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THE CABLE TELEVISION INDUSTRY 6

- An Incisive Look - /

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INTRODUCTION

During these high unemployment days, there is much interest in sectoral studies. Seldom, however, does an industry analyst have as much data available to him as is the case with D.O.C. analysts studying the Communications industries.

Companies fill in questionnaires sometimes with accuracy, but often with the uncaring aplomb that creates non-additivity, number misplacement, incorrect aggregation and so forth. The function of guarding against and, if necessary, rectifying errors in questionnaire data is a crucial one in the overall effort of computerizing information. Its performance gives analysts a 'feel' for the industry. This, in addition to having the information structured to allow analysis (as opposed to a structure that gains efficiency points on the basis of ability to form industry aggregates as per Statistics Canada needs), places D.O.C. in the enviable position to perform indepth structural studies that reveal much needed roots of phenomena often hidden in overall aggregates. These roots are what define those characteristics important to the formation of workable efficient policies, either for regulating or for stimulating an industry.

The attached analysis is brief. However, it delineates the cable television industry's crucial structural parameters. This was accomplished by sifting data through many screens and retaining only the data that was explanatory to structure.

This report is arranged in four sections. First, an industry overview which indicates the need for a policy review, then a structural analysis to aid in determining proper policies, thirdly, a brief statement

of the basics of regulatory policy, and lastly a section laying out the statistical tables from which other analysts can derive their own conclusions.

This pamphlet was prepared by Jan Van der Veen under the direction of the Statistical Information Services Director, E.E.R. King, and with the able assistance of Shirley Freeman, Janet Horton, Ron Nitschkie, Gina Smith and Eleanore Talbot.

THE CABLE TELEVISION INDUSTRY - AN OVERVIEW

The cable television industry in 1977 was composed of 332 operating companies, 125 of which had less than 1,000 subscribers and 207 of which had more than this number of subscribers. These companies ran 397 systems, 152 of these having less than 1,000 subscribers and 245 with more.

The corresponding counts for 1972 were: 263 operating companies - 132 of these were 'small', 131 were 'large'. These companies operated 326 systems - 161 'small' ones and 165 'large' ones.

The industry's rapid expansion is a thing of the past. The number of subscribers grew by 25.2% between 1972 and 1973. The growth in 1977 over 1976 was much more subdued at 9.6%. The share of people who take cable when it is offered to them is now roughly 68%. Household penetration (number of subscribers divided by number of households in the area) stands at 64% (around 70% in the denser regions). Roughly 48% of all Canadian households use cable. It is apparent that while growth has settled down, there is still room for expansion.

Overall industry figures on rates of return indicate that cable is, on average, a remunerative business. Taking the returns measure of pretax profits divided by total shareholders' equity, such returns for 1976 were 33.1%, and for 1977 they were 40.1%. Corresponding 1977 figures for all industries are 19.8%. The table below points out most aptly the relative magnitudes that authenticate the need for policy review.

Profit Comparisons - Cable vs Other Industries - 1977

Industry	Pretax Profits Divided by Total Shareholders' Equity	Pretax Profits Plus Interest Expenses Divided by Total Assets	Net Income Divided by Total Shareholders' Equity
	%	%	%
Total, All Industries ⁽¹⁾	19.8	10.7	11.9
Mining	22.2	13.0	13.1
Manufacturing	19.4	10.9	11.8
Transportation	18.1	10.4	11.1
Storage	18.1	8.9	14.8
Electric Power, Gas & Water Utilities	15.4	9.6	8.8
Wholesale Trade	19.7	8.9	11.5
Retail Trade	17.8	9.3	10.7
Community, Business & Personal Services	24.3	10.9	15.2
Communications ⁽²⁾	18.5	10.6	10.2
<u>Cable Television</u> ⁽³⁾	40.1	14.5	22.0
<u>Largest 30 Companies</u> <u>in Cable Television</u> ⁽³⁾	47.6	16.5	26.4

(1) Source: "Industrial Corporations - Financial Statistics - Fourth Quarter 1978" - Stats Can Catalogue #61-003. Only the last two categories (rows) in the above table are not from this source.

(2) This breakout excludes the CBC, Government-owned telephone and telegraph companies and all postal activities in Canada.

(3) Source: "Cable Television Statistics - 1977 - Aggregations for the Largest Companies" that was put out by DGTE in January of 1979.

The returns to total assets are noticeably higher than those for the total of all industries. However, where the cable industry really shines is in its returns to equity. Industry figures indicate that this is due to a substantially higher leverage factor for cable than for the total of all industries (2.78 vs 1.85). This differential is backed up by a debt to equity ratio of 2.95 for cable, as opposed to 1.38 for the total of all industries.

Industry aggregate figures present a limited picture. To see more, we must look at much more disaggregated data.

STRUCTURAL CHARACTERISTICS AND REVELATIONS
(separating the winners from the losers)

The statistical tables in the last section present statistical aggregations arranged according to values of those characteristics that most explain a cable company's financial performance. There are several possible cross-sections of mountains of statistics. Some will reveal structure and/or industry dynamics. Most will not.

Most analysis involves judgement. The comments that follow should thus be taken to reflect this analyst's interpretations. The attached statistical tables allow ample analysis to be done by the reader himself and this is encouraged.

The start-up year of a system has turned out to be a characteristic that most explains the relative financial health of a cable television system. Older systems make most of the money. While this statement's truth has often been asserted, it has not been statistically demonstrated - the statistical tables attempt to rectify this situation.

The fact that systems begun by the early 70's make the dollars does not contradict the "Cable Blue Book"⁽¹⁾ which showed that the largest few companies were the best performers (the top 30 companies have more than 70% of the total number of subscribers in Canada and make more than 80% of the profits). This is because the largest companies own old systems. The top 30 companies' systems are, on average, nine years old (as per the end of 1977).

(1) The booklet "Cable Television Statistics - Aggregations for the Largest Companies" put out by DSI for the years 1976 and 1977. These are available upon request.

In addition to profitability being correlated with systems begun by the early seventies, the figures show that whereas it used to take two loss years before a system could be expected to turn a profit, it now takes at least four loss years before a profit is registered. Obviously, the economically choice areas for cable establishment are now scarcer.

The oldest systems in the sample (those established in 1968 or there before) dominate the industry - they account for 62% of all subscribers in Canada in 1977. These systems, on the whole, demonstrate little increase in profits per subscriber. In 1972, their profits per subscriber were \$12.94; in 1977, their profits per subscriber were \$14.97. This is in spite of a 60% increase in the Consumer Price Index over the same period.

Studying systems by maturity (the age of a system as opposed to the year in which it began operations) indicates feverish cabling activity in the first year, still very high such action in the second year, and relatively constant 6% growth in the number of households offered cable from the third to the eighth year. Thereafter, growth is only 3½%. The latter indicates that the old systems are still growing (population growth and cabling up areas that were previously uneconomic).

Another interesting item shows up. The increase in the number of subscribers is consistently greater than the increase in the number of households cabled up - even in the older systems. Given the opportunity, more and more people are cabling up.

The older systems are established in areas with the larger populations. The Table #1, figures below accentuate this observation.

- 1977 Figures -

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
<u>Year That System Began Operations</u>	<u>Number of Systems</u>	<u>Households in Systems' Area</u>	<u>Households Offered Cable</u>	<u>Number of Subscribers</u>	<u>Household Penetration (4)/(2)</u>	<u>Subscribers Utilization of Cable (4)/(3)</u>	<u>Cable Penetration (3)/(2)</u>	<u>Subscribers Per System (4)/(1)</u>	<u>Households in Area Per System (2)/(1)</u>
Pre 1973	181	4 064 545	3 894 742	3 858 698	70.3	73.4	95.8	15 794	22 456
1973-1976	31	413 306	359 406	173 354	42.9	49.3	87.0	5 721	13 332

It is tempting to flip this over and say that financial performance differentials are really but a manifestation of economies of scale.

The facts, however, do not back this up. Small systems do not do nearly as well as large systems. However, this is true only for the smallest systems. When one gets above a certain system size minimum of 10,000 subscribers per system (which is remarkably low considering that almost 80% of total subscribers in Canada belong to systems larger than this), one gets very mixed results for profitability per subscriber. There seems little, if any, relation between profits per subscriber and size above this minimum. The "Cable Blue Book" indicates the same lack of correlation for the largest cable companies.

An analytical path that seems a natural in explaining profitability is the population density of a system. The facts show that systems begun prior to 1973 have considerably fewer miles of both distribution and trunk cable per subscriber. Systems begun before 1973 have an average 9 miles of distribution cable per 1,000 subscribers and 3 miles of trunk cable per 1,000 subscribers. Systems begun thereafter have corresponding figures of 17 miles per 1,000 subscribers and 5 miles per 1,000 subscribers. The reverse analysis, however, is not nearly as revealing. Those 22% of the total subscribers (and corresponding 225 systems) that have very low density (2.5 miles per 1,000 subscribers, or less than 400 subscribers per mile of main cable) are much less profitable than systems having greater density. But when system density gets above this threshold density level, the extent that it exceeds it seems not to have marked influence upon the profitability level.

In summary, it is fair to say that older cable television systems are in those areas that are most profitable for operating a cable concern. Such profitability is determined by size and density magnitudes only when these become exceedingly unfavourable.

Other characteristics, such as (1) an area's inability to pick up, without cable, a diversity of stations and (2) the area's capital cost for delivering diverse stations, would seem to be more crucial to profitability.

Since the measured statistics are influenced by the degree to which the CRTC has regulated profits, this intervention could be thought to be an important explanatory characteristic. However, there is little reason for thinking that the CRTC would hit older systems harder than younger ones and thus no cause to think that this would cause profit correlation with start-up year.

POLICY IMPLICATIONS

Each cable system is, in fact, a monopoly. Excess profits and other output decisions that affect people and result from monopolistic circumstances are a legitimate concern to governments.

In general terms, one regulates profits by either increasing costs or decreasing revenues. An example of the former would be CRTC insistence upon X number of weekly hours of local community programming. Revenue control examples would include CRTC rulings that an uneconomic Canadian station should be carried in place of a generally desired American one, curtailment of fee rise applications, taxation of fees, or taxation of profits above a certain rate of return to either equity, or assets, or some combination of the two.

It is to be noted that different regulatory tools, in effect, transfer the excess profits to different sub-groups in society. Thus, the insistence upon either local programs or an extra Canadian station supposedly increases the social welfare of the population within the system area. (1) Fee increase restrictions transfer the 'excess' profits back to subscribers in the system area. Taxation transfers the excess monopoly profits back to the populace at large.

No basic economic law exists which dictates whether or not excess monopoly profits rightly belong to all Canadians equally, only to those being

(1) This particular tool allows the regulatory agency and the cable system the added power of deciding together how these profits are to be spent to increase people's social well-being. Since other not-so-encumbered control tools exist, there is in fact no intrinsic reason to chain such power to profit control.

A notion related to the above is to have the total of excess monopoly profits, however collected, necessarily go to support Canadian programming. Again, no reason exists to chain the two goals together.

resident of a smaller political unit within which such profits accumulate or only to those who actually use the output of the monopoly. This being so, the decision as to the method of allocation is a political one.

In the past, much concern arose from concluding that large companies' merger activities implied fantastic profits. Since pre-1977 profits were not exceedingly high, it is likely that merger activities resulted more from speculation on the level of profits in future years.

In 1977, however, the profitability of several systems was sufficiently high to warrant policy review. The figures demonstrate cause for believing (a) that profitability is much more dependent upon the monopolistic area within which one operates than it is upon efficiently running the system; (b) that consequently there is a tendency towards much variation in profitability; (c) that such variability has not been removed by present regulations; and (d) that the average level of profitability is very high. The conclusion is that a discussion on alternative tools for removing 'excess' monopoly profits is now in order.

STATISTICAL NOTES

In this study, 'start-up year' is defined as the year that a system reported first having bought 'subscriber drops & devices'. All those systems that reported this item in 1976 were included in the study sample.

For the 1976 year, 212 reporting units reported the year of purchase of 'subscriber drops & devices'. Of the 160 units that were excluded from the study, 142 belong to companies having less than 1,000 subscribers (such 'small' companies are not required to report the relevant statistic) and 18 units were simply lax in reporting.

However, the 212 reporting units (a 'reporting unit' usually can be equated to a 'system') covered in the start-up year analysis, account for roughly 94% of all pretax profits of the industry over the last six years, 90% of all subscribers and 84% of all households offered cable service - i.e. the study sample effects good coverage.

The fact that the coverage proportion for profits is higher than the coverage proportion for total subscribers (94% vs 90%) indicates that a lot of the excluded systems have relatively lower profit margins than those included in the study. The fact that the coverage proportion of total subscribers is higher than the coverage proportion for the total number of households offered service (90% vs 84%) indicates that the systems excluded from the study have relatively less takers when their services are offered to the consumer. Both these observations are somewhat explained by the knowledge that excluded systems are small either because they are just starting up or because they are in a small area - either way they are not the most profitable or well utilized.

Since, in the time series used, the systems often pass from being 'small' to becoming 'large' (greater than 1,000 subscribers), it was necessary to take a profit measure reported both for 'small' and for 'large' systems. Thus, pretax profit per subscriber was used.

S T A T I S T I C A L T A B L E S

NUMBER OF COMPANIES & SYSTEMS 1972 - 1977

<u>Year</u>	<u>Companies</u>	<u>Small</u>	<u>Large</u>
1977	332	125	207
1976	314	124	190
1975	297	122	175
1974	281	118	163
1973	271	126	145
1972	263	132	131

<u>Year</u>	<u>Systems (Reporting Units)</u>	<u>Small</u>	<u>Large</u>
1977	397	152	245
1976	372	142	230
1975	358	141	217
1974	340	142	198
1973	326	154	172
1972	326	161	165

Comments:

- The number of companies went from 263 to 332 - a 26% increase over the five year period.
- The number of 'large' (greater than 1,000 subscribers) companies went up much more (a 58% increase) than did the number of small companies (which actually had a small decrease).
- The number of systems rose by 22% - a 6% decrease in 'small' systems and a 48% increase in 'large' systems.

PRETAX PROFITS BY START-UP YEAR 1972 - 1977

Start-Up Year	1977	1976	1975	1974	1973	1972
1968 & Prior	28,065,965	21,194,913	21,420,970	21,939,551	19,360,794	14,571,018
1969	3,109,944	2,870,491	1,715,681	1,630,484	1,863,144	1,322,715
1970	2,318,445	2,501,312	1,614,340	1,306,198	810,591	168,474
1971	7,887,114	5,951,833	4,223,461	2,894,337	959,999	(569,138)
1972	2,563,502	2,004,203	1,508,244	234,028	(627,212)	(59,299)
1973	246,174	(117,138)	(322,665)	(342,493)	(77,740)	-
1974	(512,237)	(772,389)	(893,510)	(482,191)	-	-
1975	(60,354)	(133,335)	(1,012)	-	-	-
1976	(1,197,497)	(1,832,815)	-	-	-	-
Total of Above (1)	42,421,056	31,667,075	29,265,509	27,179,914	22,289,576	15,433,770
Total of All Systems (2)	44,565,468	36,047,251	31,305,807	28,436,952	22,526,059	16,822,275
Sample Coverage (1)/(2)	95.2	87.8	93.5	95.6	99.0	91.7

Comments:

- It takes at least two loss years before a system can be expected to turn a profit. In the later years, this situation is changing in that it takes four loss years before a profit is made - indicating that the economically choice areas for cable establishment are now scarcer.

SHARE OF TOTAL INDUSTRY PROFIT BY START-UP YEAR 1972 - 1977

Start-Up Year	1977	1976	1975	1974	1973	1972
1968 & Prior	66.2	66.9	73.2	80.7	86.9	94.4
1969	7.3	9.1	5.9	6.0	8.4	8.6
1970	5.5	7.9	5.5	4.8	3.6	1.1
1971	18.6	18.8	14.4	10.6	4.3	(3.7)
1972	6.0	6.3	5.2	.9	(2.8)	(.4)
1973	.6	(.4)	(1.1)	(1.3)	(.3)	-
1974	(1.2)	(2.4)	(3.1)	(1.8)	-	-
1975	(.1)	(.4)	(.0)	-	-	-
1976	(2.8)	(5.8)	-	-	-	-

Comments:

- Those systems which began operations in 1968 or before dominate the industry with respect to share of profits (66.2% in 1977). Because of the loss situation of late starting systems, the pre-1973 systems have over 100% of the industry profits in 1977.
- Although this share for the older systems is dropping, it is dropping at a slower and slower rate.

YEARLY GROWTH (%'s) IN PRETAX PROFIT BY START-UP YEAR 1972 - 1977

Start-Up Year	1977/76	1976/75	1975/74	1974/73	1973/72
1968 & Prior	32.4	(1.1)	(2.4)	13.3	32.9
1969	8.3	67.3	5.2	(12.5)	40.9
1970	(7.3)	54.9	23.6	61.1	381.1
1971	32.5	40.9	45.9	201.5	268.7
1972	27.9	32.9	544.5	137.3	(957.7)
1973	310.2	63.7	5.8	(340.6)	-
1974	33.7	13.6	(85.3)	-	-
1975	54.7	(13,075.4)	-	-	-
1976	34.7	-	-	-	-

Comments:

- Growth in pretax profits can be factored into changes in profits per subscriber and changes in the number of subscribers in each system.
- Older systems are obviously still growing.

Comments:

- It is interesting to note that, besides the general trend of older systems being decidedly more profitable, the profits per subscriber for the older systems seem very steady over the last six years. As mentioned before, this is so even though the Consumer Price Index has gone up by 60% over the same period.
- Also of interest is that those systems that were started in 1970 and 1971 were very profitable in 1977. The reason for this has not yet been discovered.
- The number of years that it takes a system to start making the industry average rate of return is increasing. In 1969, 1970 and 1971 it took 3 years; in 1972 it took 4 years; in 1973 and thereafter it takes more than 4 years. Again, this is indicative of poorer and poorer territories being cabled up.

PRETAX PROFITS PER SUBSCRIBERS BY START-UP YEAR 1972 - 1977

Start-Up Year	1977	1976	1975	1974	1973	1972
1968 & Prior	14.97	11.74	12.16	14.43	14.82	12.94
1969	12.45	12.75	7.80	7.96	10.97	9.18
1970	17.77	21.84	15.01	13.77	11.49	2.88
1971	20.93	17.22	13.21	10.52	4.76	(4.18)
1972	11.31	9.34	7.51	1.33	(4.73)	(.90)
1973	8.67	(4.80)	(18.57)	(40.06)	(30.09)	-
1974	(8.92)	(15.71)	(23.41)	(33.93)	-	-
1975	(3.48)	(10.71)	(.19)	-	-	-
1976	(16.14)	(50.02)	-	-	-	-
Sample Average	13.97	11.20	10.96	11.84	11.83	10.09
Top 30 Companies in Blue Book	15.35	13.38				
All 'Large' Companies in Blue Book	13.20	11.46				

Comments:

- See opposite page.

PRETAX PROFIT PER SUBSCRIBER BY SYSTEM AGE

System Age	1977	1976	1975	1974	1973	1972	Average
1 Year	(16.14)	(10.71)	(23.41)	(40.06)	(4.73)	(4.18)	(16.54)
2 Years	(3.48)	(15.71)	(18.57)	1.33	4.76	2.88	(4.80)
3 Years	(8.92)	(4.80)	7.51	10.52	11.49	9.18	4.16
4 Years	8.67	9.34	13.21	13.77	10.97	12.94	11.48
5 Years	11.31	17.22	15.01	7.96	14.82	-	13.26
6 Years	20.93	21.84	7.80	14.43	-	-	16.25
7 Years	17.77	12.75	12.11	-	-	-	14.21
8 Years	12.45	11.74	-	-	-	-	12.10
9 Years & Older	14.97	-	-	-	-	-	14.97

Comments:

- This table attempts to trace profitability changes due to the maturity of a system, irrespective of the year that a system began operations. The result is an average over time of profitability, by maturity. It shows that, historically, it used to take 2 very bad years and then one moderately bad year before respectable profits could be expected from a system.

NUMBER OF SUBSCRIBERS BY START-UP YEAR 1972 - 1977

Start-Up Year	1977	1976	1975	1974	1973	1972
1968 & Prior	1,874,968	1,805,195	1,761,387	1,520,873	1,306,397	1,125,636
1969	249,730	225,209	219,932	204,960	169,895	144,037
1970	130,458	114,536	107,557	94,841	70,530	58,411
1971	376,788	345,542	319,596	275,057	201,852	136,140
1972	226,754	214,574	200,850	176,273	132,589	65,531
1973	28,391	24,426	17,372	8,550	2,584	-
1974	57,408	49,150	38,174	14,213	-	-
1975	17,356	12,452	5,454	-	-	-
1976	74,199	36,638	-	-	-	-
Total of Above (1)	3,036,052	2,827,722	2,670,322	2,294,767	1,883,847	1,529,755
Total of All Systems (2)	3,444,695	3,143,315	2,860,937	2,560,787	2,115,866	1,689,335
Sample Coverage (1)/(2)	88.1	90.0	93.3	89.6	89.0	90.6

Comments:

- For each year, this table shows the number of subscribers by system vintage.

SHARE OF TOTAL INDUSTRY SUBSCRIBERS BY START-UP YEAR 1972 - 1977

Start-Up Year	1977	1976	1975	1974	1973	1972
1968 & Prior	61.8	63.8	66.0	66.3	69.3	73.6
1969	8.2	8.0	8.2	8.9	9.0	9.4
1970	4.3	4.1	4.0	4.1	3.7	3.8
1971	12.4	12.2	12.0	12.0	10.7	8.9
1972	7.5	7.6	7.5	7.7	7.0	4.3
1973	.9	.9	.7	.4	.1	-
1974	1.9	1.7	1.4	.6	-	-
1975	.6	.4	.2	-	-	-
1976	2.4	1.3	-	-	-	-

Comments:

- The old systems (1968 and prior) account for 62% of 1977 subscribers. This proportion has, of course, been falling through the years, but at a slower and slower rate.

YEARLY GROWTH IN NUMBER OF SUBSCRIBERS BY START-UP YEAR 1972 - 1977

Start-Up Year	1977/76	1976/75	1975/74	1974/73	1973/72
1968 & Prior	3.9	2.5	15.8	16.4	16.1
1969	10.9	2.4	7.3	20.6	18.0
1970	13.9	6.5	13.4	34.5	20.7
1971	9.0	8.1	16.2	36.3	48.3
1972	5.7	6.8	13.9	32.9	102.3
1973	16.2	40.6	103.2	230.9	-
1974	16.8	28.8	168.6	-	-
1975	39.4	128.3	-	-	-
1976	102.5	-	-	-	-
Growth of All Systems	9.6	9.9	11.7	21.0	25.2
Average Growth of the Sample	7.4	5.9	16.4	21.8	23.1

Comments:

- The number of subscribers is growing in every group - even in the oldest systems.
- Overall industry growth is slowing down (in 1973/72 it was 25.2%; in 1977/76 it was 9.6%).
- Note that the sample growth is less than the universe growth in the last few years. Statistical procedures account for this. Systems still 'small' in 1976 or 1977 are necessarily excluded from the sample even though they could be those growing most quickly.

GROWTH IN THE NUMBER OF SUBSCRIBERS BY SYSTEM MATURITY

System Age	1977/76	1976/75	1975/74	1974/73	1973/72	Average
1 Year	102.5	128.3	168.6	230.9	102.3	146.5
2 Years	39.4	28.8	103.2	32.9	48.3	50.5
3 Years	16.8	40.6	13.9	36.3	20.7	25.7
4 Years	16.2	6.8	16.2	34.5	18.0	18.3
5 Years	5.7	8.1	13.4	20.6	16.1	12.8
6 Years	9.0	6.5	7.3	16.4	-	9.8
7 Years	13.9	2.4	15.8	-	-	10.7
8 Years	10.9	2.5	-	-	-	6.7
9 Years & Older	3.9	-	-	-	-	3.9

Comments:

- This maturity table demonstrates feverish growth in the first few years, then a general abatement down to 4% a year for the oldest system.

NUMBER OF HOUSEHOLDS OFFERED SERVICE BY START-UP YEAR 1972 - 1977

Start-Up Year	1977	1976	1975	1974	1973	1972
1968 & Prior	2,476,885	2,389,749	2,255,888	2,160,547	2,019,630	1,811,447
1969	350,898	337,468	317,866	303,228	275,986	246,960
1970	193,245	177,288	169,142	158,114	148,086	148,632
1971	562,071	522,947	499,273	475,040	434,505	365,203
1972	311,643	300,876	292,815	282,096	258,107	121,127
1973	44,168	44,122	35,533	22,165	6,401	-
1974	112,329	106,839	100,119	44,287	-	-
1975	30,406	26,804	20,103	-	-	-
1976	172,503	88,484	-	-	-	-
Total of Above (1)	4,254,148	3,994,577	3,690,739	3,445,477	3,142,715	2,693,369
Total of All Systems (2)	5,098,982	4,706,402	4,233,221	4,044,559	3,715,009	3,313,147
Sample Coverage (1)/(2)	83.4	84.9	87.1	85.2	84.6	81.3

SHARE OF TOTAL INDUSTRY HOUSEHOLDS OFFERED SERVICE BY START-UP YEAR 1972 - 1977

Start-Up Year	1977	1976	1975	1974	1973	1972
1968 & Prior	58.2	59.8	61.1	62.7	64.3	67.3
1969	8.3	8.4	8.6	8.8	8.8	9.2
1970	4.5	4.4	4.6	4.6	4.7	5.5
1971	13.2	13.1	13.5	13.8	13.8	13.6
1972	7.3	7.5	7.9	8.2	8.2	4.5
1973	1.0	1.1	1.0	.6	.2	-
1974	2.6	2.7	2.7	1.3	-	-
1975	.7	.7	.5	-	-	-
1976	4.1	2.2	-	-	-	-

GROWTH IN HOUSEHOLDS OFFERED CABLE BY MATURITY

System Age	1977/76	1976/75	1975/74	1974/73	1973/72	Average
1 Year	95.0	33.3	126.1	246.3	113.1	122.8
2 Years	13.4	6.7	60.3	9.3	19.0	21.7
3 Years	5.1	24.2	3.8	9.3	(.37)	8.4
4 Years	.1	2.8	5.1	6.8	11.8	5.3
5 Years	3.6	4.7	7.0	9.9	11.5	7.3
6 Years	7.5	4.8	4.8	7.0	-	6.0
7 Years	9.0	6.2	4.4	-	-	6.5
8 Years	4.0	5.9	-	-	-	5.0
9 Years & Older	3.6	-	-	-	-	3.6

Comments:

- As in the table showing subscriber growth, rapid expansion in the first year, still high growth in the second year, roughly 6% yearly growth from the third to the eighth year and then a slow-down to 3½% yearly growth.

Comments:

- Subscriber utilization of cable is generally higher for those systems established prior to 1973. This is a reflection of the rate of increase in the number of subscribers being greater than the rate of increase in the number of households offered cable. Thus, even in the older systems more and more people are taking advantage of cable.

SUBSCRIBER UTILIZATION OF CABLE (%'s) BY START-UP YEAR 1972 - 1977*

Start-Up Year	1977	1976	1975	1974	1973	1972
1968 & Prior	75.7	75.5	78.1	70.1	64.7	62.1
1969	71.2	66.7	69.2	67.6	61.6	58.3
1970	67.5	64.6	63.6	60.0	47.6	39.3
1971	67.0	66.1	64.0	57.9	46.5	37.3
1972	72.8	71.3	68.6	62.5	51.4	54.1
1973	64.3	55.4	48.9	38.6	40.4	-
1974	51.1	46.0	38.1	32.1	-	-
1975	57.1	46.5	27.1	-	-	-
1976	43.0	41.4	-	-	-	-
Sample Average	71.4	70.8	72.4	66.6	59.9	56.8
Top 30 Companies in Blue Book	67.0	66.3				
All 'Large' Companies in Blue Book	67.5	66.8				

*Total Subscribers Divided by Total Households Offered Service.

Comments:

- See opposite page.

GROWTH IN SUBSCRIBER UTILIZATION OF CABLE BY START-UP YEAR 1972 - 1977.

Start-Up Year	1977/76	1976/75	1975/74	1974/73	1973/72
1968 & Prior	.3	(3.3)	11.4	8.3	4.2
1969	6.7	(3.6)	2.4	9.7	5.7
1970	4.5	1.6	6.0	26.0	21.1
1971	1.4	3.3	10.5	24.5	24.7
1972	2.1	3.9	9.8	21.6	(5.0)
1973	16.1	13.3	26.7	(4.5)	-
1974	11.1	20.7	18.7	-	-
1975	22.8	71.6	-	-	-
1976	3.9	-	-	-	-

Comments:

- Subscriber utilization of cable can be viewed analogous to capacity utilization. The above table shows such utilization to be almost invariably increasing.

CABLE (POPULATION) DENSITIES OF SYSTEMS BY START-UP YEAR - 1977

Start-Up Year	Miles of Distribution Cable Per Thousand Subscribers	Number of Subscribers Per Mile of Distribution Cable	Miles of Main Cable Per Thousand Subscribers	Number of Subscribers Per Mile of Main Cable	Number of Households Wired Per Mile of Main Cable	Percentage of Indirect Subscribers to Total Subscribers	Percentage of Total Subscribers to Total Households in Area
1968 & Prior	8.51	117.51	2.61	383.72	506.91	23%	71%
1969	9.79	102.17	2.72	367.43	516.28	28%	70%
1970	8.92	112.08	2.63	379.98	562.85	23%	66%
1971	9.19	108.77	2.39	418.57	624.41	19%	67%
1972	8.69	115.12	3.12	320.76	440.84	7%	71%
1973	11.54	86.69	4.07	245.60	382.08	9%	62%
1974	18.17	55.04	5.54	180.66	353.50	6%	46%
1975	14.98	66.74	6.87	145.54	254.98	10%	52%
1976	17.64	56.70	4.38	228.37	530.94	5%	36%

Comments:

- See opposite page.

NUMBER OF SUBSCRIBERS PER SYSTEM BY START-UP YEAR 1972 - 1977

Start-Up Year	1977	1976	1975	1974	1973	1972
1968 & Prior	16,304	15,697	15,316	13,225	11,360	9,788
1969	12,487	11,260	10,997	10,248	8,495	7,202
1970	10,035	8,810	8,274	7,295	5,425	4,493
1971	26,913	24,682	22,828	19,647	14,418	9,724
1972	11,934	11,293	10,571	9,278	6,978	3,449
1973	5,678	4,885	3,474	1,710	517	-
1974	6,379	5,461	4,242	2,690	-	-
1975	3,471	2,490	1,091	-	-	-
1976	6,183	3,053	-	-	-	-

Comments:

-- Generally, the older systems are larger than those more recently set-up.