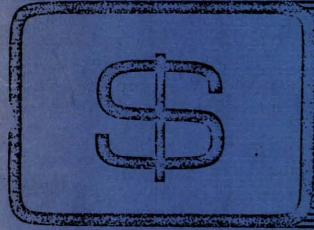
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ENVIRONMENTAL POLICY PLANNING BRANCH

AN ECONOMIC AND FINANCIAL

PROFILE OF THE CANADIAN

CABLE TELEVISION INDUSTRY

Marcel Simoneau

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Gaétan Boucher

Industry Canada

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Communications Canada Environmental Policy Planning Branch

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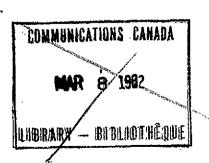


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SUMMARY

When Community Antenna Television Systems (CATV) began operating in 1952 their function was to receive television signals at distances beyond the area of normally reliable reception from television broadcast transmitters and to distribute them by cable to subscribers.

However, within a few years cable television technology greatly increased the number of channels available to the entire population with a consequent large growth in the number of subscribers. Over the period of 1967 to 1972 this increase averaged 27 percent and 23 percent annually in Canada and the United States respectively. This is shown in Table A.

Table A

Annual Growth Cable Television Subscriptions
(000)

	Canad	<u>la</u>	United States		
	Subscribers	Annual Increase (%)	Subscribers	Annual Increase (%)	
1967	517	a-/pm	2100	part that gain	
1968	710	37.3	2800	33.3	
1 969	924	30.1	3600	28.6	
1 970	1 1 64	26.0	4500	25.0	
1971	1399	20.2	5300	17.8	
1972	1689	20.7	6000	13.2	

Source: Statistics Canada, <u>Cable Television</u>, Cat. No. 56-205. **Television** Digest, <u>Television</u> Factbook, No. 42, 1972-1973.

This, in turn, may have had an adverse effect on the revenue of the television broadcasters by modifying the laws of competition which had

prevailed previously in the industry. Moreover, the continentalization of TV broadcasting in North America brought about by the advent of cable could inhibit the development of a truly national TV broadcasting policy in Canada.

Faced with the many problems that could stem from the remarkably rapid growth of cable television, government authorities in Canada and the United States intervened in the hope of better structuring the development of cable television. The Canadian Radio-Television Commission (CRTC) generally preferred to favour the expansion of cable television by encouraging the production of Canadian programs designed to complement rather than compete with the existing broadcasting services. In the United States the directives of the Federal Communications Commission (FCC) hindered the implementation of cablevision in the 100 most important markets with the admitted purpose of protecting small broadcasters and permitting the development of Ultra High Frequency (UHF) television stations. However, in 1972 the FCC reversed its position and considered that an increased pervasiveness of cable television could promote the development of local UHF broadcasting stations.

In both countries the demand for cablevision, reflected by the number of subscribers, has grown at a prodigious rate from 1967 to 1972.

During that period the number in Canada more than tripled from 500,000 to 1.7 million.

This growth varied from region to region as shown in Table B, with the highest rate being experienced in the Prairies and the Maritimes, probably due to a latent demand which remained unsatisfied until 1967.

Table B
Subscribers per Region
Annual Mean Growth Rate
Canada
1967-1972

Regions	Growth Rate (%)
Maritimes	47.7
Quebec	23.7
Ontario	31.0
Prairies	57.3
British Columbia	17.5
Canada	26.7'

Source: Statistics Canada, Cable Television, Cat. No. 56-205.

It is reasonable to assume that in Quebec the linguistic barrier as well as the appearance of a new network, TVA, may have hindered the growth of cable television. In British Columbia, where the highest proportion of house-holds in Canada (60 percent) are connected to cable, the lowest increase in number of subscribers was experienced. Because of its proximity to large centres of population and television broadcasting in the United States, the annual mean growth rate in Ontario reached 31 percent between 1967 and 1972.

To satisfy the explosive demand the cable television undertakings were required to invest at a rate of 20.4 percent per annum between 1970 to 1972. The growth rate of the number of subscribers for the same period reached 20.5 percent. Table C shows a breakdown of cable television costs.

Table C Cable Television Costs Main Items

Investment Costs

- 1. Head-end and distribution system plant.
- 2. Subscriber drops and devices.
- 3. Cable casting equipment.
- 4. Other (automobiles, trucks, buildings, etc.)

Operating Costs

- 1. Program origination.
- 2. Technical.
- 3. Sales and promotion.
- 4. Administration and general.

From 1970 to 1972 the percentage of investment costs allocated to distribution system plant, as well as to "other" costs remained virtually unchanged from one region to another. The cost of subscriber drops and devices varied in conformity with the number of subscribers whereas the proportion of fixed assets assigned to cable casting equipment reached relatively different levels according to region, the highest being in the Maritimes and the lowest in British Columbia. During the same period operating costs increased at a rate of 18.5 percent and, for Canadian cablevision systems as a whole, technical and administrative expenses accounted on the average for 80 percent of those operating costs. This proportion remained relatively constant throughout the regions in this period but the proportion of program origination and publicity expense to operating costs was greater in the Prairies and the Maritimes where cable television had progressed at a rapid rate.

Growth of cable television in Canada necessitated a heavy injection of capital which was provided mainly by debt capital. During the 1970-1972

period the long term debt represented, on the average, 59 percent of the sources of long term financing. This great resort to external financing was probably due to start-up operations which require heavy investments in fixed assets. However, since 1970 there has been a tendency to resort more and more to internal financing - common shares and retained earnings. In the short run the financial situation of the cable television industry has not been strong, as shown by the working capital ratio which declined steadily from 1970.

Whether the dependence on the capital market through debenture flebt, and the deterioration of short term liquidity will slow the growth of the industry, will probably depend on the profitability of cable television.

In general, profit rates have not stopped growing in the Canadian cable television industry since 1969; and there appears to be a close relationship between the size of a cable system and profitability. The greater level of profitability of the larger companies is probably due to their location in the greater urban centres where demand for cable television is stronger.

Urban regions offer better possibilities to CATV operators because of population density and despite higher costs for underground installations.

In conclusion, the demand for cable television in Canada progressed rapidly and required heavy investment costs. This injection of capital was made possible by massive recourse to debenture debt. Even if the short term liquidity position of the cable systems is not strong, and despite the marked dependence of the industry on the capital market, cable television offers attractive prospects for profit which could even further accelerate development.

INTRODUCTION

Initially the CATV systems served areas beyond the normally reliable reception distance from television broadcast transmitters.

At that time the basic function was to "receive radio and television signals off the air from broadcasting stations and to distribute these by means of cable to its customers or subscribers." (1)

However, within a few years a number of other services were envisaged, not exclusively devoted to extending the range at which broadcast signals could be received. Applications such as pay TV, teleconferencing, and data communications, utilizing the one-way or potential two-way capability inherent in cable technology, became apparent.

Today, cable television is described as "television of abundance":

"...cable television can be something considerably more than a mere extension and expansion of conventional television. The capacity of the system that comes with additional channels, its ability to serve small areas, and to devote channels to particular uses, the expansibility of the system when it is freed from the constraints of the radiated signal, the responsiveness and flexibility that accompany the digital return signal, all combine to make of it an entirely new communications complex.... Television of abundance is not merely an augmented television of scarcity. A whole new range of possibilities suddenly appears."(2)

^{1.} Statistics Canada, Cable Television, Cat. No. 56-205, 1972, p. 5.

Report of the Sloan Commission on Cable Communications, On the Cable -The Television of Abundance, 1971, pp. 42-43.

The reality of this concept could alter the traditional bases of the established broadcasting systems. Indeed,

"...from the point of view of technology alone, a large part of television should be transferred to cable, leaving radiated television only for those instances where cable will not serve and liberating virtually the entire electro-magnetic spectrum for those services to which it is indispensable and which are clamoring for it. Some of the spectrum would be retained for television, so that remote areas and portable television sets might still be served. But the lion's share of the spectrum would go where it is needed and where no alternative exists."(3)

Furthermore, such a change would not take place without creating certain disturbances. Although they are recognized by the Broadcasting Act as "broadcasting receiving undertakings", the CATV systems with their latent capability of providing other forms of telecommunications functions, such as data processing and information-based services, can impinge on the domain of the regulated common carriers. In this respect the Federal Government realizes that

"there may be difficult issues regarding competition between existing carriers and CATV systems in the development of efficient distribution systems."(4)

Two other effects are possible. First, the advent of cable television modifies the laws of competition which up to now have governed

^{3.} Ibid., p. 22.

^{4.} A position paper of the Government of Canada, <u>Proposals for a Communications Policy for Canada</u>, p. 20.

television broadcasting. "The traditional concept of a telecommunications carrier, protected from competition, is being challenged by undertakings employing new techniques and modes namely cable television undertakings". (5) In fact, the growth of cablevision may have an adverse effect on the revenue of the established television broadcasters. Secondly, the continentalization of TV broadcasting arising from the introduction of cable television could retard or inhibit a truly national TV broadcasting policy designed to safeguard, enrich and strengthen the cultural, social, economic and political identity of Canada.

The object of this study is to describe the growth of the Canadian CATV industry in order to be better prepared to cope with its future behaviour.

^{5.} Ibid., p. 10.

CHAPTER ONE

THE ROLE OF GOVERNMENT INTERVENTION

Radio and television developed as local services in both the United States and Canada. The advent of cable television altered this by enabling television signals to reach a wider audience, and brought the existing television broadcasting stations face to face with new competition. By fragmenting the audiences of these stations cable television could reduce their revenue and thus endanger their viability.

Accordingly, government authorities intervened in order to minimize the possible adverse effect of cable television on the television broadcasting industry. In Canada the CRTC generally preferred

"to strive for the vigorous development of cable television and of the whole Canadian broadcasting system by integrating cable television into the system". (6)

In the early stages in the United States the FCC severely handicapped the implementation of cable television in the 100 most important markets:

"the result (of CATV regulation) was in effect to prevent CATV systems from being built in the top 100 markets."(7)

^{6.} CRTC Annual Report, 1971-72, p. 21

^{7.} Martin H. Seiden, <u>Cable Television U.S.A. - An Analysis of Government Policy</u>, p. 8.

I.1 THE POSITION OF THE FCC

Since 1965, the FCC has published three policy statements on cable television. The first, issued in April 1965, based on unfair competition and unfavourable economic impact factors, was designed to protect television broadcasters serving the small-scale markets:

- "1. The failure by a CATV system to carry the signal of a local station is inconsistent with the FCC belief that CATV service should supplement, but not replace, off-the-air-television service. This practice gives the distant stations an unfair advantage over the local stations in competing for the subscribers' attention. It is also destructive of the FCC goals in allocating television channels to different areas and communities.
- 2. For the reasons given in (1), a CATV system's failure to carry the signal of a local station is inherently contrary to the public interest.
- 3. A CATV's duplication of local programming via distant signals is unfair competition, since broadcasters and CATV systems do not compete for programming on an equal footing. The FCC therefore recommended "a reasonable measure of exclusivity" to protect both the program suppliers and the stations.
- 4. A CATV system's duplication of local programming is also inconsistent with CATV's appropriate role as a supplementary service, because it is likely to affect the audience for the specific programs involved. The FCC therefore favoured some restrictions on this ability to duplicate in order to help equalize the conditions under which CATV and broadcasting service competed."(8)

A second statement, issued in March 1966 reiterating the arguments of the first statement, aimed to protect the future development Φ : UHF

^{8.} FCC, First Report and Order (1965), paras. 76-80, taken from M. Alice and M. Philips, CATV a History of Community Antenna Television, p. 73-74.

stations within the 100 most important markets:

"No CATV system operating in community within the predicted Grade A contour of a television broadcast station in the 100 largest television markets shall extend the signal of a television broadcast station beyond the Grade B contour of that station, except upon a showing approved by the Commission that such extension would be consistent with the public interest, and specifically the establishment and healthy maintenance of television broadcast service in the area." (9)

It is worth mentioning that within the A Contour, picture quality should be satisfactory at least 90 percent of the time for at least 70 percent of the locations within the contour. Within the B Contour satisfactory service is expected for at least 50 percent of the receiving locations.

During the years following the second statement the United States cable television industry continued to grow. From 1966, the number of systems increased by 76 percent reaching a total of 2,700 in 1972 while the number of subscribers increased by 281 percent to a total of 6 million.

This development occurred outside the 100 most important markets. Indeed, since 1966, the cable television industry established itself only in

New York and San Diego which are classified by the Amarican Research Bureau (ARB) in the top 100 markets as first and fifty-second respectively. It is difficult to determine up to what point these policy statements hindered the growth of the cable television industry in that country because it is not certain that it is that important in cities well served by television signals. It is recognized that New York and San Diego, (the only two centres among the 100 most important markets where cable television systems

^{9.} Martin H. Seiden, Cable Television U.S.A. - An Analysis of Government Policy, p. 8.

were developed) had serious reception difficulties. Moreover, the cable television carriers in San Diego were not opposed to the second policy statement for, as they alleged, they had the right to import signals of stations in Los Angeles because San Diego is located in the B Contour of the Los Angeles television stations.

Finally, in February 1972 in a third statement the FCC rejected its long-standing philosophy to the effect that CATV was a menace to the development of UHF and should be barred from the greater centres:

"... our basic objective is to get cable moving so that the public may receive its benefits... increased cable penetration would have a beneficial effect on local UHF stations... it would be wholly wrong to halt cable development on the basis of conjecture, for example, as to its impact on UHF stations."(10)

I.2 THE POSITION OF THE CRTC

In Canada, where competition was already very stiff because U.S. television signals can reach the larger Canadian cities, the CRTC stated that: "rapid development of cable television, especially with distant headends and broadband techniques, increases competition in larger centres and introduces competition into areas where television broadcasting is already economically difficult." The Commission, in a series of directives,

^{10.} FCC, Cable Television Report and Order, 2 Feb. 1972, paras. 69,71, taken from the Television Digest, Final Cable Television Decision, 1972 pp. 19-20.

^{11.} CRTC, The Integration of Cable Television in the Canadian Broadcasting System, Public Announcement, Feb. 26, 1971, p. 5.

warned that "unlimited penetration by United States stations on a wholesale south-to-north basis would completely destroy the licensing logic of the Canadian broadcasting system." (12) In consequence, in 1969 the CRTC encouraged the cable television systems to produce Canadian programs designed to complement television broadcast programs rather than compete with them:

"CATV can assist in the development of a community identity through locally produced programs....CATV local programming should complement, rather than compete with, programming already available to the community through television and commercial movie houses."(13)

It was not the intention of the Commission, in certain cases, to grant cable television permits to telecommunications carriers or to cable television undertakings planning to import programs from the United States on a wholesale basis by using microwave or other technical means.

"The CRTC has concluded that it would not be in the public interest to encourage common carriers to hold licences for CATV systems... The Commission will not licence broadcasting receiving undertakings (CATV) based on the use of microwave or other technical systems, for the wholesale importation of programs from distant U.S. stations and thereby the enlargement of the Canadian audience and market areas of U.S. networks or stations."(14)

In April 1970, however, the use of microwave or other broadband systems by CATV operators was permitted under the following conditions:

^{12.} Ibid, p. 6.

^{13.} CRTC, Community Antenna Television, Public Announcement, May 13, 1969, taken from CRTC, Annual Report, 1969-1970, p. 336.

^{14.} CRTC, Public Announcement, (December 3, 1969) taken from CRTC, Annual Report, 69-70, pp. 341-342.

"A proposed CATV system should not prevent the extension of television service into an area, seriously inhibit local programming, or cause the financial failure of a broadcasting station serving the area." (15)

In 1971 the Commission rejected a proposal to permit the development of cable television, free from any regulation and direction, that would progressively reduce and possibly eliminate the larger part of traditional television broadcasting. A second proposal, diametrically opposed to the first and aimed to impose certain conditions that would limit, arrest or set back the extension of cable television to ensure the survival of the television broadcasting stations, was also rejected by the Commission. The CRTC did not wish to hinder the development of cable television broadcasting for the following reasons:

- "1. Cable television offers improved picture quality, particularly for colour television.
 - 2. It provides more channels for distribution and thus the possibility of a large choice of programs and services.
- 3. A relatively large number of Canadians have clearly expressed the view that they like and want it.
- 4. Finally, cable television in some special circumstances can provide service where it is otherwise unavailable." (16)

^{15.} CRTC, Annual Report, 1970-71, p. 301.

^{16.} CRTC, The Integration of Cable Television in the Canadian Broadcasting System, Public Announcement, Feb. 26, 1971, p.7.

For these reasons the CTRC favoured a third proposal:

"attempt to develop a policy which would integrate cable television into the Canadian broadcasting system, avoid disrupting the system, enhance the capacity of the system to produce programs, and finally permit a vigorous development of cable television and of the whole Canadian broadcasting system."(17)

1.3 THE IMPACT OF GOVERNMENT INTERVENTION

It is difficult to determine to what extent the FCC and the CRTC directives had an impact on the growth of cable television. The fact remains however, as shown in Table 1, that in the United States there was a proliferation of small-scale cable television systems and in Canada the expansion and the development of the existing systems. In 1972 there were close to 5,000 subscribers per system in Canada, compared to 2,200 in the United States, reflecting the policy of the FCC whose aim was to delay the extension of cable television in the larger cities.

Table 1
Cable Television

	Canada				United Sta	tes
	Number of Subscribers	Number of Systems	Subscribers per System	Number of Subscribers	Number of Systems	Subscribers per System
	(000)			(000)		
1967 1968 1969 1970 1971 1972	516.5 710.1 923.8 1,164.2 1,398.5 1,689.3	314 377 400 314 326 344	1,645 1,884 2,309 3,708 4,290 4,911	2,100 2,800 3,600 4,500 5,300 6,000	1,770 2,000 2,260 2,490 2,570 2,770	1,186 1,400 1,593 1,807 2,062 2,166

Source: Statistics Canada, <u>Cable Television</u>, Cat. No. 56-205; Television Digest, Television Factbook, No. 42, 1972-1973.

^{17.} Ibid., p. 7.

Moreover, most Canadian cable television undertakings serve the urban regions. In 1972, for example, 40 percent of the Canadian cable television subscribers were in the metropolitan regions of Montreal, Toronto and Vancouver, whereas in the United States less than 10 percent of subscribers were located in the three most cabled cities.

Therefore, it is not surprising to note in Table 2 that eight of the ten largest cable television systems in North America are Canadian.

Table 2
Ten Largest Cable Television Systems
North America - 1972

Name and location of the system	Number of subscribers
Canadian Wirevision, Vancouver	153,000
National Cablevision, Montreal	81,000
Mission Cable TV Inc., San Diego	65,000
Cable Television Ltd., Montreal	64,000
Grand River CTV Ltd., Kitchener	61,000
Metro Cable TV Ltd., Toronto	61,000
Ottawa Cablevision, Ottawa	52,000
Victoria Cablevision, Victoria	50,000
London Cablevision Ltd., London	45,000
Teleprompter, New York	45,000

Source: Television Digest, Television Factbook, No. 42, 1972-73.

Obviously, other factors of a socio-economic, as well as a technical nature, have had a role to play in the rapid advancement made in the cablevision systems in particular those affecting the demand for cablevision which are examined in the following section.

CHAPTER TWO

THE DEMAND FOR CABLE TELEVISION

As mentioned earlier, the main purpose of cable television was to serve areas having difficulty receiving television signals. But, with the discovery of new applications for technology, cable television has made remarkable progress in Canada in the past few years with a mean annual growth rate of 27 percent in numbers of subscribers. The determinants of this growth as well as the form it has taken will be examined in this Chapter. In the first part cable will be considered as an economic good for which the demand is governed by certain factors. In the second part the manner in which the demand for cable television has manifested itself will be described.

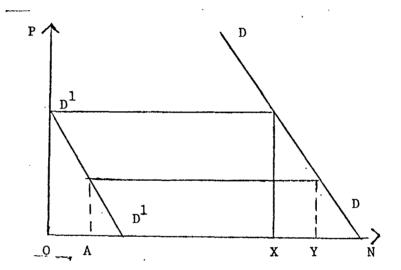
II.1 THE DETERMINANTS OF THE DEMAND FOR CABLE TELEVISION

As in the case of any economic good, the demand for cable television by any individual can be related to the cable television subscription fee, to his income, and to other institutional and demographic factors.

The price that a consumer is willing to pay for a subscription to cable will depend upon the number of directly available off-air channels. Because an individual can usually receive a certain number of channels free of charge without the aid of cable, the demand for cable television can be determined by subtracting the number of "free" channels from the general demand for television. This general demand includes the demand for "free"

channels as well as that for cable television channels and is defined by the price a consumer will pay for a certain number of television channels.

GRAPH 1
Demand for television



In Graph 1 the price is plotted on the ordinate and the number of channels is plotted on the abscissa. If DD is the curve of the general demand for television and OX represents the number of channels directly received offair and having an acceptable quality, then curve D^1D^1 represents the demand for cable television. This curve is obtained by subtracting quantity OX from each point on curve DD. So, if the demand for television is of OX channels, it follows that the demand for cable television will be nil, the general demand for television being totally satisfied by the channels directly available. On the other hand, if the general demand for television were to to of OY channels, the demand for cable television would be of OA, AY being identically equal to OX. Thus, with a demand for OY channels, OA will be on the cable and AY will be directly received off-air. In this manner the entire curve of demand for cable television, can be identified. In fact, Comanor and Mitchell

mention:

"As expected, the more free channels available, the further curve D1 will lie to the left and the less consumers will be willing to pay for the additional channels which are received only by cable". (18)

It follows that the first determinant of the demand for cable television will be the number and the variety of channels provided by the cable, with a second determinant being the number of channels that can be received directly off-air.

Cable television provides improved reception and a more stable picture. Therefore, the comparative quality of reception of the off-air channels will necessarily affect the demand for cable television. This factor has great importance in most of the larger Canadian cities where United States television signals carried by cable are also available off-air.

Moreover, the presence of high-rise buildings often causes unsatisfactory reception by distortion of the signal received off-air.

The impaired signal affects colour television sets more severely than monochrome television sets.

Consequently, cable systems which receive the signal off-air on the outskirts of the community and trunk it into the highly populated residential areas permit improved reception, and a higher penetration of colour television here will likely correspond to a greater demand for cable television.

^{18.} Comanor, W.; Mitchell, B.M., "Cable Television and the Impact of Regulation", The Bell Journal of Economics and Management Science, Spring 1971, pp. 157-168.

In fact, from 1967 to 1972, the percentage of Canadian house-holds owning at least one colour television set increased from 2.0 to 24.2 percent, while the percentage of Canadian households subscribing to cable television increased from 10.3 to 27.7 percent.

Because the presence of high rise buildings in urban regions tends to degrade signal quality, reception in apartment buildings is often very poor. For this reason cable outlets are often provided in high rise apartment buildings. Thus the demand for cable television could vary according to the number of households living in high rise apartments. A study undertaken by the Systems Research Group (SRG) (19), revealed that if previous trends are maintained the proportion of apartments to total residences will increase from 22.8 percent in 1966 to 34.4 percent by 1981. This trend towards apartment living could constitute a new factor affecting the demand for cable television.

The quality of reception can be influenced by factors other than the high rise environment. First, a television station that broadcasts on VHF generally provides a better signal to the receiver than does a UHF transmitter. In addition, many viewers own sets which cannot receive the UHF signal, therefore the demand for cable television would be expected to be higher in regions surrounding UHF stations.

Secondly, the quality of a broadcast signal depends on the proximity of the transmitter to the receiver. Consequently, the demand for cable

^{19.} Systems Research Group, Canada, Family, Household & Housing Projections to the Year 2000, Toronto, 1970, p. 36.

television will also depend on whether the receiver is situated within Grade A contour or Grade B contour* of a given transmitter. Since a residence within the Grade A contour is more likely to receive a satisfactory signal from a given station than one located within the Grade B contour of the same station, the demand for cablevision will tend to be higher for households in the latter area.

In these lights the demand for cablevision can be concluded to depend essentially on the number and variety of channels available by cable plus the number, variety and the quality of reception of the off-air channels. The latter factor will be affected in turn by the influence of high rise buildings, the broadcasting frequency (VIIF or UHF), and the proximity of receivers to transmitters.

Other factors can also affect the demand for cablevision such as publicity expenses, quality of local programming, linguistic similarity of the cable television and the off-air channels, and the age of the existing cable television systems. The possibility of substituting other recreational activities for television viewing should also be considered.

II.2 CABLE TELEVISION IN CANADA

In North America cable television systems made very great progress from 1967 to 1972. During that period the number of subscribers more than tripled in Canada, increasing from 500,000 to 1.7 million. In

^{*}Within the Grade A contour, picture quality should be satisfactory at least 90 percent of the time for at least 70 percent of the locations within the contour. Within the Grade B contour, on the other hand, satisfactory service is expected for at least 50 percent of the receiving locations.

the United States the market almost tripled from 2.1 million subscribers in 1967 to 6 million in 1972. These figures are shown in Table 3.

Table 3
Cable Television Subscribers

	Canada		United States
		(000)	
1967	516.5		2,100
19 68	710.1		2,800
1969	923.8		3,600
1970	1,164.2		4,500
1971	1,398.5		5,300
1972	1,689.3		6,000

Source: Statistics Canada, <u>Cable Television</u>, Cat. No. 56-205; Television Digest, Television Factbook, No. 42, 1972-1973.

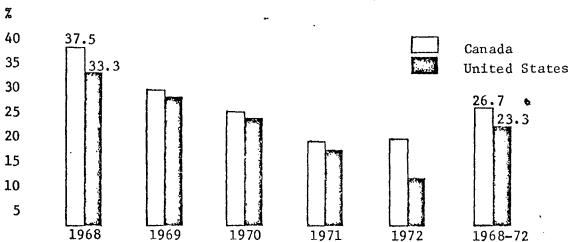
The increase in Canada is further indicated by the annual mean growth of 26.7 percent from 1967 to 1972 whereas the United States rate was 23.3 percent over the same period. Graph II illustrates a deceleration of the annual growth rate of cable.

GRAPH II

Cable Television

Subscribers - Canada and the United States

Annual Variations



The expansion in Canada is reflected in the proportion of house-holds connected to cable in each country. In 1972, 27.7 percent of Canadian households were connected to cable whereas only an estimated 9.2 percent of United States households were subscribers. Table 4 compares the percentages of Canadian and United States households connected to cable from 1967 to 1972.

Table 4

Percentage of Households

Connected to Cable

	,	Canada	United States
1967		10.3	3.6
1968	•	13.2	4.7
1969		16.8	5.9
1970		20.6	7.2
1971		24.2	8.3
1972		27.7	9.2

Source: Statistics Canada, Household Facilities and Equipment, Cat. No. 64-202; Cable Television, Cat. No. 56-205; Television Digest, Television Factbook, No. 42.

This rapid growth of demand can also be measured by the rate of penetration. This is defined as the number of households subscribing to cable related to the number of households established along the distribution cables in service, i.e. the number of potential subscribers. In 1972, the rate of penetration of the total number of Canadian cable television systems was 51 percent.

Table 5
Penetration of Cable Television
Canada 1968-72

-	Actual number of subscribers	Potential number of subscribers	Ratio of the actual number of subscribers to the potential number of subscribers
			. %
1968 1970 1972	710,100 1,164,200 1,689,300	1,606,000 2,392,000 3,313,100	44.2 48.7 51.0

Source: Statistics Canada, Cable Television, Cat. No. 56-205.

The thrust of cable television was nevertheless not equal from region to region in Canada. For example, in 1972 in Ontario cable television served close to 50 percent of the total number of Canadian subscribers. In British Columbia and Quebec cable television accounted for 23.5 percent and 18.8 percent of the market respectively. The three regions alone represent more than 90 percent of the Canadian demand for cable television as illustrated in Table 6.

Table 6
Cable Television
Canadian Subscribers per Region

1972

	Number of Subscribers	Percentage
Maritime Provinces	21,753	1.3
Quebec	317,171	18.8
Ontario	822,766	48.7 7.7
Prairie Provinces	130,846	* 7 .7
British Columbia	396,799	23.5
Canada	1,689,335	100.0

Source: Statistics Canada, Cable Television, Cat. No. 56-205.

It has been established earlier that the main determinants of the demand for cable television are the number and variety of channels available by cable television and the number, variety and the quality of reception of the off-air channels. Since, on the one hand, the United States television signals reach most of the larger Canadian cities, and on the other hand the urban regions can experience difficulties receiving these signals, cable transmission permits an increase in the number of available channels, as well as improving the quality of reception. It is not surprising therefore that the demand for cable television has tended to centre around the metropolitan, regions. In fact, 40 percent of Canadian subscribers are located in the metropolitan regions of Montreal, Toronto and Vancouver. In general the number of subscribers per region increases with the degree of urbanization as illustrated in Table 7.

Table 7

Cable Television and the Degree of Urbanization

1971

	Number of Subscribers	Percentage of Population Residing in Metropolitan Regions
Ontario	669,840	65.8
British Columbia	351,456	58.5
Quebec	294,917	55.7
Prairie Provinces	70,060	48.2
Maritime Provinces	_ 12,196	22.5
Canada	1,398,469	55.2

Source: Statistics Canada, Cable Television, Cat. No. 56-205; Contral Mortgage and Housing Corporation, Canadian Housing Statistics, 1972, p. 90.

The data available for 1971 indicate that, with 66 percent of its population residing in metropolitan areas, Ontario accounted for close to 50 percent of Canadian cable television subscribers. Because of the proximity of the bulk of population to the United States cable was readily accepted. Indeed, 12 percent of the Ontario households were connected to cable in 1967 as compared to 36 percent in 1972. As a result, the annual mean growth rate in subscriptions was 31 percent in that period.

From 1967 to 1972, the number of subscribers in Quebec and British Columbia increased at a lower rate than the Canadian average. (See Table 8). In consequence, the relative share of these two regions in the Canadian market was reduced.

Cable television has been established for many years in British Columbia and the proportion of households connected to cable is the highest in Canada. (20) Table 8 illustrates that close to 60 percent of British Columbia households are subscribers and, because cable television is well established, the province is close to saturation with a decreasing growth rate in recent years.

Table 8

Growth of Subscribers and Households

Connected to Cable Television per Region % Mean Annual Growth % of Households 1967 1967-1972 1972 Maritime Provinces 47.7 0.7 4.3 Quebec 23.7 8.3 19.3 Ontario 31.0 36.1 11.5 Prairie Provinces 57.3 1.6 12.9 British Columbia 17.5 33.0 59.7 Canada 26.7 10.3 27.7

Source: Statistics Canada, Cable Television, Cat. No. 56-205.

^{20.} The largest cablevision system in the world is in Vancouver serving 153,000 subscribers.

In Quebec, on the other hand, the linguistic barrier may have contributed to the relatively slow progress of cable television during 1967-1972 particularly over the last two years of that period. It can be surmised that the existence of cable is strongly related to the import of United States programs. If a region is generally Francophone there would be only slight incentive to pick up Anglophone programs, with some specific exceptions such as sporting events.

It has been shown that demand for cable television represents that part of the general demand for television that cannot be satisfied by the reception of off-air channels. Consequently, the creation of a new broadcasting network could help to increase the demand for off-air channels and thus reduce the demand for cablevision. This is probably the effect that was brought about by the creation of the TVA television network by enabling most of the regions in Quebec to receive programs originated in Montreal directly off-the-air. Thus by increasing the diversity of programs TVA could have hindered the progress of cable television. This could only have happened however if the provincial stations had not already been retransmitting Montreal-originated programs on a delayed basis prior to the formation of TVA.

From 1967 to 1972 the demand for cable television grew phenomenally in the Prairie and Maritime provinces, the rate of increase in the number of subscribers greatly surpassing that of other Canadian regions. The proportion of households subscribing was negligible in 1967, increased considerably up to 1972, at which time the thrust became very strong. It would appear that

cable television established itself around 1967 and advanced at an ultrarapid rate, probably because of the latent demand which had remained unsatisfied up to that time.

In spite of this explosive growth the cost of cable television has varied little since 1967. The average monthly subscription for a single residence is about \$5.00 and the installation fee has stabilized at \$10.00. The cost to the owner of a high rise building for each main outlet in a collective contract is \$3.00. The main sources of revenue are shown in Table 9.

Table 9
Cable Television
Sources of Revenue

1967-72
(\$000)

Year	Subscriptions	<u>%</u>	Installations	<u>%</u>	Others	<u>%</u>	Total
1967	19,093	86.3	2,031	9.2	991	4.5	22,115
1968	27,917	89.2	2,443	7.8	926	3.0	31,286
1969	33,440	89.5	2,870	7.8	1,070	2.7	37,380
1970	51,714	94.1	2,597	4.7	629	1.2	54,940
1971	62,791	94.3	3,057	4.6	772	1.1	66,620
1972	77,224	93.7	4,289	5.2	951	1.1	82,464

Thus the operating revenue of the cable television industry increased from \$22.1 million in 1967 to \$82.5 million in 1972, which represents an annual mean growth rate of 30.1 percent. To fully recognize the extent of that growth it need only be noted that the gross national product experienced a growth of 9.3 percent per annum over the same period.

Moreover, the operating revenue of the private radio and broadcasting stations increased annually at a rate of 8.6 percent and the operating revenue of the telephone sector had an annual growth rate of 10.6 percent.

In the following section the operating and investment costs necessary to satisfy the demand for cablevision are examined.

CHAPTER THREE

COSTS OF CABLE TELEVISION IN CANADA

Cable television systems vary greatly one from another. Some of the diversity is related to the number of subscribers served and to the amount of local programming produced by the cable system itself. Some systems are able to import programs via microwave relay whereas others obtain them directly off-the-air by means of sophisticated receiving antennas. One system may operate 12 or 20 channels, others may provide as few as five or six channels.

In spite of the diversity, CATV systems are relatively similar in design. One or many receiving antennas beyond the normal receiving range, of sufficient height and well situated, will pick up signals off-the-air. This complex of electronic equipment constitutes what it has been agreed to call the Head-End. The signals are then amplified and retransmitted to subscribers by means of a cable distribution system. This system is composed of trunk cables linking the head-end with the areas to be served; thence via feeder cables that are situated at about 100 feet from the buildings to be served, and drop lines that connect the feeder cables to the television receiving sets.

The capital and operating costs may be broken down by the components shown in Table 10.

Table 10
Costs of a Cable Television System

Capital Costs

- 1. Head-end and distribution system plant
- 2. Subscriber drops and devices
- 3. Cable casting equipment
- 4. Other capital costs (automobiles, trucks, buildings, etc.)

Operating Costs

- 1. Program originiation
- 2. Technical*
- 3. Sales and promotion
- 4. Administration

*Technical expenses apply to maintenance and/or the rental of distribution system plant.

Because of the varying characteristics of cable systems the relative importance of each component cost differs according to the system. In the first part of this section the capital costs of the CATV systems are studied, in the second part the operating costs are examined.

III.1 CAPITAL COSTS

The net capital cost of all cable systems in Canada reached \$121 million in 1972 compared to \$88 million in 1970. This represents an annual mean increase of 17.6 percent. However, if depreciation is disregarded the total investment in cablevision was \$131 million in 1970 and reached \$190 million in 1972, or an annual mean increase of 20.4 percent. This corresponds closely to the growth rate of 20.5 percent per annum in the number of subscribers over the same period. In consequence, to satisfy the rapidly expanding demand, the operators had to invest in about the same proportion.

Head-end and distribution system plant accounted for approximately the same percentage of capital costs from region to region from 1970 to 1972,

whereas subscriber drops and devices increased in conformity with the size of the systems. Table 11 confirms this point.

Table 11

Percentage Breakdown of Capital

Costs per Region

Canadian Cable Television Industry

1970-1972 Average

	Maritimes	Quebec	<u>Ontario</u>	Prairies	British Columbia	<u>Canada</u>
•	Z	7	7.	%	2	%
Head-End and Distribution Plant	64.2	66.8	65.0	74.1	64.5	66.0
Subscriber drops and devices	6.8	18.8	25.8	14.3	23.8	22. 5
Cable Casting Equipment	18.9	, . 5.0	3.4	2.3	1.4	3.5
Others	10.1	9.4	5 .8	9.3	10.3	8.0
Total	100.0	100.0	100.0	100.0	100.0	100.0
Total \$000	2,138.5	36,779.7	73,876.5	14,822.3	32,599.7	160,216.7

Source: Statistics Canada, Cable Television, Cat. No. 56-205.

According to Table 11 the head-end and distribution system costs represent approximately 66 percent of total capital costs and the proportion varies very little from one region to another except for the Prairies where it reached 74.1 percent. Since the cost of the head-end is higher for stations which import programs by microwave relay, and since eight out of only eleven stations of this type in Canada are all located in the Prairies* the higher cost percentage there can be attributed to this fact. It therefore appears that whatever the size of the system represented by the total cost of investment, the head-end and distribution systems part

^{*}Television Factbook, No. 42, 1972-73.

remains practically the same.

Table 12 shows that the proportion of capital cost relating to subscriber drops and devices increases with the number of subscribers.

During the 1970-72 period, Ontario CATV operators directed an average of 26 percent of their investment to the connection of an average of 675,000 subscribers. In the Maritimes where subscribers averaged 15,000 during the same period, an average of 6.8 percent of capital was allocated to subscriber drops and devices.

Table 12

Percentage of Capital Cost Allocated to Subscriber Drops and Devices in Relation to the Number of Subscribers per Region - 1970-72 Average

Region	Percentage	Subscribers
Maritimes	6.8	15,000
Quebec	18.8	291,000
Ontario	25.8	675,00 0
Prairies	14.3	85,000
British Columbia	23.8	352,000
Canada	22.5	1,418,000

Source: Statistics Canada, Cable Television, Cat. No. 56-205

Cable casting equipment includes cameras, video recorders and other types of studio apparatus, and the proportion of capital cost allocated for this item varies considerably from one region to another. Table 11 indicates that in the 1970-72 period the proportion was 19 percent in the Maritimes. This figure contrasts widely with those related to the importance placed in this type of capital equipment in other regions.

The importance of local programming in order to insure economic viability of a new system may be the raison d'être for this situation, however, the quality of the data available is doubtful, making an in-depth analysis difficult.

Quebec, Ontario, the Prairie provinces and British Columbia allocated an average of 5.0, 3.4, 2.3 and 1.4 percent of capital investment respectively to cable casting equipment during the 1970-72 period.

It appears that in these regions very little importance is attached to local programming if capital costs for program equipment are any indication. However, this does not necessarily indicate an absence of local programming, but rather that programming expenses are accounted for primarily by employee wages and equipment rental.

Other capital costs which are not exclusive to cable transmission include those for land, buildings, furniture, etc., and constitute approximately 10 percent of the total regardless of the region. Ontario is an exception where 5.8 percent of the total fixed assets make up this type of investment.

In general, it appears that the share of capital costs assigned to head-end and distribution system plant as well as to "other" costs changed very little from one region to the other during the 1970-72 period. Costs for subscriber drops and devices varied with the number of subscribers whereas fixed assets in cable casting equipment represented different proportions according to the region, the highest being in the Maritimes and the lowest in British Columbia.

111.2 OPERATING EXPENSES

Operating expenses of the Canadian cable television industry increased by 21 percent in 1972 from \$35.2 to \$42.5 million. This is greater than the 16 percent increase in 1971 but less than the annual mean increase of 27.0 percent registered over the 1967-71 period. Table 13 shows the four main items of operating expense for the years 1970, 1971 and 1972.

Table 13
Cable Television
Operating Expenses
(\$000)

	1970	19/1	19/2
Program Origination	672	1,259	2,514
Technical	12,634	14,645	17,481
Sales & Promotion	3, 988	3,779	4,799
Administration & General	12,987	15,513	17,716
Total	30,281	35,196	42,510

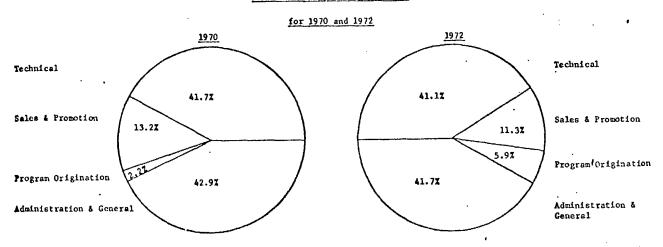
Source: Statistics Canada, Cable Television, Cat., No. 56-205, 1972.

In 1972, cable television was still a transmission service rather than a program production service, although expenses for program production increased in a relative and absolute way. From 1970 to 1972, program production expense almost quadrupled. In proportion to total operating expenses program production increased from 2.2 to 5.9 percent, to some small extent to the prejudice of Technical, Administration & General, and Sales & Promotion, which fell from 41.7, 42.9, and 13.2, to 41.1, 41.7 and 11.3 percent respectively. (See Graph 111).

CRAPH III

CABLE TELEVISION

Breakdown of Operating Expenses



However, on a regional basis the relative importance of the main items of operating costs differ. Examination of cable television systems with more than 1,000 subscribers* shows that in 1972 in the Maritime provinces 14 percent of total operating expense was accounted for by program origination compared to 7.0, 6.4, 5.0 and 4.0 percent respectively in Ontario, the Prairie provinces, Quebec and British Columbia. The amount allocated to programming could partly explain a sharp expansion of cable television in the Atlantic and Prairie Provinces. In the Prairies the relatively high proportion of total operating expense was mainly in Alberta where 10 percent went towards program production with Manitoba and Saskatchewan allocating only 0.6 percent to this activity.

^{*}Systems having more than 1,000 subscribers serve 96 percent of all Canadian subscribers.

The Prairie systems also spend relatively more on publicity and sales promotion with 20.4 percent of total operating expense going to this item. This factor obviously contributed to the growth of cable television in that region. In all other regions publicity fell between 9.5 and 11.5 percent of total operating expense.

Table 14
Cable Television
Operating Expense by Region*

1972

		•			1
	Program Origination	Technical	Sales & Promotion	Administration & General	Total
	%	%	%	. %	%
Atlantic Provinces	s 14.3	36.5	11.0	38.2	100.0
Quebec	5.0	43.5	10.1	41.4	100.0
Ontario	7.0	39.2	11.5	42.3	100.0
Manitoba &					
Saskatchewan	0.6	51. 5	12.3	35.6	100.0
Alberta	10.0	27.3	25.5	37.2	100.0
British Columbia	4.0	46.7	9.5	39.8	100.0
Canada	6.0	41.3	11.7	41.0	100.0

^{*} Systems having more than 1,000 subscribers.

Source: Statistics Canada, Cable Television, Cat. No. 56-205.

From 1970 all regions except Quebec saw a decrease in technical services as a part of total operating expense. In particular the cable television operators have very little control over the rental costs of head-end and distribution system plant, which totalled \$4.0 million for Canadian systems as a whole in 1972. By regions, 15.0 percent of operating expense in the Prairies stems from head-end and distribution

plant rental compared to 6.4 percent, 10.0 percent, 10.1 percent, and 11.2 percent in British Columbia, Quebec, Ontario and the Maritimes respectively.

The relative amount of operating expense attributed to program production will probably continue to increase over the next few years. There will always be a demand for local programming and, if the broadcast television systems are unable to satisfy it, the cable systems may be used as a substitute. Moreover, there is a proliferation of United States programs in the information and entertainment sectors which threaten to submerge Canadian creativity. Without completely banning the entry of foreign programs the Canadian Government wishes to "ensure that available Canadian material is comprehensive and of excellent quality" (21) and therefore could compel the cablevision industry to produce a certain proportion of their own programming.

In this analysis certain common trends in operating costs of Canadian cable systems have been examined. Technical and administrative expenses represent, on average, 80 percent of operating costs. The proportion of operating costs assigned to program origination expense was greater in the Maritimes and the Prairies where cable demand was very strong. It appeared that sales and promotion expenses were not independent of regional cable growth. In fact, the highest rate of growth of cable demand over the 1967-1972 period was in the Prairies where publicity expense represented 20.4 percent of total operating expense - the highest proportion in Canada.

^{21.} Government of Canada. Proposals for a Communications Policy for Canada p. 8, March 1973.

The CATV industry in Canada experienced a mean rate of increase of 17.6 percent a year in capital costs between 1970 and 1972. Operating costs were increasing at a rate of 18.4 percent a year over the same period. The next section analyses the financial structure of Canadian cable systems to determine how this strong demand for capital was satisfied.

CHAPTER FOUR

FINANCIAL STRUCTURE OF CABLE TELEVISION

The growth of cable television in Canada required a heavy injection of capital with investment increasing at a rate of 17.6 percent per annum during the 1970-1972 period. In general, funds were provided from debenture debt. Over 1970-1972 long term debt represented on the average 59 percent of the sources of long term financing as shown in Table 15.

Table 15
Sources of Long Term Financing
Cable Television Industry
(millions of dollars)

	1970	<u>%</u>	<u>1971</u>	<u>%</u>	<u>1972</u> *	<u>%</u>
Long Term Debt	57.1	(63.4)	54.7	(53.8)	74.2	(59.8)
Preferred Shares	11.5	(12.8)	10.5	(10.3)	10.1	(8.1)
Common Shares	7.3	(8.1)	7.2	(7.1)	11.5	(9.3)
Non-distributed profits	<u>13.8</u>	(15,7)	29.2	(28.8)	28.3	(22.8)
Total	89.7	(100.0)	101.6	(100.0)	124.1	(100.0)

^{*} Systems having more than 1,000 subscribers.

Source: Statistics Canada, Cable Television, Cat. No. 56-205.

The heavy recourse to external financing was probably due to start-up of operations when heavy investment in fixed assets is required necessitating long term financing. Thus most of the assets are fixed and in 1972 represented 66.5 percent of the total. (see Table 16)

Table 16

CATV Systems Balance Sheet

Canada

(In millions of dollars)

	1970	1971	1972*
Assets			
Current Assets Net Fixed Assets Other Assets Investments	14.3 87.9 36.0	14.3 103.5 23.0 22.7	18.2 121.2 21.5 21.5
Total Assets	138.2	163.5	182.4
Liabilities	•		
Current Liabilities Deferred Accounts Long Term Debt Other Liabilities	27.2 14.3 57.1 7.1	33.3 14.7 54.7 13.9	45.6 8.2 74.2 4.4
Total Liabilities	105.7	116.6	132.4
Shareholders Assets			
Share Capital (Preferred and ordinary) Non-distributed Profits	18.8 13.7	17.7 29.2	21.6 28.4
Total	32.5	46.9	50.0

^{*} Systems having more than 1,000 subscribers.

Source: Statistics Canada, Cable Television, Cat. No. 56-205.

However, the tendency towards a concentration of fixed assets is not characteristic of the cable television industry alone. Together with public utilities, (and unlike manufacturing industries and retail trade) they require a high level of fixed assets and tend to finance investment programs by means of long term debt rather than by share capital. Table 17 confirms this by comparing the financial structure of these segments of the economy.

Table 17

Inter-Industrial Comparison of Financial Structure - 1972

	Manufacturing	Electric Energy, Gas & Water	Retail Trade	Cable Television
Current Assets/Total	47.7	7.4	63.0	10.0
Fixed Assets/Total Assets (%)	41.2	79.9	27.2	66.4
Retained Earnings/ Total Liabilities and Shareholders' equity (%)	34.0	12.7	33.8	15.5
Long Term Debt/Total Liabilities and Shareholders' equity (%)	15.0	17.0	9.9	11.5
Share Capital/Total Liabilities (%)	18.1	56.9	15.3	40.7
Working Capital Ratio	1.89	0.88	1.64	0.40

Source: Statistics Canada, <u>Industrial Corporations - Financial Statistics</u>
Third Quarter, 1973, Cat. No. 61-003, Quarterly; <u>Cable Television</u>,
Cat. No. 56-205.

The working capital ratio expresses the relation of the amount of current assets to the amount of current liabilities and is indicative of the degree of safety with which short term credit may be extended.

Generally, the ideal ratio should be at least above 1, indicating that current liabilities will be covered.

A concentration of fixed assets is usually accompanied by recourse to long term debt. However, long term financing is possible only if a certain level of revenue can be maintained and the flow stabilized. Because of their quasi-monopolistic position the regulated industries can satisfy this condition due to the stability of their revenue which is ensured by the nature of the market.

The conditions of regulation can also constitute an incentive towards debenture debt. If regulatory measures impose a rate of return on the total investment and stipulate that the payment of interest is an integral part of the cost, it encourages financing by means of debenture debt.

Lately some change in the method of financing has been noticed in the Canadian cable television industry. Between 1970 and 1972 there was a tendency towards internal financing, i.e., common shares and retained earnings. While the long term debt still constituted 63 percent of the 'source of long term financing in 1970, it declined to 60 percent in 1972. For the same period, the preferred share portion decreased from 13 percent to 8 percent. Common shares remained practically the same in this period and profit, which represented 16 percent in 1970, constituted 23 percent in 1972. (Table 15)

Thus, there is a difference between the cable television industry and others with respect to financial structure. The former tends to resort to a greater degree to external sources whereas manufacturing and retail industries prefer internal financing. Consequently, the expansion of cable television networks is linked primarily to conditions prevalent in the capital markets.

In the short run, the financial situation of cable television does not appear to be very strong. The working capital ratio could constitute a test of solvency and the capability of a company to face its current debts. Working capital is defined as the surplus of current

measured according to the ratio of current assets to current liabilities.

In 1972 the liquidity coefficient of the manufacturing industry was

1.89, retail trade stood at 1.64 and public utilities at .88. In the

cable television industry the liquidity coefficient continuously

decreased from .53 in 1970, .43 in 1971, and to .40 in 1972.

This deterioration over the last few years need not be considered a hindrance to operations. To satisfy the demand the industry requires little working capital compared to, say, retail trade where inventory is a daily problem and short term liquidity is of prime importance.

Whether the dependence of the cable operators on the capital market through debenture debt and the deterioration of short term liquidity will retard the growth of the industry will probably depend on the profitability of cable television. This factor is analyzed in the following section.

CHAPTER FIVE PROFITABILITY OF THE CABLE TELEVISION INDUSTRY

Table 18 shows three measures of profit rate for the Canadian cable television operators for the 1967-72 period. The first is the operating profit margin expressed as a ratio of operating profit to operating revenue. The second is return on investment which is net operating profit expressed as a percentage of shareholders' equity. The third measure is return on assets which shows net operating profit plus interest expressed as a percentage of total assets.

Table 18
Cable Television
Profitability

	Operating Profit Margin	Return on Investment	Return on Assets
1967	38.1	12.2	5.9
1968	40.7	29.1	8.8
1969	40.5	28.5	8.3
1970	44.9	28.9	10.2
1971	47.2	28.5	11.0
1972	48.5	33.0*	12.6*

^{*} Systems having more than 1,000 subscribers.

Source: Statistics Canada, Cable Television, Cat. No. 56-205.

Operating revenue of the cable television undertakings increased by 273 percent between 1967 and 1972 whereas operating expense increased by only 210.3 percent. Operating profit, expressed as a percentage of revenue, increased from 38.1 percent to 48.5 percent between 1967 and 1972. In general most profit rates continued to increase each year from 1969.

By comparison the operating profit margin of privately owned radio and television braodcasting stations was 19.6 percent and 23.6 percent for 1971 and 1972 respectively. These data would indicate that operation of a cable television system is more profitable than that of a private radio or television broadcasting station. However, the fact is that the latter had a higher return on assets in the years 1971 and 1972, but their return on investment was lower in 1971 and higher in 1972.

Table 19 shows profitability as related to size of revenue. A company which operates more than one system is categorized according to the total revenue of all systems operated by that company.

Table 19
Profitability by Revenue Group*

1972

Dollars	Operating Profit Margin	Return on Investment	Return on Assets
less than 100,000 100,000 - 399,999 400,000 - 799,999 800,000 and more	24.1 34.9 42.3 55.8	21.4 29.8 38.7	1.1 7.2 8.3 16.0
Total	49.3	33.0	12.5

^{*} Systems having more than 1,000 subscribers

Source: Statistics Canada, Cable Television, Cat. No. 56-205

Table 19 indicates that there is a close relationship between size and profitability of a system or company. Systems having the highest revenue have the highest profit rate regardless of the method of ca' ulation used. However, it is pointed out that Table 19 also includes those systems which experienced an operating loss. If these were excluded another measure

of profit rate would emerge and perhaps a different conclusion would be derived regarding the relationship between size and profitability.

Unfortunately, it was not possible to break down cable systems into the categories of those suffering loss and those experiencing profit.

The most profitable companies, that is those having revenue greater than \$800,000, are few but account for the major slice of net operating profit of cable television compared to the total number of companies in Canada. In 1972 only 21 companies (15.5 percent of those having more than 1,000 subscribers) had gross revenue of \$800,000 or more. Nevertheless, 66 percent of the operating revenue and 85 percent of net operating profit accrued to these companies which operated 25 percent of the 194 systems having more than 1,000 subscribers.

This greater level of profitability could be explained by the fact that the majority of the large systems are situated in the larger urban centres where demand for cable television appears to be stronger.

Table 20
Cable Television
Profitability by Region*

	Operating Profit Margin	Return on Investment	Return on Assets
Maritime Provinces	4.9		
Quebec	49.7	15.8	10.6
Ontario	50.2	55 . 0	13.1
Prairie Provinces	33.2		2.4
British Columbia	54. 6	42.3	23.6
Canada	49.3	33.0	*u2.5

^{*} Systems having more than 1,000 subscribers.

It also appears that urban regions offer better possibilities because population density is higher and profit-earning prospects are better despite higher intallation and rental costs. For example, in 1971 only 35.4 percent of the population of the Maritimes were living in regions having more than 10,000 residents, and only six subscribers per thousand inhabitants were connected to cable. On the other hand, in Ontario where 73.0 percent of the population live in urban regions of more than 10,000 inhabitants, there are 87 cable subscribers per 1,000 population.

On a regional basis the cable television systems in Ontario and British Columbia appear to be the most profitable as shown in Table 20. These two provinces have the greatest number (72 percent) of Canadian subscribers. They also have the highest penetration rate - 56.7 percent in Ontario and 77.8 percent in British Columbia. Average net operating profit per system was \$158,945 in British Columbia and \$91,616 in Ontario.

All cable television operators in the Maritimes and Prairies experienced a loss. The net loss registered across the Prairies is accounted for by a reported net loss in Alberta of \$844.4 thousand - an average of \$93,822 per system. However, the rate of penetration in Alberta is still only 26 percent compared to 77.8 percent in British Columbia. Consequently a good part of the Alberta network is under-utilized because the industry has only recently become established.

APPENDIX

STATISTICAL TABLES

Table A-1

Cable Television Subscribers

Canada and by Region

1967-72

				•		
Region	1967	1968	1969	1970	1971	1972
Atlantic Provinces	3,098	4,533	5,379	10,930	12,196	21,753
Québec	109,561	162,423	183,406	260,356	294,917	317,171
Ontario	213,207	302,186	445,241	530,931	669,840	822,766
Prairie Provinces	13,582	19,114	27,717	. 54,173	70,060	130,846
British Columbia	177,036	221,820	262,068	307,797	351,456	396,799
Canada	516,484	710,076	923,811	1,164,187	1,398,469	1,689,335

Table A-2

Cable Television Systems

Canada and by Region

1967-72

Region	<u> 1967</u>	1968	1969	<u>1970</u>	<u>1971</u>	1972
Atlantic Provinces	5	8	11	9	12	14
Québec	121	148	159	127	131	131
Ontario	101	. 130	138	102	104	108
Prairie Provinces	17	19	16	17	21	26
British Columbia	70	72	7 6	59	58	65
Canada	314	377	400	314	326	344

Table A-3

Average Number of
Subscribers per System

Canada and by Region

1967-72

Region	1967	1968	1969	1970	<u>1971</u>	1972
Atlantic Provinces	620	567	489	1214	1016	1554
Québec	905	1097	1153	2050	2251	2421
Ontario	2111	2325	3226	5205	6441	7618
Prairie Provinces	7 99	1006	1732	3187	3336	5033
British Columbia	2529	3081	3448	5217	6060	6105
Canada	1645	1883	2310	3708	4290	4911

Table A-4

Percentage of the Number of Canadian Cable Television Subscribers in Each Region

Region	<u>1967</u>	1968	1969	1970	<u>1971</u>	1972
Atlantic Provinces	.6	6	6	.9	.9	1.3
Québec	21.2	22.9	19.9	22.4	21.1	18.8
Ontario	41.3	42.6	48.2	45.6	47.•9	48.7
Prairie Provinces	2.6	2.7	3.0	4.7	5.0	7.7
British Columbia	34.3	31.2	28.3	26.4	25.1	23.5
Canada	100.0	100.0	100.0	100.0	100.0	100.0

Table A-5

Cable Television Subscribers

Per Cent Change from Previous Year

Canada and by Region and United States

1968-72

Region	<u>1968</u>	1969	<u>1970</u>	1971	1972	Mean Annual Growth
Atlantic Provinces	46.3	18.7	103.2	11.6	78.4	47.7
Québec	48.3	12.9	42.0	13.3	7.6	23.7
Ontario	41.7	47.3	19.3	26.2	22.8	31.0
Prairie Provinces	40.7	45.0	95.5	29.3	86.8	57.3
British Columbia	25.3	18.1	17.5	14.2	12.9	17.5
Canada	37. 5	30.1	26.0	20.1	20.8	26.7
United States	33.3	28.6	25.0	18.0	13.0	23.3

Table A-6

Households

Canada and by Region

1967-72

(000)

Region	<u> 1967</u>	1968	1969	1970	1971	1972
Atlantic Provinces	441	456	460	464	468	506
Québec	1,319	1,450	1,475	1,500	1,536	1,641
Ontario	1,860	1,987	2,040	2,106	2,163	2,280
Prairie Provinces	877	926	941	957	970	1,015
British Columbia	537	575	598	619	640	665
Canada	5,034	5,394	5,514	5,646	5,779	6,108

Source: Statistics Canada, Household Facilities and Equipment, Cat. No. 64-202

Table A-7

<u>Households</u>

United States

1967-72

(000)

1967	58,900
1968	59.900
1969	61,300
1970	62,700
1971	63,900
1972	65,100

Source: Television Digest, Television Factbook, No. 42, 1972-73

Table A-8
Percentage of Households
Connected to Cable

Canada and by Region

1967-72

Region	<u>1967</u>	1968	1969	1970	<u>1971</u>	1972
Atlantic Provinces	0.7	1.0	1.2	2.4	2.6	4.3
Québec	8.3	11.2	12.4	17.4	19.2	19.3
Ontario	11.5	15.2	21.8	25.2	31.0	36.1
Prairie Provinces	1.6	2.1	3.0	5.7	7.2	12.9
British Columbia	33.0	38.6	43.8	49.7	54.9	59.7
Canada	10.3	13.2	16.8	20.6	24.2	27.7

Table A-9
Households Passed by Cable

Canada and by Region

1968, 70, 72

(000)

Region	1968	1970	1972
Atlantic Provinces	10.1	19.1	60.4
Québec	552.1	782.9	895.2
Ontario	707.1	1,020.0	1,450.0
Prairie Provinces	27.8	164.0	397.4
British Columbia	309.5	406.1	510.1
Canada	1,606.6	2,392.1	3,313.1

Table A-10

Subscribers as a % of Households Passed by Cable

Canada and by Region

1968, 70, 72

<u>Region</u> <u>1968</u> <u>1970</u> <u>19</u>	72
Atlantic Provinces 44.6 57.1 36	5.1
Québec 29.4 33.3 35	5.4
Ontario 42.7 52.1 56	5.7
Prairie Provinces 68.7 33.0	2.9
British Columbia 71.7 75.6 77	7.8
Canada 44.2 48.7 51	1.0

Table A-11

Households with One or More Color T.V. Sets

Canada and United States

1967-72

(000)

	Canada	United States
1967	101	9,012
1968	229	13,717
1969	443	18,635
1970	686	23,387
1971	1,065	27,605
1972	1,479	32,810

Source: Statistics (nada, Household Facilities and Equipment, Cat. No. 64-202; Television Digest, Television Factbook, No. 42, 1972-73.

Table A-12

Population

Canada and by Region

1971

(000)

Region	Metropolitan Areas	All Areas
Atlantic Provinces	462	2,058
Québec	3,358	6,028
Ontario	5,072	7,703
Prairie Provinces	1,706	3,542
British Columbia	1,278	2,185
Canada	11,876	21,516

Source: Central Mortgage and Housing Corporation, Canadian Housing Statistics, 1972, p. 90.

Table A-13

Cable Television

Operating Revenues

Canada

1967-72

	Operating Revenues (\$000)	Annual Variation (%)
1967	22,115	
1968	31,286	41.5
1969	37,380	19.5
1970	54,9 40	47.0
1971	66,620	21.3
1972	82,464	23.8
Average annual rate of growth	\$	30.1

Table A-14

Gross National Product

Canada

1967-72

	G.N.P. (millions of dollars)	Annual Variation (%)
1967	66,409	
1968	72,586	9.3
1969	79,815	10.0
1970	85,610	7.3
197 1	93,402	9.1
1972	103,407	10.7
Average annual ra	te of growth	9.3

Source: Statistics Canada, Canadian Statistical Review, Cat. No. 11-003.

Table A-15

Privately-Owned Radio and Television Broadcasting Industry

Operating Revenues

Canada

1967-72

	Operating Revenues (\$000)	Annual Variation (%)
1967	183,939	
1968	195,672	6.4
1969	214,663	9.7
1970	225,714	5.1
1971	241,482	7.0
1972	277,526	14.9
Average annual rate of growt	h	8.6

Source: Statistics Canada, Radio and Television Broadcasting, Cat. No. 56-204.

Table A-16

Telephone Industry

Operating Revenues

Canada

1967-72

	Operating Revenue (\$000)	Annual Variation (%)
1967	1,116,038	
1968	1,216,961	9.0
1969	1,358,971	11.7
1970	1,518,017	11.7
1971	1,676,327	. 10.4
1972	1,871,400	11.6
Average Annual Rate of G	rowth	10.9

Source: Statistics Canada, Telephone Statistics, Cat. No. 56-203.

Table A-17

Cable Television

Fixed Assets

Atlantic Provinces

1970-72

	<u>1970</u>	1971 (\$000)	1972
Head-end Distribution System Plant	346.0	1,416.8	2,551.9
Subscriber Drops and Devices	74.6	133.1	136,1
.Cable Casting Equipment	365.5	16.2	485.8
Other	56.3	70.9	762.4
Total	842.4	1,637.0	3,936.2

Note: 1) Includes data for only those licensees with more than 1,000 subscribers.

Table A-18

Cable Television

Fixed Assets

Quebec

1970-72

	<u>1970</u>	1971 (\$000)	19721
Head-end Distribution System Plant	22,354.6	25,159.1	26,234.0
Subscriber Drops and Devices	5,799.9	6,926.8	8,091.7
Cable Casting Equipment	2,339.4	2,581.9	510.6
Other	3,388.8	4,050.2	2,902.1
Total	33,882.7	38,718.0	37,738.4

Note: 1) Includes data for only those licensees with more than 1,000 subscribers.

Source: Statistics Canada, Cable Television, Cat. No. 56-205.

Table A-19
Cable Television

Fixed Assets

Ontario

1970-72

	<u>1970</u>	<u>1971</u> (\$000)	1972
Head-end and Distribution System Plant	38,216.9	49,566.1	56,021.0
Subscriber Drops and Devices	15,113.1	18,197.6	24,132.3
Cable Casting Equipment	1,815.5	2,650.2	3,197.1
Other	3,525.1	4,272.0	4,922.5
Total	58,670.6	74,685.9	88,272.9

Note: 1) Includes data for only those licensees with more than 1,000 subscribers

<u>Table A-20</u>

Cable Television

Fixed Assets

· Prairie Provinces

1970-72

	<u>1970</u>	(\$000)	<u>1972</u> 1
Head-end and Distribution System Plant	7,386.4	9,348.8	15,548.1
Subscriber Drops and Devices	1,096.9	1,363.2	4,627.7
Cable Casting Equipment	240.4	304.7	381.8
Other	1,027.7	945.7	2,195.5
Total	9,751.4	11,962.4	22,753.1

Note: 1) Includes data for only those licensees with more than 1,000 subscribers

Table A-21

Cable Television

Fixed Assets

British Columbia

1970-72

	1970	1971 (\$000)	19721
Head-end Distribution System Plant	18,167.5	21,749.3	23,046.9
Subscriber Drops and Devices	5,972.1	7,637.5	9,840.9
Cable Casting Equipment	292.8	427.7	653.1
Other	3,538.1	2,951.7	3,521.4
Total	27,970.5	32,766.2	37,062.3

Note: 1) Includes data for only those licensees with more than 1,000 subscribers.

Table A-22
Cable Television

Fixed Assets

Canada

1970-72

	<u>1970</u>	<u>1971</u> (\$000)	<u>1972</u> 1
Head-end Distribution System Plant	86,471.4	107,240.2	123,402.0
Subscriber Drops and Devices	28,056.6	34,258.2	46,828.7
Cable Casting Equipment	5,053.6	5,980.7	5,222.3
Other	11,536.0	12,290.5	14,309.7
Total	131,117.6	159,769.6	189,762.7

Note: 1) Includes data for only those licensees with more than 1,000 subscribers.

Table A-23

Cable Television

Operating Expenses

Canada

1967-72

	Operating Expenses (\$000)	Annual Variation (%)
1967	13,700	
1968	18,560	35.5
1969	22,247	19.9
1970	30,282	36.1
1971	35,196	16.2
1972	42,510	20.8
Average annual rate of growth		25.4

Table A-24

Cable Television

Operating Expenses

Canada and by Region 1972

Region	Program Origination	Technical (\$	Sales & Promotion 000)	Administra- tion & Gene	
Atlantic Provinces	121.5	311.0	93.3	326.6	852.4
Quebec	389.4	3,405.6	790. 5	3,244.8	7,830.2
Ontario	1,335.9	7,514.8	2,197.9	8,113.9	19,162.5
Manitoba & Saskatchewan	9.3	802.1	191.6	555.4	1,558.4
Alberta	251.0	687.5	641.2	937.0	2,516.7
British Columbia	336.1	3,951.6	802.6	3,364.0	8,454.3
Canada	2,443.2	16,672.5	4,717.0	16,541.7	40,374.4

Note: 1) Includes data for only those licensees with more than 1,000 subscribers.

Table A-25
Inter-Industrial Comparison

of Financial Structure

Canada

1972

	Total Manufacturing	Electric Power, Gas & Water Utilities	Retail Trade
·	(m	illions of Dollars)	
Current Assets	22,692	277	5,793
Current Liabilities	12,030	314	3,531
Assets	47,620	3,747	9,202
Fixed Assets	19,598	2,995	2,503
Liabilities	23,384	2,578	5,089
Shareholders' Equity	24,236	1,169	4,113
Retained Earnings	16,168	476	3,107
Share Capital	7,163	635	912
Long-Term Debt	8,638	2,130	1,410

Source: Statistics Canada, <u>Industrial Corporations</u>, <u>Financial Statistics</u>, Cat. No. 61-003 Quarterly.

Table A-26

Cable Television

Profitability

Canada

<u>1967-72</u>

	<u> 1967</u> .	1968	1969	1970 000)	<u>1971</u>	1972
•			(40	,00,		
Operating Revenue	22,115	31, 286	37,380	54,940	66,620	79,679
Operating Expenses (exclu-				*		
ding Interest & Deprecia-	13,700	18,560	22,247	30,282	35,196	40,374
Operating Profit	8,415	12,726	15 ,1 33	24,658	31,424	39,305
Interest	1,530	1,716	2,428	4,719	4,588	6,320
Depreciation	5,234	6,159	6,603	10,549	13,459	16,477
Net Operating Profit	1,652	4,851	6,101	9,391	13,377	16,508
Other Revenue & Expenses	(47)	. 85	(442)	842	(205)	3 7 9.
Net Profit Before Taxes	1,605	4,936	5,659	10,233	13,172	16,887
Net Profit After Taxes	474	1,803	2,278	5,081	6,558	9,284
Shareholders' Equity	13,599	16,695	21,430	32,516	46,868	50,021
Assets	54,067	74,362	102,381	138,194	163,492	182,385

Note: 1) Includes data for only those licensees with more than 1,000 subscribers.

Source: Statistics Canada, Cable Television, Cat. No. 56-205.

<u>Table A-27</u>

Privately-Owned Radio and

Television Broadcasting Industry

Profitability

Canada

1971-72

	<u>1971</u> (\$000	<u>1972</u>
Operating Revenue	241,482	277,526
Operating Expenses	194,172	212,081
Operating Profit	47,310	65,445
Interest	4,076	5,073
Depreciation	13,165	13,316
Net Operating Profits	30,069	47,056
Other Revenue & Expenses	9,500	4,459
Net Profit Before Taxes	39,569	51,515
Net Profit After Taxes	20,677	27,948
Shareholders' Equity	117,436	135,030
Assets	233,551	291,145
Operating Profit Margin	19.6%	23.6%
Return on Investment	25.6%	34.8%
Return on Assets	14.6%	17.9%

Source: Statistics Canada, Radio and Television Broadcasting, Cat. No. 56-204

Table A-28

Cable Television

Profitability by Revenue Group

Canada

<u>1972</u>1

	Less Than \$100,000	\$100,000 399,999	\$400,000 799,999	\$800,000 & More	Total
Operating Revenue	2,702	13,322	11,127	52,528	79,679
Operating Expenses	2,050	8,678	6,421	23,225	40,374
Operating Profit	652	4,643	4,706	29,304	39,305
Interest	204	748	965	4,403	6,320
Depreciation	522	2,522	2,541	10,892	16,477
Net Operating Profit	(74)	1,373	1,200	14,009	16,508
Other Revenue & Expenses	(3)	(125)	(99)	606	379
Net Profit Before Taxes	(7 7)	1,248	1,101	14,615	16,887
Net Profit After Taxes	(149)	465	(51)	9,019	9,284
Shareholders' Equity	3,398	6,412	4,024	36,187	50,021
Assets	11,944	29,508	25,964	114,969	182,385

Note: 1) Includes data for only those licensees with more than 1,000 subscribers.

Source: Statistics Canada, Cable Television, Cat. No. 56-205.

Table A-29
Cable Television

Concentration

Canada

1972

	Less than \$100,000	\$100,000 399,999	\$400,000 799,999	\$800,000 and more	fotal
Companies					
Number	35	62	19	21	137
Percentage		1 =		15	100
Distribution	26	45	14	15	100
Systems				•	
Number	49	71	25	49	194
Percentage					
Distribution	25	37	13	25	100
Operating Revenue			•	•	
(\$000)	2,702	13,322	11,127	52,52 8	79,679
Percentage	·	•	•	•	
Distribution	3	17	14	66	100
Net Operating Profit					•
(\$000)	(74)	1,373	1,200	14,009	16,508
Percentage		-	- -	*	-
Distribution	•	8	7	85	100

Note: 1) Includes data for only those licensees with more than 1,000 subscribers.

Table A-30

Cable Television

Profitability by Region

1972

	Atlantic Provinces	Quebec	0ntario (\$000)	Prairie Provinces	British Columbia
Operating revenue	896	15,566	38,478	6,102	18,637
Operating expenses	852	7,830	19,163	4,075	8,454
Operating profit	44	7,736	19,315	2,027	10,183
Interest	. 129	. 1,411	3,581	784	415
Depreciation	46	3,215	8,313	1,494	3,409
Net operating profit	(131)	3,110	7,421	(251)	6,359
Other revenue & expenses	200	384	(103)	(122)	220
Net profit before taxes	(131)	3,494	7,318	(373)	6,579
Net profit after taxes	(144)	2,730	3,755	(772)	3,717
Shareholders' equity	1,008	19,736	13,502	760	15,015
Assets	5,299	42,458	84,088	21,885	28,655

Note: 1) Includes data for only those licensees with more than 1,000 subscribers.

Table A-31

Average Net Operating
Profit per System

1972

1972

Region	Net Operating Profit \$	Number of Systems	Net Operating Profit per System \$
Atlantic Provinces	(131,326)	7	18,761
Quebec	3,109,106	51	60,963
Ontario	7,420,904	81	91,616
Manitoba & Saskatchewan	595,318	6	99,220
Alberta	(844,402)	9	(93,822)
British Columbia	6,357,814	40	158, 945
Canada	16,507,414	194	85, 090

Note: 1) Includes data for only those licensees with more than 1,000 subscribers.

Table A-32

Cable Television Subscribers vs. Population in Urban Areas

Canada and by Region

1971

	Percentage distribution of population living in urban areas with a population of 10,000 or more	subscribers per 1,000 inhabitants	
Atlantic Provinces	35.4	6	
Quebec	69.0	49	
Ontario	73.1	87	
Prairie Provinces	55.1	20	
British Columbia	66.2	161	

Source: Statistics Canada, 1971 Census of Canada Population (Urban and Rural Distribution), Cat. No. 92-709, Vol: 1 - Part: 1 (Bulletin 1.1 -9) February 1973.

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