Cable television and competition

Theory, evidence and policy

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There is currently widespread discussion in the USA of the merits of amending legislation to allow competition in the cable television market, notably from the telecommunications companies. This article explores what economic theory can contribute to this debate, and adduces empirical evidence on the effects of competition in the cable market where it presently exists. The authors conclude that blocking entry into cable, and indeed into telecommunications markets, is likely to be poor policy, and that increased competition would foster the development of an efficient modern broadband network.

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Cable television companies and local exchange telecommunications companies in the USA are currently engaged in a heated debate over competition in the cable television market and, by inference, in the local exchange telecommunications market. Cable companies would like to preserve their current monopolies, once again submitting, if necessary, to limited local regulation in order to do so. Local exchange carriers, on the other hand, would like to be allowed to enter into the cable markets, either with new entry or by buying existing cable companies. Other versions of this debate are taking place in many other countries around the world.

In the USA the discussion is taking place in Congress, at the National Telecommunications and Information Administration (NTIA) and at the Federal Communications Commission (FCC). Congress is considering legislation to reregulate cable and legislation to repeal the cable/telco cross-ownership ban. The NTIA is also considering revising its recent policy statement on a video dial tone in favour of more competition in the cable market. The FCC is reconsidering its statutory definition of what constitutes competition in cable, and hence when the cable companies can be free from regulation, and how cable companies should be regulated, as well as the cable/telco cross-ownership ban.

This article explores what economic theory can contribute to this debate. The article then compares cable companies operating in a non-monopoly environment with those which do not to see if the expected benefits of additional suppliers are present. The article concludes by using economic theory and empirical evidence to make policy recommendations on cable television and telecommunications competition and on the cross-ownership issue.

Cable and broadband

No discussion of cable television and telecommunications can take place without reference to broadband. Cable companies, telecommunications companies and their other competitors are all likely to be thinking about broadband, and each would like to control the underlying broadband

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network. Explorations of the theory and policy of cable must take place in this context.

Broadband services delivered over fibre-optic networks are likely to change the entire telecommunications industry fundamentally. Not only may existing services, including telecommunications and television, be delivered differently, but new services not yet evisaged may become common. To date, much of what has been written about broadband has concerned technology only, but the policy response to broadband will undoubtedly be important. The broadband infrastructure that results will affect the nature, availability and pricing of telecommunications and related services in the coming years.

One of the most contentious issues surrounding broadband is who will provide the broadband delivery system. The answer depends on both economics and regulation. There may or may not be more than one broadband delivery system, depending on ultimate costs, economies of scale, local market characteristics and customer preferences. Similarly, there may or may not be private networks supplementing all or part of the public broadband network. Larger markets are more likely to have more than one system, particularly if absolute costs are relatively low, while smaller markets may have only one system.

Both telecommunications companies and cable TV companies, along with others, are positioning themselves to provide the broadband network. Local exchange companies are interested because of their current services and because they see the need to consolidate all revenues to cover total costs. They believe that the cost of a broadband network requires current telco revenues, cable transmission revenues and perhaps other revenues from new services or from programming in order to make the broadband network investment feasible. Cable companies are interested because they currently supply television/video services and because they see the telcos as a threat to their current business. Cable facilities are wearing out and need to be replaced, and telcos are considering replacing or upgrading local loops, sometimes with fibre. This is bringing the ownership issue to a head, as the resolution of this issue will help to determine who will do the replacement and with what technology.

Both telcos and cable are viable competitors and broadband network providers. Telephone penetration rates are over 90%, and virtually everyone, with some rural exceptions, has telephone lines passing by his or her residence. Cable had a 54% penetration rate at the end of 1989, but, more importantly, 80% of residences were passed by cable,[1] and this latter figure should continue to increase.

The FCC is currently investigating the cable/telco cross-ownership ban, and a recommendation could be made at any time. The NTIA is also considering the cross-ownership ban.[2] The NTIA previously recommended that the cross-ownership ban be left intact but that telcos be encouraged to provide distribution services as a common carrier. It is now reconsidering these issues and is investigating whether the cross-ownership ban is retarding development of the telecommunications infrastructure. The NTIA is also soliciting comments on whether telcos need the ability to engage in programming in order to have sufficient incentive to deploy a broadband distribution system. Janice Obuchowski, the new Administrator of the NTIA, states that 'NTIA pioneered the concept of "video dial tone," in which telephone companies could provide the "conduit" to the home for competitive video programming.

[1]Federal Communications Commission, 'Notice of Inquiry: In the Matter of Competition, Rate Deregulation and the Commission's Policies Relating to the Provision of Cable Television Service', December 1989, p 24.

[2]National Telecommunications and Information Administration, *Comprehensive Study on the Domestic Telecommunications Infrastructure*, Department of Commerce, Washington, DC, January 1990, pp 656–660.

In the coming year, NTIA will be looking beyond that concept in the continuing cable–telco cross-ownership debate to determine whether all companies, including local exchange telephone companies, should be able to enter the video programming market.'[3]

It is becoming increasingly clear that telcos are interested in entering the cable business. Although they are barred from doing so within their service areas at this time, Pacific Telesis is attempting to buy cable companies outside its service territory, and all of the regional Bell holding companies are involved in telecommunications abroad, often in cable ownership.[4] These overseas activities seem to expand daily. The companies have all shown their willingness to invest abroad to gain cable experience; certainly they are hoping to have the opportunity to use this experience in the USA. For example, 'Investing in foreign cable systems allows the regional companies to gain experience in combining cable and telephone services. The cable contracts in Britain allow companies to provide telephone and television services over the same networks. And the Baby Bells plan to install fiber-optic cable, which can carry both telephone and video signals, in some European homes.'[5]

Raymond Smith, Chairman and CEO of Bell Atlantic, presents a position that is generally representative of the Bell portion of the local exchange telecommunications industry.[6] He wants Bell Atlantic to be the company that builds the fibre-based broadband system in its service territory. Under this scenario, Bell Atlantic would provide broadband transport services to all 'legitimate' users on a 'non-discriminatory price-list basis'.[7] While Bell Atlantic would like to form joint ventures with programmers, they do not appear interested in entering the programming business. In exchange, Bell Atlantic is willing to allow any user of the broadband network to provide telecommunication services in competition with it.

This Bell Atlantic view is similar to the NTIA's proposal for a video dial tone:

> The NTIA 'video dial tone' proposal entails: (1) expanding the common carrier regulatory model applicable to video transport (but not allowing such common carriers to supply program content) and (2) facilitating local telephone company provision of such transport to others (regardless of whether they have a local cable franchise). According to NTIA, the public interest benefits of the regime would be: (1) its immediate competitive effect on existing cable systems, causing them to be more responsive to consumers in terms of quality of service, and programming choices; and (2) further enhancements to exchange telephone facilities made in order to deliver video signals.[8]

Cable companies, on the other hand, seem interested in protecting their monopoly both from entry and from acquisition by telcos. While they are also opposed to any reregulation of the industry, they would probably prefer that to losing their franchise as a result of entry.

Entry and mergers

Cable television markets have historically been regulated, franchised monopolies. As a result of the 1984 Cable Communications Policy Act municipal governments can no longer regulate basic cable rates in markets in which there are three or more off-the-air signals.[9] In addition, it is now more difficult for a municipality to deny renewal of a franchise to a cable company. In essence, then, many cable companies are unregulated, legally protected monopolies.

[3]Janice Obuchowski, 'The state of the Union in telecommunications regulation', *Telecommunications*, January 1990, p 25.
[4]See, for example, Calvin Sims, 'The Baby Bells scramble for Europe', *New York Times*, 10 December 1989, Sec 3, pp 1ff; and Paul Travis, 'Bell South joins French CATV firm', *Telephony*, 22 January 1990, p 3.
[5]Sims, *ibid.*
[6]Doug Halonen, 'Ringing in a new era', *Electronic Media*, 11 December 1989.
[7]*Ibid.*
[8]*Op cit*, Ref 1, p 14.
[9]The FCC will probably change this standard. It has recently begun this process by issuing a rulemaking to alter its standard for what constitutes effective competition. See 'FCC effective-competition rule could amount to "price cap" for cable', *Communications Daily*, Vol 10, No 237, 10 December 1990, pp 1–2.

Alfred Sikes, Chairman of the FCC, has stated, however, that 'The FCC has an interest in ensuring a video service marketplace which is effectively competitive, because that has proven to be the most efficient means of safeguarding the public's interest in an economically robust and diversified media market.'[10] It is in this context that the FCC continues to investigate cable television regulation and cable/telco cross-ownership issues. Sikes discusses the importance of entry, and also states that 'Any price regulation, of course, should be applied only to the extent that competitive marketplace forces are demonstrably inadequate to safeguard customers' interest. If price regulation is to be reimposed, as a number of interest groups have urged, it is important at the same time to take steps aimed at engendering the kind of pro-entry, procompetitive policies which, over time, will facilitate phasing out any such regulation.'[11]

There is no economic reason to block competitive entry, resulting in more than one broadband network, and there may even be reasons to allow mergers between telcos and cable companies. Telcos and cable companies each bring something to a prospective merger. Cable companies have customers and the right to a market for TV-type services. Telcos have large size (as do some cable companies), access to capital, better customer relations and technological expertise. Cable systems wearing out and telcos considering replacement of local loops will help achieve a resolution to the merger issue.

While allowing potential competitors to merge is not usually good public policy, in this case it could remove an important impediment to broadband deployment. The structural conflicts make achieving a broadband network difficult, and the alternative may be not two networks but none. The question may be how to get the best single network. At the same time it may be possible to replace a cable monopoly with a better alternative, particularly if there are no barriers for any service provider who wishes to use the new broadband network.

Any evaluation of competition must also make the distinction between a competitive market structure and competitive behaviour, and in this case competitive behaviour can be preserved. The owner may be required to operate the network as a common carrier. This may happen automatically, with pressure to sell the substantial excess network capacity. The owner's economic interest in exclusion should be low, and antitrust may provide a sufficiently effective enforcement threat and remedy. If these financial pressures are not sufficient, however, regulation can always be used to ensure access to the broadband network.

Currently, telcos are prevented by the Modified Final Judgment (MFJ) from originating information or video services. They can, however, probably control a small proportion of the total number of channels without any adverse effect on competitive behaviour; indeed, they are an important source of potential competition. Developing open network architecture experience may suggest how to resell the network and network services and how to get competitive behaviour with one underlying network.

Even so, some regulation may be needed. The need for this regulation will be greater if there is only one broadband network. This regulation will have to address how Bell operating companies and independent telcos involved in broadband and cable/telco cross-ownership should be treated. For example, they may or may not be allowed to originate programming. Regulation may also have to deter-

[10]Alfred Sikes, 'Statement on Federal Communications Commission cable television policies, recommendations, and initiatives', Subcommittee on Communications, Committee on Commerce, Science and Transportation, United States Senate, 17 November 1989, p 8.
[11]*Ibid*, p 11.

mine whether the broadband network provider should formally be required to adhere to common-carrier status or whether there are sufficient market forces to make such regulation unnecessary.

Recently, however, telcos have not upheld the concept of common carriage. Under federal and state regulatory pressure many quickly caved in on dial-a-porn and related issues. Some telcos have refused to carry certain services they deemed inappropriate, have agreed to carry certain services only on separate exchanges or with pre-subscription, and have provided selective billing arrangements depending on the nature of the service. While less regulation is, in general, preferable, actions to date weaken the argument for no regulation unless telcos are more willing to demonstrate that they can behave as true common carriers.

Relaxing the ban on cable/telco cross-ownership can prevent unjustified competing systems, while providing maximum choice, better service and lower prices to customers. Such accommodations are particularly likely to result as existing cable systems reach the end of their useful life; the opportunity will be excellent for a cable/telco combination to install a new multipurpose fibre-based broadband delivery system. At the same time, if the market will support more than one broadband system, that, too, will be allowed to develop.

Empirical analysis

Economic theory is clear as to the benefits of competition.[12] Most importantly, competition should result in lower prices. In addition, competition should result in improved service quality or more diverse price–quality choices from the customer's point of view, although this is more difficult to measure objectively.

Since there are a small number of jurisdictions with competing cable television systems, it is possible to measure whether customers in these areas with competition receive the expected benefits.[13] If they do benefit, these results will confirm the predictions of economic theory and will support procompetitive cable television policy recommendations.

The methodology for such a study is to compare areas with competitive and non-competitive cable companies. The objective is to identify jurisdictions which are similar in most respects except for the presence or absence of competition. Then, controlling for other influences, it is possible to measure the extent to which, for example, price is lower for the cable systems with competition than for those cable systems without competition.[14]

Table 1 lists the matched cities and cable companies for the competitive and non-competitive sample. There is a larger sample of 47 firms in 19 pairs of markets and a smaller sample of 35 firms in 14 pairs of markets. The smaller sample is useful as a check on the larger sample; some of the firms in the larger sample operate in both competitive and non-competitive areas in a locality, and it is difficult to obtain reliable data, other than price data, specific to each area. The smaller sample eliminates these firms and markets where the data may not be sufficiently reliable.[15]

In addition to competition having an effect on price, cost considerations and the quality of the service may also affect price. An older system and a greater density of customers may both result in lower costs

[12]For a description of the industry and some theoretical analyses, see for example Thomas W. Hazlett, 'Duopolistic competition in cable television: implications for public policy', *Yale Journal on Regulation*, Vol 7, pp 65–148 (including a response by Albert K. Smiley and reply by Hazlett; and Harry M. Shooshan III, 'Cable television: promoting a competitive industry structure', in Paula R. Newberg, ed, *New Directions in Telecommunications Policy*, Duke University Press, Durham, NC, 1989.

[13]Hazlett suggests that only in about 1–3% of all US markets does a cable firm face competition from another cable firm or from a multichannel microwave competitor. See Thomas W. Hazlett, 'Should telephone companies provide cable TV?', *Regulation*, Winter 1990, p 77.

[14]Primeaux, for example, uses such an approach to study electricity prices. See Walter J. Primeaux, Jr, 'Estimate of the price effect of competition: the case of electricity', *Resources and Energy*, Vol 7, 1985, pp 325–340.

[15]This sample is the group of firms from 'Cable rates in competitive and non-competitive markets', *Consumers' Research*, May 1990, p 10, for which data are available for all the variables in the study.

Table 1. List of cable companies.

Competitive	Non-competitive
1 Chula Vista, CA Cox Cable Ultronics	1 Chula Vista, CA Cox Cable
2 Sacramento, CA Pacific Select TV	2 Sacramento, CA Viacom Cablevision
3 Orange County, FL Cablevision Ind	3 Orange County, FL Cablevision of Central Florida Cablevision Ind
4 Orlando, FL Cablevision of Central Florida	4 Ft Lauderdale, FL Selkirk Communications
5 Vidalia, GA TCI Southland	5 Louisville, GA TelleScripps
6 Warner Robbins AFB, GA Cox Cable	6 Macon, GA Cox Cable
7 Boone County, KY Storer	7 Covington, KY Storer
8 Frankfort, KY Community Cablevision	8 Lexington, KY TeleCable
9 Glasgow, KY TeleScripps Glasgow EPB	9 Bowling Green, KY Storer
10 Monroe, MI Toledo Blade	10 Adrian, MI Westmarc
11 Omaha, NE Cox Cable	11 Lincoln, NE Cablevision
12 Hillsboro, NC Cablevision Industries	12 Carrboro, NC Albert Cable
13 Paramus, NJ Cablevision UA Cablesystems	13 Palisades Park, NJ Vision Cable TV
14 Cleveland, OH North Coast TBA	14 Akron, OH Warner Amex Cable
15 Allentown, PA Twin-County Trans Video Service Electric	15 Reading, PA Berks Cable
16 Pottsville, PA Warner Wire Teleview	16 Lebanon, PA Valley Video Service
17 Henderson, TN Multivision	17 Jackson, TN Tribune Cable
18 Carollton, TX Storer	18 Addison, TX Storer
19 Sandy, UT TCI Insight Cablevision	19 Ogden, UT Community TV of Utah

Notes: 19-market sample: 27 competitive, 20 non-competitive.
14-market sample: 21 competitive, 14 non-competitive.
The 14-market sample omits markets 1, 3, 6, 7 and 18 from the 19-market sample.

and prices. The number and quality of channels provided by the cable system should also affect the price that the cable company is able to charge.

The following regression model can be used to estimate these relationships.

$$\text{PRICE} = F(\text{COMP, DENSITY, AGE, SATCHAN/TOTCHAN/MAJCHAN}) \quad (1)$$

where:

PRICE = monthly basic cable price[16] for the most comprehensive service that does not include pay movie channels;
COMP = 1 if competitive, 0 otherwise;
DENSITY = homes passed per mile of cable;
AGE = age of the system in months;
SATCHAN = the number of satellite channels included in basic service;

[16]From *ibid.*

Table 2. Regression results, 19-market sample.

Variable	Dependent variable		
	PRICE	*PRICE*	*PRICE*
COMP	–3.28[a]	–3.33[a]	–3.24[a]
DENSITY	–0.0000418	–0.0000525	–0.0000327
LDENSITY			
AGE	–0.0000776	–0.0000881	–0.0000666
LAGE			
SATCHAN	0.0651		
LSATCHAN			
TOTCHAN		0.0664	
LTOTCHAN			
MAJCHAN			0.22445[c]
LMAJCHAN			
CONSTANT	16.56[a]	16.02[a]	13.88[a]
Adj R^2	0.243	0.250	0.247
F-stat	4.69[a]	4.84[a]	4.60[a]
	LPRICE	*LPRICE*	*LPRICE*
COMP	–0.248[a]	–0.259[a]	–0.255[a]
DENSITY			
LDENSITY	0.0370	0.0339	0.0373
AGE			
LAGE	–0.0101	–0.0092	–0.0079
SATCHAN			
LSATCHAN	0.0516		
TOTCHAN			
LTOTCHAN		0.1462[c]	
MAJCHAN			
LMAJCHAN			0.2712[b]
CONSTANT	2.62[a]	2.29[a]	2.01[a]
Adj R^2	0.203	0.241	0.255
F-stat	3.90[a]	4.65[a]	4.77[a]

[a]Significant at the 1% level or better.
[b]Significant at the 5% level or better.
[c]Significant at the 10% level or better.

TOTCHAN = the number of total channels included in basic service;[17]

MAJCHAN = the number of major satellite channels included in basic service; major channels are those satellite channels received on at least half of the cable systems in the study.

LPRICE, LDENSITY, LAGE, LSATCHAN, LTOTCHAN and LMAJCHAN are logarithms of the respective variables. The sign on the coefficient of the competition variable should be negative, as should the signs on the coefficients of the cost variables (density[18] and age). The sign on the coefficients on the variables for the number of channels (satellite and total) and for the number of quality channels (major channels) should be positive.

The regression model is estimated with a linear and logarithmic specification. The results of the regressions are presented in Table 2 for the larger sample and in Table 3 for the smaller sample.[19] All the regressions are significant, and the significant coefficients are robust across both samples and all of the alternative specifications.

The linear estimation suggests that customers of competitive cable companies pay between $2.94 and $3.33 per month less for service, and this basic service typically includes more channels. The logarithmic estimation suggests elasticities between –0.22 and –0.30. The cost variables are not significant in any regression. This may suggest that costs are a relatively unimportant factor in setting cable prices, within limits. It also suggests that cable companies are charging what they can in the market, given customers' demands, and that relatively small differences in cost will not affect the market price.

Customers do pay more for more channels received as part of their

[17]Data on DENSITY, AGE, SATCHAN and TOTCHAN from *Factbook, The Networks for the Nineties, Cable 1990, Part I*, Warren Publishing, Washington, DC, 1990.

[18]The density hypothesis is that marginal cost will be lower in more dense systems, resulting in lower prices. This may result from shorter distances from the cable to residences, for example. On the other hand, more dense systems may have lower average costs, which would not necessarily result in lower prices.

[19]The following empirical evidence meets Smiley's call for an empirical demonstration that actual competition in cable markets 'effectively constrains rates'. See Hazlett, *op cit*, Ref 12, p 122.

Table 3. Regression results, 14-market sample.

Variable	Dependent variable		
	PRICE	*PRICE*	*PRICE*
COMP	−3.01[a]	−3.08[a]	−2.94[a]
DENSITY	−0.00011	−0.000088	−0.000089
LDENSITY			
AGE	−0.000077	−0.00012	−0.00012
LAGE			
SATCHAN	0.1114[c]		
LSATCHAN			
TOTCHAN		0.0869[c]	
LTOTCHAN			
MAJCHAN			0.2102[c]
LMAJCHAN			
CONSTANT	15.77[b]	15.73[a]	14.79[b]
Adj R^2	0.303	0.230	0.250
F-stat	4.81[a]	4.74[a]	3.75[a]
	LPRICE	*LPRICE*	*LPRICE*
COMP	−0.222[a]	−0.298[a]	−0.233[a]
DENSITY			
LDENSITY	0.0316	0.0429	0.0317
AGE			
LAGE	−0.0215	−0.0485	−0.0285
SATCHAN			
LSATCHAN	0.0760		
TOTCHAN			
LTOTCHAN		0.3229[b]	
MAJCHAN			
LMAJCHAN			0.2505[b]
CONSTANT	2.68[a]	1.97[a]	2.27[a]
Adj R^2	0.202	0.290	0.250
F-stat	3.15[b]	4.58[a]	3.75[a]

[a]Significant at the 1% level or better.
[b]Significant at the 5% level or better.
[c]Significant at the 10% level or better.

basic service, although the evidence on this issue is less forceful. The evidence does suggest that the major channels are more important to customers (they are more willing to pay for them) than are the total number of channels or the number of satellite channels. Customers of these cable companies, all else equal, pay just over $0.20 extra per major channel each month.

The evidence here supports Hazlett's earlier findings regarding the effect of competition on cable television prices.[20] Hazlett found a significantly lower price for basic service and for the Home Box Office pay channel in jurisdictions in which city governments franchised more than one cable firm as compared to those jurisdictions in which a single monopoly franchise was awarded. A statistically significant estimate of $1.82 was reported as the marginal effect of competition on a broader group of services than was used in this study.

Recently, two other studies have considered the issue of cable competition, although they have not looked directly at the relationship between competing cable companies and the price paid by customers for cable service. For example, Dertouzos and Wildman analysed 340 cable systems and found that five or more off-air broadcast signals provided sufficient competition for cable.[21] They found that per-channel prices were 16% lower in markets with five or more off-air broadcast signals. Crandall analysed 2752 cable systems and found that each incremental off-air broadcast signals lowered basic cable prices until five broadcast signals were available, at which point there was no incremental effect on basic cable prices.[22] These two studies found that the number of off-air signals affected the price of basic cable service, while the study reported here finds that the presence of competing cable systems affects the price of basic cable service.

[20]See Thomas W. Hazlett, 'Competition *v* franchise monopoly in cable television', *Contemporary Policy Issues*, Vol 80, 1986.
[21]James N. Dertouzos and Steven S. Wildman, 'Competitive effects of broadcast signals on cable', paper prepared for the National Cable Television Association, 22 February 1990.
[22]Robert Crandall, 'Regulation, competition and cable performance', paper prepared for Tele-Communications, Inc, 6 April 1990.

Conclusions

The analysis presented here is consistent with competitive hypotheses: competition results in lower prices. This also suggests that the most effective restraint on cable prices will come from competition and not from various regulatory schemes which may not reduce prices and in the past have restricted service offerings.

The cable bill recently passed in the US House of Representatives,[23] for example, does not allow for truly competing cable systems which could restrain, and probably reduce, prices, although there is some mandatory resale of programming. In addition, the price regulation which it authorizes for off-air, public broadcasting and community access channels probably does not cover the services which are driving cable television value (and price) in the eyes of customers. The analysis here suggests that what cable customers may care about are the major satellite channels, and to the extent that there are cable complaints[24] the House legislation is not likely to address them. At the same time it is hard to be enthusiastic about extending the concept of basic telecommunications, with all of its difficulties, to the cable industry. This will surely lead to endless discussion of the public interest, the proper definition of basic services and fears of cross-subsidization.

Competition in cable television may lead to more than one broadband system. While a cursory analysis might suggest that there should be only one broadband provider, perhaps leasing space to information or programming services, a closer look calls this conclusion into question. For example, each of three long-distance telephone companies has enough capacity to serve all of the market, yet the benefits of competition are sufficiently great that this market structure is not questioned. Broadband may, in fact, develop in the same manner. Policy should be designed to ensure that competition is allowed and that the market functions to answer the market structure question efficiently. Competition and markets should be viewed as a discovery process, ultimately determining how many broadband providers there will be. While there is still a role for policy and regulation, it should be implemented within this market context.

Circumstances in the telecommunications and cable industries are creating the need for a resolution of various cable/telco issues. With increasing competition, old facilities and customers demanding services that cannot be provided with current equipment, policy must be clarified. Protecting a monopoly, no matter how or of what type, is usually poor policy, designed to serve not customers but owners of a monopoly service or franchise. Policy makers should be particularly wary of arguments that such restrictions to competition will result in good service, low prices or infrastructure development. There is little evidence to suggest that this is the case, and much to suggest that it is not.

In this context, blocking entry into telecommunications or into cable is likely to be poor policy. The cable/telco cross-ownership ban should probably be repealed, additional entry should be allowed into cable, mergers between cable companies and telcos may be advantageous, and entry into telecommunications is desirable. This position is becoming increasingly widely held.[25] There are many examples of the type of services which may eventually be available.[26] A combination of demand by customers coupled with advances by suppliers will allow the market to determine the level of broadband services and network deployment

[23]Mary Lu Carnevale, 'House passes bill to limit cable-TV fees', *Wall Street Journal*, 11 September 1990, p A4.

[24]United States General Accounting Office, *Telecommunications: Follow-Up National Survey of Cable Television Rates*, GAO/RCED-90-199, Government Printing Office, Washington, DC, June 1990.

[25]See for example Hazlett, *op cit*, Ref 13, and 'US conference of mayors back telco entry into cable TV with safeguards, franchise', *Telecommunications Reports*, 26 June 1989, p 35, as well as the FCC and NTIA.

[26]See for example John Markoff, 'Here comes the fiber-optic home', *New York Times*, 3 November 1989, p F1.

that is appropriate for the USA. International developments will provide additional information to suppliers and customers which will help them determine their desires.

Regulatory barriers have little or no place in these developments. Entry can often be used as an alternative to regulation, as in the case of cable companies. Both the FCC and NTIA appear to be giving strong consideration to the benefits of increased competition and reduced regulatory restrictions. Such policies, if implemented, could allow the USA to continue to provide superior telecommunications and video services efficiently over a modern broadband network.