as well. After the Supreme Court ruling, Maritime Telegraph and Telephone and Island Tel filed and received approval of their tariffs from the CRTC. Other carriers who have been placed within the ambit of federal regulation are expected to follow suit.

The Supreme Court ruling will evidently serve to boost CNCP's position as a provider of long-distance services. CNCP already has access to the facilities of Bell Canada and B.C. Tel for its private-line services. The court order will enable CNCP to extend its network to other parts of the country.

im

pl

lo

ar

in

pr

an

St

st.

St.

ope

rec

rec

CHAPTER 6

IMPLICATIONS OF COMPETITION

The purpose of this chapter is to examine the implications of competition in the long-distance market place. It will be shown that both the long-distance and local segments of the telecommunications carrier industry are structurally more competitive in the United States than in Canada. The implications of competition for performance, pricing and bypass will be examined.

Structure

This section will compare the structure of the local and long-distance of the telephone industry in the United States and Canada.

Local Segment

The AT&T consent decree substantially altered the structure of the local segment of the industry in the United States. Under the breakup agreement, the twenty-two operating Bell companies were merged into seven independent regional companies. An important feature of this reorganization is that the local carriers must offer

interconnection privileges to all dial-up or private-line services on a non-discriminatory basis.⁹⁴ By contrast, only CNCP has interconnection privileges to Bell Canada's and BC Tel's local exchange facilities. The extent and nature of this allowable interconnection remains a contested issue.

Long-distance Segment

With the implementation of the consent decree, structural conditions in the local segment of the industry differ quite markedly between the United States and Canada. In the U.S., besides the approximately fifteen hundred independent telephone companies providing service, mainly to small towns, there are seven major independently-owned regional companies of comparable size. In Canada, there are almost 200 companies offering local exchange service of which the great majority are relatively small. Bell Canada and B.C. Tel account for approximately two-thirds of all local telephone calls.

Regulatory restrictions on the number of firms legally entitled to compete in different segments of the industry are significantly more rigid in Canada than in the United States.⁹⁵ For example, in Canada, private-line voice, data

⁹⁴ Globerman, "Economic Factors in Telecommunications Policy and Regulation," 5.

⁹⁵ Ibid., 5.

	B
	S
1	1
1	1

communications and message record services are provided on a duopoly basis by Telecom Canada and CNCP.

In the United States, as a result of procompetitive FCC policies and marketplace developments in the long-distance service, there has been a very substantial increase in the number of companies offering toll services to the public.⁹⁶ In 1970, there was essentially a single long-distance service provider in the United States, namely the AT&T. In March 1987, there were 561 long-distance companies, most of them resellers.⁹⁷ The main players are the three largest national facilities-based carriers, AT&T, MCI, and US Sprint.

The current competitive providers of long-distance services in the U.S. are characterized by the following categories:

1. Major facilities-based carriers: These long-distance carriers are providing service on a national basis. By the end of 1986, 40% of U.S. LATAs were served by four or more facilities-based long-distance carriers, 75%

⁹⁶ Organization for Economic Co-operation and Development, Trends of Change in Telecommunications Policy (Paris: Organization for Economic Co-operation and Development, 1987), 341.

⁹⁷ Federal Communications Commission, Common Carrier Bureau, Industry Analysis Division, "Trends in Telephone Service," Washington, DC: Federal Communications Commission, 1 August 1988, 14.

were served by three or more carriers, 89% were served by two or more, only 11% were served by AT&T alone.

2. Regional facilities based carriers. In the second category, there are a growing number of facilities based long-distance carriers which operate on a regional basis. The period since divestiture has also seen dramatic growth in the number of carriers' carriers, of which the National Telecommunications Network is an example. These companies operate as regional wholesalers and specialize in marketing to transmission service vendors.
3. Resale carriers. Resellers, the final category, consist of companies that lease transmission capacity in bulk from other carriers and resell that capacity to individual customers or groups of customers at prices high enough to make a profit, yet sufficiently below the equivalent rates of facilities based carriers to attract customers. Such services are attractive to customers who do not have sufficient traffic to take advantage of WATS rates and rate structure directly. Many resellers concentrate on serving relatively limited geographic markets or only certain selected user group. The impact of permitting competition in resale services has been to spawn new markets that

hundreds of new companies have entered. As of March 1987, there were 554 resellers in the voice market.⁹⁸

Impact on Efficiency and Innovation

Long-distance competition has also stimulated established firms such as AT&T to operate more efficiently and responsively, although it is difficult to precisely measure the effect.⁹⁹ Competition is generally acknowledged to be the principal reason for AT&T's rapid introduction of new data communications services which are targeted at meeting special business communications needs. In fact, the long-distance communications market has changed from a seller's market to a buyer's market where meeting consumer needs and interests commands high industry priority.¹⁰⁰

Service Offerings

The availability of certain dedicated and switched network services has expanded as the networks of new entrants have increased geographical coverage. Declining transmission costs associated with fiber optics, and the

⁹⁸ Federal-Provincial-Territorial Task Force on Telecommunications, Competition in Public Long-distance Telephone Service in Canada, 33.

⁹⁹ Organization for Economic Co-operation and Development, Trends of Change in Telecommunications Policy, 342.

¹⁰⁰ Ibid., 342.

introduction of enhanced software features and functions in the COs have contributed in dramatically expanding the types of services that the carriers are now able to offer. Carriers have diversified their array of offerings, providing many new pricing and service configuration alternatives. There has been a proliferation of services, particularly high-capacity lines for transmission of computer data.¹⁰¹ There is a growing availability of digital services, including switched 56 kb/s, T-1, and ISDN. Digital technology has also made the nation's long-distance network more efficient and has increased the number of high-capacity channels that businesses can use to transmit computer data from one office to another.¹⁰² These developments may be due to real technological progress that may or may not have been affected by competition. Nevertheless, there are as many as 60 different service packages currently available.¹⁰³ In Canada, the CRTC recently approved two new subscription-based services, Teleplus and Between Friends, which afford subscribers an opportunity to reduce their MTS charges even further.

¹⁰¹ Calvin Sims, "Customers Fault Bell Break-up," New York Times, 22 December 1989, D21.

¹⁰² Ibid., D1.

¹⁰³ Federal-Provincial-Territorial Task Force on Telecommunications, Competition in Public Long-distance Telephone Service in Canada, 60.

In its Computer II decision, the FCC deregulated the provision of enhanced services and mandated that AT&T offer these services through a separate subsidiary. In Canada, enhanced services are provided directly by common carriers, who are subject to regulatory approval of tariffs and other conditions of supply.¹⁰⁴ Bell Canada provides network facilities at tariffed rates for "third-party" provision of enhanced services, as does B.C. Tel in the case of data services.

In summary, both the long-distance and local segments of the telecommunications carrier industry are structurally more competitive in the United States than in Canada. Competition and the requirement to provide equal access have served to accelerate the implementation of digital switching and other new technologies.

Performance

Some observers suggest that competition will stimulate research and development by providing clear market incentives to carriers to be the first to develop new systems and improve performance.¹⁰⁵ At present, however,

¹⁰⁴ Globerman, "Economic Factors in Telecommunications Policy and Regulation," 8-9.

¹⁰⁵ Federal-Provincial-Territorial Task Force on Telecommunications, Competition in Public Long-distance Telephone Service in Canada, 86.

there is no conclusive evidence of the impact of long-distance competition on research and development in the United States.

There is some concern that lessened co-ordination among carriers and the reluctance to share strategic information could impede the development of new systems and new standards.¹⁰⁶ There is also concern that competing carriers may be more inclined to aim for short-term pay-offs, avoiding longer term development projects.

The first three years of the Bell System breakup were characterized by widespread delays in the installation of telephone services. However, these delays have now subsided.¹⁰⁷

The breakup has also meant confusion for the customer. Much of the confusion stems from the increasing number of decisions customers are being asked to make about their telephone service and equipment.¹⁰⁸ The complexity created by competition can be evidenced by the following:¹⁰⁹

1. Billing arrangements are more complicated.

¹⁰⁶ Ibid.

¹⁰⁷ Sims, "Customers Fault Bell Break-up," D21.

¹⁰⁸ Ibid., D1.

¹⁰⁹ Federal-Provincial Territorial Task Force on Telecommunications, Competition in Public Long-distance Telephone Service in Canada, 87.

2. Customers are flooded with an avalanche of services and do not know how to distinguish between them.
3. There are delays in service ordering, billing errors, and confusion concerning tariff structures.

Pricing: U.S.

Telephone companies in both the United States and Canada have followed similar rating principles and practices and have adopted similar rate structures.

Pricing Principles

The two key principles on which the rates of local service are based are company-wide rate averaging and value-of-service pricing. Company-wide rate averaging means that rates for services with similar features are the same throughout a telephone company's operating territory, regardless of the type of terrain, location, or technology employed. The value-of-service concept recognizes that telephone services are more valuable to some classes of subscribers than to others. The principle of value-of-service pricing forms the basis for rate group structures and for the difference between residence and business rates. Applying these two principles has meant that rates for services do not necessarily reflect their costs, except in the aggregate. In both the countries, telephone companies have adopted the practice of providing local service on a

flat-rate basis. The result has been the development of a pricing system in which a company's total costs are recovered in the aggregate, but where the rates for individual services are not necessarily intended to recover related costs, and where rates are generally averaged on a company-wide basis.

Cross-subsidization

The presence of such a pricing system has given rise to debate as to the existence of cross-subsidization on both a service and a geographical basis. Some parties hold the view that extensive cross-subsidization takes place, for example, from business to residence subscribers, from long-distance users to local service users and from urban subscribers to rural subscribers. Alternatively, there are those who argue that costs could be allocated in such a way as to show that cross-subsidization is less extensive than supposed and, in some cases, that the reverse may be true - for example, that local service users subsidize long-distance users. The debate as to the existence or direction of cross-subsidization has its roots in assumptions, about which there is no consensus, made regarding the costs of providing service.

The FCC had defined cross-subsidization in its 1976 decision on rate-making to be any deviation from prices

based on fully distributed costs.¹¹⁰ AT&T maintained that subsidies ran from its competitive long-distance services to its monopoly local services.¹¹¹ According to Temin, if cross-subsidies flowed across the line drawn by AT&T, they flowed from the competitive to the monopoly services.¹¹²

"The telephone network was broken up along board-to-board lines. On a board-to-board basis, Long Lines has been heavily subsidizing local service since the separations process was initiated during the Second World War. The size of the subsidy has grown steadily over time, exceeding \$7 billion in 1981. Whether or not they are called subsidies, this extensive use of interstate revenues to support local plant has been a pivotal fact of telecommunications history."¹¹³

Jill Hill contends that the arguments propounded by supporters of deregulation on the question of the distribution of costs within a deregulated system are not altogether as proven as they seem.¹¹⁴ "None of the dominant entities have such transparent accounting methods that it is possible to judge the extent of cross-subsidization from one service to another."¹¹⁵

¹¹⁰ Temin, Fall of the Bell System, 179-80.

¹¹¹ Ibid., 175.

¹¹² Ibid., 354.

¹¹³ Ibid., 357.

¹¹⁴ Hills, Deregulating Telecoms, 50-74.

¹¹⁵ Ibid.

Telephone companies began to recommend in the early 1980s that state toll prices be reduced.¹¹⁶ These recommendations were not made because any competitors had appeared, but because local telephone companies began to realize that their toll prices were way above cost and that the FCC's pro-competition stance was removing many of the regulatory barriers to entry into the various toll markets. AT&T proposed interstate toll reductions before actual competitors appeared on most routes.

Wenders argues that the ease of entry into the long-distance market shows that as a monopoly provider AT&T overpriced its toll services.¹¹⁷ The discipline of competition on sellers, says Wenders, was felt long before actual competitors appeared.

In its antitrust suit against AT&T the Justice Department maintained that there was "no basis for claiming that changes in its jurisdictional separations procedures caused disparities between the cost and price of Bell's interstate rates because the fundamental thrust of the changes ... has been to arrive at reasonable and equitable cost allocations between interstate and intrastate telephone services."¹¹⁸

¹¹⁶ Wenders, Economics of Telecommunications, 208.

¹¹⁷ Ibid., 208-210.

¹¹⁸ Temin, Fall of the Bell System, 357.

Differences between costs and prices are likely to exist if service must be provided on "equal terms." Use of average prices for a service category implies that some customers' prices will be above costs while others' will be below costs. Competition will change this. New entrants can single out customers who are paying charges above costs and underprice the established carrier's offerings. Competition would also endanger a established carrier's rights of full recovery of its costs, particularly past costs of service.¹¹⁹

Nationwide averaging, where prices are set on the basis of irrespective of the density of the route, produces a much greater disparity between prices and costs in the high-volume, long-distance routes. An examination of the way the OCCs have behaved in competition for the residence toll market would reveal that they sought to serve only the urban areas and tailor their toll rate schedules to only the high-volume residence toll user. Similarly, the OCCs have focused their competitive efforts on the high-use business customers.

Perhaps less visible to the consumer but of significance to the communications industry and its regulators has been the alignment of the price of telephone service with the actual cost of providing it.¹²⁰ The FCC

¹¹⁹ Bolter, Transition to Competition, 9.

¹²⁰ Sims, "Customers Fault Bell Break-up," D21.

estimates that long-distance rates have dropped 38% since AT&T spun off the regional operating companies.¹²¹ But rates for basic residential service have increased substantially in the same period.¹²²

Current Pricing Trends

In the United States, there is a strong movement toward pricing local services on a measured basis.¹²³ At the time of divestiture, rate cases pending before state public utility commissions totaled nearly \$7 billion.¹²⁴ These staggering amounts threatened to increase basic rates, in some instances, by over 100%.¹²⁵ Increases in basic rates carried the danger that the overall affordability of basic telephone service would be compromised. LMS, with its usage sensitive rate structure, was proffered as a means of lessening this threat. AT&T, GTE, and BOCs have been staunch advocates of LMS. However, early attempts by telephone companies to implement LMS were often thwarted by adverse state commission actions. The telephone companies have

¹²¹ Ibid.

¹²² Ibid.

¹²³ Local measured service (LMS) is based on usage sensitive rate structure encompassing up to four variables: calling frequency, call duration, time of day and distance between calling and called party.

¹²⁴ Federal Communications Commission, "Trends in Telephone Service," 9.

¹²⁵ Bolter, Transition to Competition, 15.

contended that they would like to make LMS available on an optional basis.

In the United States, the CPI index with respect to local, interstate and intrastate telephone charges shows that local charges have been increasing continuously since the long-distance marketplace has been opened to competition. On the other hand, intrastate and interstate charges have, with some exceptions, been declining, as shown in Table 1.

Mitigating Mechanisms

The opening of competition in the provision of long-distance telephony has clearly inflated the prices of local services. However, the following measures have served to offset the threat to local service, specially in rural and remote areas and for people having inadequate financial means:

1. The FCC has devised mitigating mechanisms to offset the detrimental effect of high local prices on the universal availability of telephone service. These include programs such as lifeline assistance that are designed to financially assist subscribers that might otherwise drop local service.
2. The FCC has also established a Universal Service Fund to help those local companies whose costs are higher than average. Companies whose non-traffic sensitive

costs are higher than 115% or more of the national average are entitled to compensation.

TABLE 1
LOCAL, INTRASTATE, AND INTERSTATE CHARGES

	Local	Intrastate	Interstate
1978	1.4%	1.3%	-0.8%
1979	1.7	0.1	-0.7
1980	7.0	-0.6	3.4
1981	12.6	6.2	14.6
1982	10.8	4.2	2.6
1983	3.1	7.4	1.5
1984	17.2	3.6	-4.3
1985	8.9	0.6	-3.7
1986	7.1	0.3	-9.5
1987	3.3	-3.0	-12.4
1988	2.7	-2.5	-5.1

As a result, there were no sudden financial shocks affecting the ability of local companies to build and improve their networks.

Implications for Household Penetration

Despite increase in local service rates, the household penetration has continued to increase.¹²⁶ Since November 1983, nearly seven million households have been added to the telephone system of the United States. The addition of these households is attributable partly to the increase in the

¹²⁶ Federal Communications Commission, "Trends in Telephone Service," 1.

total number of households and partly to increase in the percentage of telephone households.

One dire prediction that preceded divestiture was that with rising local rates, the concept of "universal service" would come to an end. That has not been the case, as more households than ever before now have telephone service. As of March 1988, there were 85.3 million households with telephones, or 92.9% of all households, up from 91.4% five years earlier.

Pricing: Canada

In Canada, rate levels for local and intra-company long-distance services vary considerably from company to company. On the other hand, rates for inter-company long-distance services, with some exceptions are quite similar. In 1986, a team of CRTC and provincial representatives conducted a major investigation of telecommunications pricing and the universality of affordable telephone service. The team's report was the first comprehensive study of the pricing issue.

Local Measured Service

Local measured service (LMS) has been available to individual-line business customers in large exchange areas of Bell Canada, B.C. Tel, Maritime Telegraph and Telephone, and New Brunswick Telephone Company Territories. However,

the service is not widely used. Various surveys of consumer attitudes in Canada suggest that most subscribers are opposed to the introduction of LMS. According to the pricing study, the benefits of LMS could be outweighed by the costs and difficulties of implementing a measured service, including increased capital costs for measurement equipment, increased bill processing costs and negative customer reaction.¹²⁷

Extended Area Service

Extended area service (EAS) that allows customers to call in neighboring exchanges on a flat-rate basis without long-distance charges, is available in varying degrees throughout Canada. There is continued pressure on telephone companies to expand the availability of EAS to reduce long-distance expenses from calling nearby exchanges. Expanded EAS could be considered as a partial response to the pressures for lower long-distance rates.

Implications of Long-distance Rate Increases

An analysis of average monthly bills associated with the reductions in inter- and intra-provincial long-distance

¹²⁷ Canadian Radio-television and Telecommunications Commission, Federal-Provincial Examination of Telecommunications Pricing and Universal Availability of Affordable Telephone Service (Ottawa: Canadian Radio-television and Telecommunications Commission, October 1986), 29.

rates and the local rate increases predicts that the average monthly residential bills would change very little from current averages.¹²⁸ However, the majority of residential subscribers would experience some bill increases, except in Bell Canada territory. The distribution of effects is such that a small number of bills are predicted to decrease by comparatively large amounts and a larger number are predicted to increase by a small amount. The average bills of private branch exchange customers - mostly large businesses - would decrease substantially in most areas. Single-line customers - mostly small businesses - would experience small decreases in Ontario and Quebec and somewhat larger average bill increases elsewhere. However, increased local rates would be unlikely to result in significant reductions to telephone service penetration levels, even for price increases of as much as 100%.

Lowering inter- and intra-provincial long-distance rates across the country by 10% would result in residential local rate increases ranging from 10.5% to 22.4%. This would constitute actual dollar increases ranging from \$1.15 to \$2.13 per month. Lowering inter-provincial rates by 50% and intra-provincial rates by 20% would result in local rate increases ranging from 44.5% to 108.5% and actual dollar increases ranging from \$4.88 to \$10.66.

¹²⁸ Canadian Radio-television and Telecommunications Commission, Federal-Provincial Examination of Telecommunications Pricing, 22-23.

Bypass

The widespread availability of technology and the potential for lower prices also give rise to the possibility that users will avail themselves of alternatives provided by other than the regulated telecommunications companies to complete some or all of their telecommunications requirements, i.e. "bypass" the established telecommunications industry. In the present discussion, the term "bypass" will be taken to mean the circumvention of the facilities of the local carrier.

Economic and Uneconomic Bypass

A critical distinction at the heart of much of the policy debate relates to the differences between "economic" and "uneconomic" bypass. Both serve to decrease the revenues of the local carriers. However, there are differences in economic terms that stem from dissimilar costing bases. In theory, cost-based rates or prices are the relevant calculus for any economic bypass decision, while non-cost based rates are the *raison d'être* for uneconomic circumvention of the local carrier facilities.¹²⁹

Economic bypass can be caused by price differentials that result from the ability of other suppliers to provide alternative distribution services more cheaply than a local carrier. Uneconomic bypass, on the other hand, can occur

¹²⁹ Bolter, Transition to Competition, 213.

where the local carrier's costs are artificially increased or its rates are otherwise inflated. As a result, truly higher cost alternatives are actually priced at lower levels than those of services provided over the local carrier facilities.

Potential Implications for Universal Service

Bypass derives policy importance from its relationships to a range of social issues and its effects on individual subscribers and firms. For instance, one of the major concerns related to bypass is its impact on universal telephone service.¹³⁰

The consent decree had banned AT&T's separation payments to the local operating companies. This process of interjurisdictional separations and settlements has historically minimized local rates at the cost of reduced long-distance charges. The FCC attempted to end this cross-subsidy by recovering revenue in the form of flat-rate access charges on end-users.

Congress and state regulators objected strenuously to the imposition of charges on end-users, favoring instead charges imposed on interexchange carriers. However, the imposition of such charges on interexchange carriers threatened to increase long-distance rates and produce an

¹³⁰ Ibid., 214.

incentive for large businesses to "bypass" the public switched network.

Bypass in U.S.

In the United States, a bypass threat is clearly emerging. The majority of nonproprietary studies of local bypass have been conducted by telephone companies or their consultants. The findings of these studies are:¹³¹

1. Bypass demonstrably exists today, particularly among certain large users.
2. The imminent proliferation of new bypass technologies will lead to significant increases in the level of bypass in the future, creating a serious problem for local carriers and regulatory commissions.

But the majority of public policy makers who have studied the phenomenon believe that it does not presently pose a significant problem, nor it is expected to become one in the near future.

According to figures recently released by the FCC, the Bell operating companies lost 5% of their revenue to bypass.¹³² The BOC's total revenue for the year was \$69.75 billion, out of which \$3.5 were lost to private bypass systems.

¹³¹ Ibid., 224.

¹³² "RBOCs Losing \$3.5 Billion per Year to Bypass, According to FCC Reports," Communications Week, n.d.

Stimulation of bypass opportunities could be a positive force in generating more telecommunications research and development and might spawn a variety of new products and services. In the United States, there is evidence that competition, which is the flywheel of the bypass process, has spurred innovation in both the telecommunications equipment and services markets. With the proliferation of new technology, however, has come price and service instability, a heightened flow and complexity of information, and, in many cases, customer confusion and frustration. But these problems may be transitory and could subside if industry rationalization - or a supplier "shakeout" - leads to a market with fewer, financially stronger firms.¹³³

Bypass in Canada

In Canada, the extent of bypass of telecommunications carriers' facilities, both domestically and internationally, has been found to be minimal.¹³⁴ Bypass is deterred by current pricing principles and practices as well as by the radio spectrum licensing, interconnection and other policies of the federal and provincial governments, and by Canada-US exchange rate differentials. Removal of some or all of these

¹³³ Bolter, Transition to Competition, 214.

¹³⁴ Canadian Radio-television and Telecommunications Commission, Federal-Provincial Examination of Telecommunications Pricing, 44-46.

deterrents could result in increased bypass activities in Canada.

Cross-border Resale

With changes in the U.S. competitive situation, particularly in the resale of telecommunications services, incentives have arisen to extend the resale of U.S. telecommunications services into the Canadian market. This is achieved by providing some means of reasonable access from Canadian centers to resale operations located in the United States. Resale operations of this nature can provide alternatives to Canadian carrier facilities for Canada-Canada, Canada-U.S., and Canada-overseas services.¹³⁵

Except for short-haul, toll charges are generally lower in the United States than they are in Canada on a comparable mileage basis.¹³⁶ The main impact on Canadian carriers is the loss of revenues to resellers and discount message service providers. Apart from revenue implications for the carriers, international competition can, particularly in the extreme have an impact on the ability of carriers to maintain the integrity and sovereignty of Canadian telecommunications. The exchange rate, however, acts as a

¹³⁵ D. A. Ford and Associates Ltd., The Impact of International Competition on the Canadian Telecommunications Industry and Its Users, (Ottawa: D. A. Ford and Associates Ltd., August 1986), 17.

¹³⁶ Ibid., 8-10.

deterrent to cross-border resale. If Canadian and U.S. dollars were at par, large positive financial incentives to use cross-border resellers would exist and significantly more resale activity would be expected.

In response to the emergence of cross-border resale activities in markets, B.C. Tel applied to the CRTC for permission to block calls to resellers with facilities located just across the Canada-U.S. border, and also to restructure its Canada-U.S. rates.¹³⁷ In Telecom Decision CRTC 85-7 rendered April 4, 1985, the commission denied B.C. Tel's application to block calls, but approved the proposed restructuring of Canada-U.S. message toll rates which resulted in an increase in short-haul rates, and a reduction in long-haul rates.

¹³⁷ Ibid., 9-10.

CHAPTER 7

CONCLUSIONS

In both the United States and Canada, therefore, interexchange markets are being opened to greater competition. The FCC has relieved tariff burdens on carriers having no monopoly power and is clearly moving to deregulate the industry and to forbear from economic regulation. The long range goal of federal regulators in both the countries is clear: to move the entire industry to full, effective competition and thus to full deregulation. The regulators have apparently recognized that their efforts to protect the public interest through rate regulation have been a failure in this competitive milieu.

The regulation of telephony as a natural monopoly in both the United States and Canada has been rooted in the desire to provide universal access to telephony to all segments of the population at affordable rates. However, technological change along with a confluence of other factors has served to gradually erode the regulatory barriers.

Although the complete opening of the long-distance marketplace to competition is still to be realized, the

movement toward deregulation is inexorable. The 1982 consent decree and the 1979 Supreme Court decision have put the final seal on deregulation as a fact of life in both the United States and Canada. The federal governments in both the countries have been aggressively advocating a competitive milieu, but provincial/state regulators have by and large opposed deregulation because of fears that it will subvert the concept of universal service.

The United States has been in the forefront of the movement to deregulate the telecommunications marketplace. The opening of the long-distance marketplace has had the following ramifications:

1. Greater and more diversified service offerings
2. Phenomenal rise in the number of carriers offering long-distance services
3. Substantial decline in the rates of long-distance services

At the same time, fears of a downward slide in telephone subscriptions did not come true. Universal service is in place, partly because of mechanisms devised to mitigate the effects of increase in local rates. Finally, bypass has not emerged in a substantial way to threaten local telephony and universal service.

SELECTED BIBLIOGRAPHY

SELECTED BIBLIOGRAPHY

- Berg, Sanford V., and John Tschirhart. Natural Monopoly Regulation Principles and Practice. New York, NY: Cambridge University Press, 1988.
- Brock, Gerald W. The Telecommunications Industry. Cambridge, MA: Harvard University Press, 1981.
- Buchan, Robert J., Christopher C. Johnston, Gregory T. Kane, Barry Lesser, Robert J. Schultz, and W.T. Stanbury. Telecommunications Regulation and the Constitution. Montreal: Institute for Research on Public Policy, 1982.
- Baughcum, Alan and Gerald Faulhaber, eds. Telecommunications Access and Public Policy. Norwood, NJ: Ablex Publishing Corporation, 1984.
- Bolter, Walter, ed. The Transition to Competition: Telecommunications Policy for the 1980s. Englewood Cliffs, NJ: Prentice Hall, 1984.
- Bruce, Robert R., Jeffery P. Cunard, and Mark D. Director. From Telecommunications to Electronic Services. Washington, D.C.: Debevoise & Plimpton, 1985.
- Canadian Radio-television and Telecommunications Commission. Federal-Provincial Examination of Telecommunications Pricing and Universal Availability of Affordable Telephone Service. Ottawa: Canadian Radio-television and Telecommunications Commission, October 1986.
- Canadian Radio-television and Telecommunications Commission. Telecom Public Notice 1989-1: Resale and Sharing of Private Line Voice Services. Ottawa: Canadian Radio-television and Telecommunications Commission, 11 January 1989.
- Collins, Robert. A Voice from Afar: The History of Telecommunications in Canada. Toronto: McGraw-Hill Ryerson Limited, 1977.

- Crew, Michael A. Regulatory Reform and Public Utilities. Lexington, MA: Lexington Books, 1982.
- D. A. Ford and Associates Ltd. The Impact of International Competition on the Canadian Telecommunications Industry and Its Users. Ottawa: D. A. Ford and Associates Ltd., August 1986.
- Datapro Research Corporation. Datapro Reports on Telecommunications. Delran, NJ: Datapro Research Corporation, 1985.
- Ergas, Henry, and Jun Okayama, eds. Changing Market Structures in Telecommunications. Amsterdam: North-Holand, 1984.
- Faulhaber, Gerald R. Telecommunications in Turmoil: Technology and Public Policy. Cambridge, MA: Ballinger Publishing Company, 1987.
- Federal Communications Commission, Common Carrier Bureau, Industry Analysis Division, "Trends in Telephone Service." Washington, DC: Federal Communications Commission, 1 August 1988.
- Federal Communications Commission, Common Carrier Bureau, Industry Analysis Division. "AT&T's Share of the Long Distance Market." Washington, DC: Federal Communications Commission, Third Quarter 1989.
- Federal-Provincial-Territorial Task Force on Telecommunications. Competition in Public Long-Distance Telephone Service in Canada. Ottawa: Minister of Supply and Services, 1988.
- Fisher, Franklin M., John J. McGowan, and Joen E. Greenwood. Folded, Spindled and Mutilated: Economic Analysis and U.S. vs. IBM. Cambridge, MA: MIT Press, 1983.
- Haight, Timothy R., ed. Telecommunications Policy and the Citizen. New York, NY: Praeger, 1979.
- Hills, Jill. Deregulating Telecoms: Competition and Control in the United States, Japan, and Britain. London: Frances Pinter, 1986.
- Irwin, Manley R. Telecommunications American: Markets without Boundaries. West Port, CT: Quorum Books, 1984.
- Irwin, Manley R. "US Telecommunications: Searching for an Optimum Policy." Telecommunications Policy, March 1988.

- Jaffery, Nagi A. "Canadian Telecommunication Marketplace: Trends and Developments." in Link Client Memo New York, NY: LINK Resources Corporation, November 1989.
- Kahn, Alfred E. The Economics of Regulation: Principles and Institutions. New York, NY: Wiley, 1970.
- Kraus, Constantine R., and Alfred W. Duerig. The Rape of Ma Bell: The Criminal Wrecking of the Best Telephone System in the World. Secaucus, NJ: Lyle Stuart, Inc., 1988.
- McPhail, Thomas. Telecom 2000: Canada's Telecommunications Future. Calgary: University of Calgary, 1986.
- McPhail, Thomas, and S. Hamilton. Communication in the Eighties: Major Issues. Calgary: University of Calgary, 1984.
- McGhee, John S. Industrial Organization. Englewood Cliffs, NJ: Prentice Hall, 1988.
- Mosco, Vincent, ed. Policy Research in Telecommunications. Norwood, NJ: Ablex Publishing House, 1984.
- Organization for Economic Co-operation and Development. Telecommunications: Pressures and Policies for Change. Paris: Organization for Economic Co-operation and Development, 1983.
- Organization for Economic Co-operation and Development. Trends of Change in Telecommunications Policy. Paris: Organization for Economic Co-operation and Development, 1987.
- Pearce, Alan, "Chairman Patrick's Last Stand: Price Caps for AT&T, but not for the Local Exchange Companies," Telecom Insider, April 1989.
- Pelletier, Gerard. Proposals for a Communications Policy for Canada: A Position Paper of the Government of Canada. Ottawa: Information Canada, March 1973.
- Rada, Juan F., and G. Russel Pipe, eds. Communication Regulation and International Business. Amsterdam: North-Holland, 1984.
- "Semi-Annual Study on Telephone Trends brings Good News for Consumers," FCC News, August 1988.

- Shooshan III, Harry M. Disconnecting Bell: The Impact of the AT&T Divestiture. New York, NY: Pergamon Press, 1984.
- Sims, Calvin. "Customers Fault Bell Break-up." New York Times, 22 December 1989.
- Singh, Indu B. "Information Economy and the Next Presidency." Telecommunications Policy, September 1988.
- Snow, Marcellus S. Marketplace for Telecommunications: Regulation and Deregulation in Industrialized Democracies. While Plains, NY: Longman, 1986.
- Snow, Marcellus S. Telecommunications: Regulation and Deregulation in Industrialized Democracies. Amsterdam: North-Holland, 1986.
- Stanbury, W. T., ed. Telecommunications Policy and Regulation: The Impact of Competition and Technological Change. Montreal: Institute for Research on Public Policy, 1986.
- Temin, Peter. The Fall of the Bell System: A Study in Prices and Politics. New York, NY: Cambridge University Press, 1987.
- Wenders, John T. The Economics of Telecommunications: Theory and Policy. Cambridge, MA: Ballinger Publishing Company, 1987.
- Woodrow, Brian, Kenneth Woodside, Henry Wiseman, and John Black. Conflict over Communications Policy: A Study of Federal-Provincial Relations and Public Policy. Quebec: C.D. Howe Institute, 1980.
- Zajac, Edward E. Fairness or Efficiency: An Introduction to Public Utility Pricing. Cambridge, MA: Ballinger Publishing Company, 1978.

MICHIGAN STATE UNIV. LIBRARIES



31293008850061