



NEMZETI HÍRKÖZLÉSI HATÓSÁG

Comprehensive forward-looking analysis of the cable programme distribution market to present the rationale and possibility of ex ante and ex post regulation

Prepared with the involvement of Telkes Tanácsadó ZRt., Colosseum
Budapest Kft. and Ariosz Kft.

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TABLE OF CONTENTS

PREFACE	3
1 INTRODUCTION	4
1.1 Background	4
1.2 CATV Project objectives.....	4
1.3 CATV Project methodology and sources	4
1.4 Importance of the CATV sector	5
2 REVIEW OF THE CATV MARKET SITUATION	9
2.1 Consumer interests	11
2.2 Competition problems	22
2.3 Industry interests	32
3 PROSPECTS: ORGANIC EVOLUTION PATH	37
3.1 Impact on consumer problems.....	37
3.2 Impact on competition problems	49
3.3 Impacts on the industry interest.....	50
4 REVIEW OF THE REGULATORY TOOLS	51
4.1 Soft law tools.....	51
4.2 Ex post market regulation.....	53
4.3 Ex ante market regulation.....	55
5 CONSULTATION QUESTIONS	66

PREFACE

To enable the preparation of its regulatory and communication policy decisions in September 2005 the National Communications Authority (NCAH) launched a project for market survey, analysis and evaluation of the cable television sector (CATV Project). The recently closed project gave the most comprehensive and thorough picture so far about the cable television (CATV) sector in Hungary, the current situation and estimated development of the market, the requirements and goals of the demand side (residential customers) and supply side (operators) and their attitudes towards 'multiplay' services and digitalisation.

It is my conviction that the major precondition to appropriate transparent and predictable regulation is that the regulator should have the most comprehensive information about the given market. Regulation based on such information positively contributes to balanced operation and development of the market, improvement of customer satisfaction and at the same time to promoting investment and innovation. In the CATV Project we used all available tools and sources to have the most precise and objective picture possible about the cable television services market to enable making the most informed decision on the necessity and extent of ex ante regulatory action.

Hereby I would like to thank all operators who scrupulously fulfilled their data supply obligation and made available their consultants to us for interviews. The valuable feedback and comments received from them greatly helped us get to know the market. However such analysis of the situation may only be complete with feedback on opinions and proposals of CATV operators and other relevant market players and this way it can be used in order to develop an efficient regulatory policy for the programme distribution sector which can appropriately reflect interests of varying time span and nature. Practically this is what we consider the primary objective of this consultation.

This consultation document places emphasis on analysis of the situation, expected future trends and review of available regulatory tools. In connection with this process we ask you to give your comments on the analysis of the situation and forecast prepared under the CATV Project and on the analysis of tools available to the authority and state your opinion about the regulatory tools which would be reasonable in the area of wireline programme distribution.

We are awaiting your comments, opinions and questions about this document by 15 June 2006 by e-mail to the kabel@nhh.hu address by completing the cover sheet downloaded from NCAH's website. To enable easier processing please deliver your answers with the structure defined in Chapter 5 herein.



Dániel Pataki
President

1 INTRODUCTION

1.1 Background

1. To enable the preparation of its regulatory and communications policy decisions in 2005 the National Communications Authority launched a project, in harmony with the provisions of the Electronic Communications Act (ECA¹), for market survey, analysis of the situation and evaluation of the cable (coaxial infrastructure based) programme distribution market to deliver a thorough comprehensive forward-looking market analysis and gather information for the wireline programme distribution related regulatory policy. The consortium of Telkes Tanácsadó Zrt., Colosseum Budapest Kft. and Ariosz Kft. won the public procurement procedure invited for the implementation of the CATV Project and performed the task from 8 August 2005 to 28 February 2006. The Project Steering Committee included in addition to two members of NCAH's Board also high level officials of the Ministry of Information Technology and Communications (IHM) and the Hungarian Competition Authority (GVH).

1.2 CATV Project objectives

2. The major task of the CATV Project was to perform a competition analysis of the Hungarian wireline programme distribution sector to deliver information for regulatory impact assessment and regulatory decisions. The objective of the project was also to enlarge the scope of data available on the Hungarian CATV sector and – in order to obtain the most information about the current situation and expected development of the market and the requirements of the market players – to conduct an empirical survey of the demand and supply side of the cable television market according to the following criteria:
 - market structure, its players and probable trends of changes
 - decision-making mechanisms of the market players
 - level of development, share and potential of the sector within the electronic communications sector
 - other conditions which influence the market
 - review of regulator's room for manoeuvring
 - analysis of markets interconnected along the value chain (e.g. content service market)
 - other platforms of media communication and programme distribution
 - market of voice, data and internet services provided on cable infrastructure

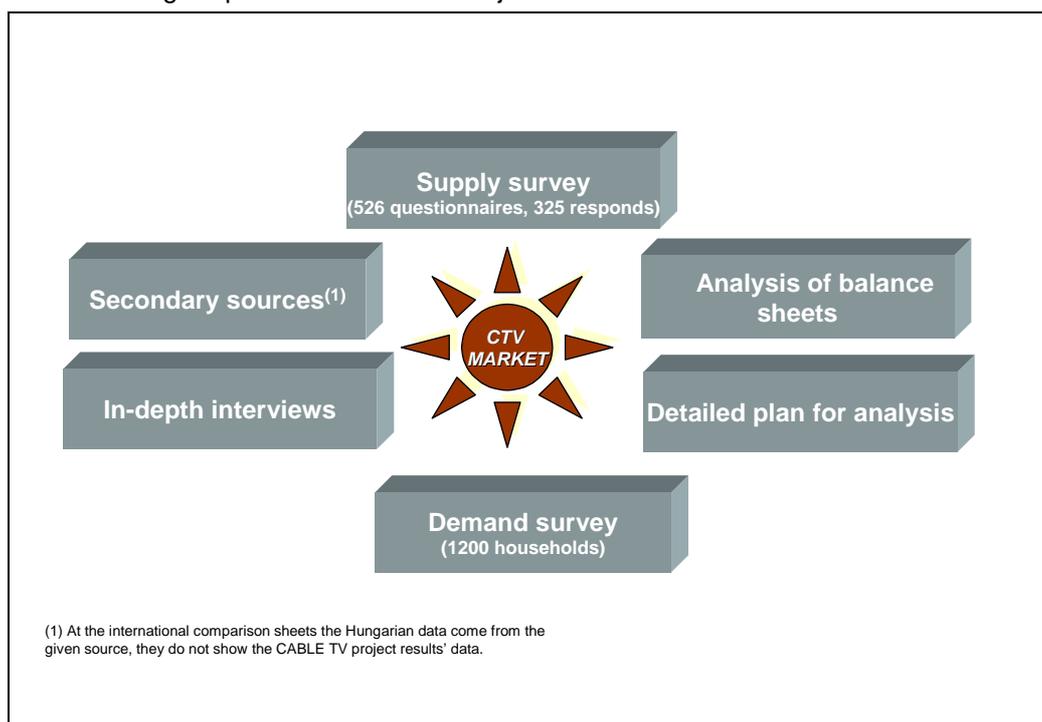
1.3 CATV Project methodology and sources

3. To achieve the above objectives of the CATV Project we used various methodological tools ranging from primary research to secondary analyses. The project summarised the determining international trends and evolution prospects of wireline programme distribution, the media market and broadcast transmission in broader sense with special regard to the strengthening convergence processes and multiplatform competition.

¹ Act C of 2003 on electronic communications

4. In the process of preparatory analysis we conducted a comprehensive analytical review of the regulatory tools of wireline programme distribution based on the CATV value chain on the basis of Hungarian and international experiences.
5. The preparatory analyses of the project focused on a competition analysis of the market of wireline programme distribution in Hungary, systematic gathering and structured analysis of CATV market information. These were conducted on the basis of empirical surveys, structured deep interviews and secondary analysis.

Figure 1: Methodological pillars of the CATV Project



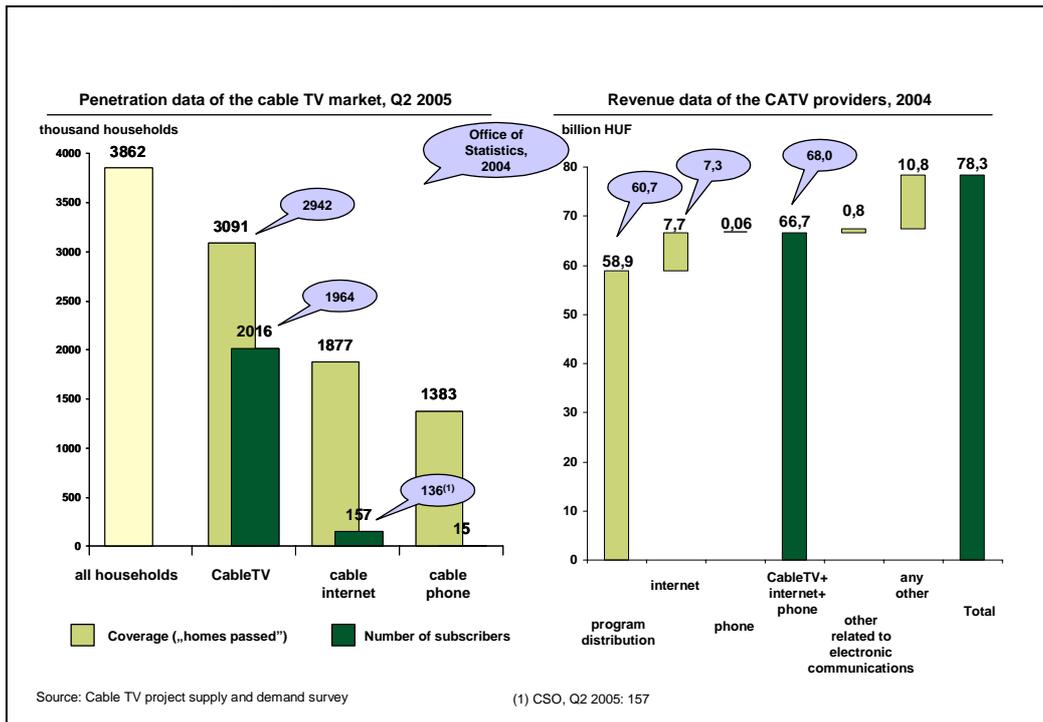
1.4 Importance of the CATV sector

6. The primary importance of the CATV industry lies on the one hand in its leading position in programme delivery, on the other hand in its role played in strengthening the infrastructure-based competition.

Today in Hungary cable television is the most widely used programme delivery platform. According to surveys conducted by the CATV Project in the second half of 2005 the estimated subscriber base was 2,015,600 households, while the number of homes passed by this platform was 3,091,000. This means that currently in Hungary about 52 percent of the households and 53.5 percent of the households with television subscribe to CATV (CATV penetration) and the service is available to about 80 percent of the households (homes passed)².

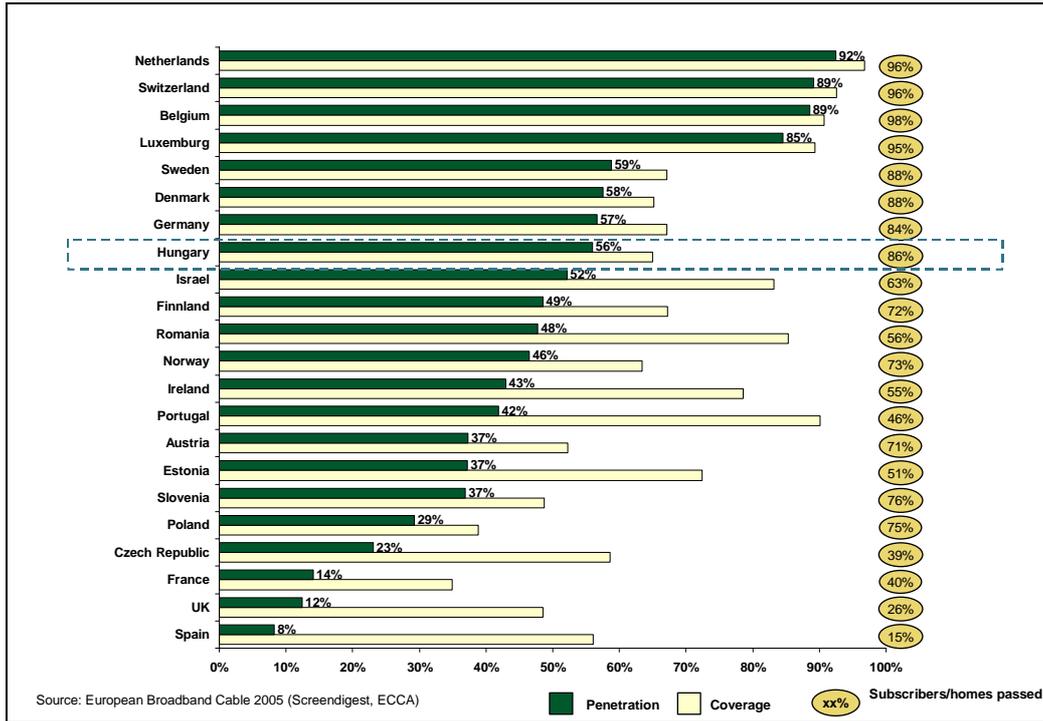
² On the basis of secondary sources currently in Hungary about 2.8 – 3.0 million households (72 – 78%) live in an area where cable television service can be used (home passed). The number of actual subscribers is estimated to amount to 2.1 – 2.3 million (54 – 59%). So the supply-side and demand-side survey conducted under the project can confirm in respect of the homes passed the higher, in respect of the number of subscribers the lower figures.

Figure 2: CATV market key figures



7. Before the project was closed in January 2006 KSH (Central Statistical Office) published *Cable television services in Hungary, 2003-2004* which included also indicators which can be compared with the above presented key figures. In respect of homes passed with cable television and subscriber numbers the data of this research and KSH are well matching.
8. CATV penetration and homes passed in Hungary are considered to be definitely high by international comparison too. On the basis of penetration and homes passed figures traditionally three country groups are distinguished:
 - Countries with high rate of cable networks (more than 50% of the households are subscribers): in addition to the Benelux countries and Scandinavian countries this group includes also Germany, Hungary and Switzerland.
 - The countries practically without cable networks or very low number of viewers (less than 20% of the households): primarily the Mediterranean Sea countries and France and the United Kingdom.
 - Countries between these two categories where cable network is present approximately in the same share as the other programme delivery platforms.

Figure 3: Penetration³ and homes passed⁴ in the ECCA⁵ countries, end of 2004



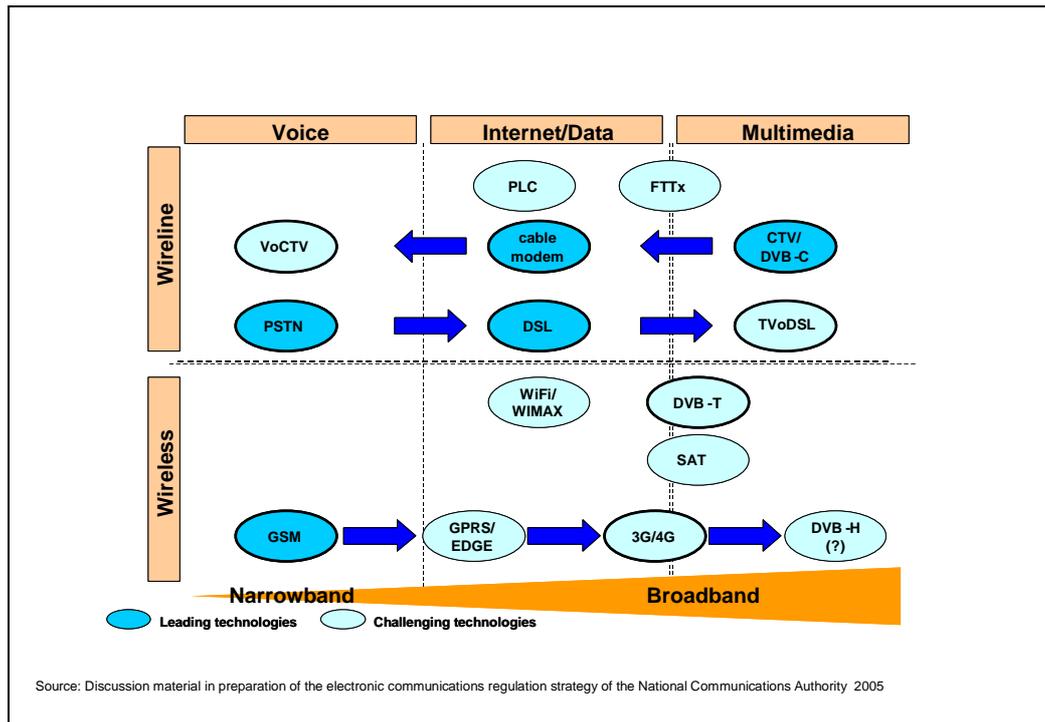
9. In respect of the business viability of the cable television service the utilisation rate of the networks constructed is more important than the number of homes passed or penetration. In this respect Hungary is also in a good position by international comparison: belongs to the upper medium group of countries with high CATV penetration.
10. In the long term CATV networks can play a major role not only in programme delivery, but also in data and voice services. With this role they can actually contribute to the favourable CATV penetration and homes passed figures and lead to strengthening of infrastructure-based competition.
11. A determining trend of the triple play marketplace is that (traditional) telecommunications operators started to move towards television too (IPTV) while cable operators are open to cable internet and VoIP. A similar trend is expected in respect of the mobile platform only in the medium term (3 – 5 years). Satellite and terrestrial broadcasters may only strengthen competition in even longer term and only in the audiovisual segment and in certain well-defined value-added services.

³ Number of cable network subscribers as a percentage of households

⁴ Homes passed as a percentage of households

⁵ European Cable Communication Association

Figure 4: Competition in the triple play marketplace



12. Triple play means the three-component package which includes fast internet access, telephone service and television broadcasting. Currently cable operators have gone the farthest in triple play offerings and for them the only real competitor even in the medium term can be ADSL (IPTV) which is, like for CATV operators:
- generally positioned for cities and urban areas,
 - is already currently making efforts to widen its product choice and stop reduction of its revenues through generation of triple play offers.

According to surveys by the CATV Project in the second half of 2005 in Hungary there were 157,000 CATV internet subscribers (about 4 percent of all households) and this service was accessible to about 1.8 – 1.9 million households (about 60 percent of CATV households). CATV telephone service was launched only in 2005, notwithstanding in a few months it reached already 14,500 subscribers and this service is accessible for about 45% of the CATV households. In the medium term we can in any way reckon with improvement of CATV internet and telephone offers and increasing subscriber base and homes passed rate. This is justified by business, strategic and marketing considerations.

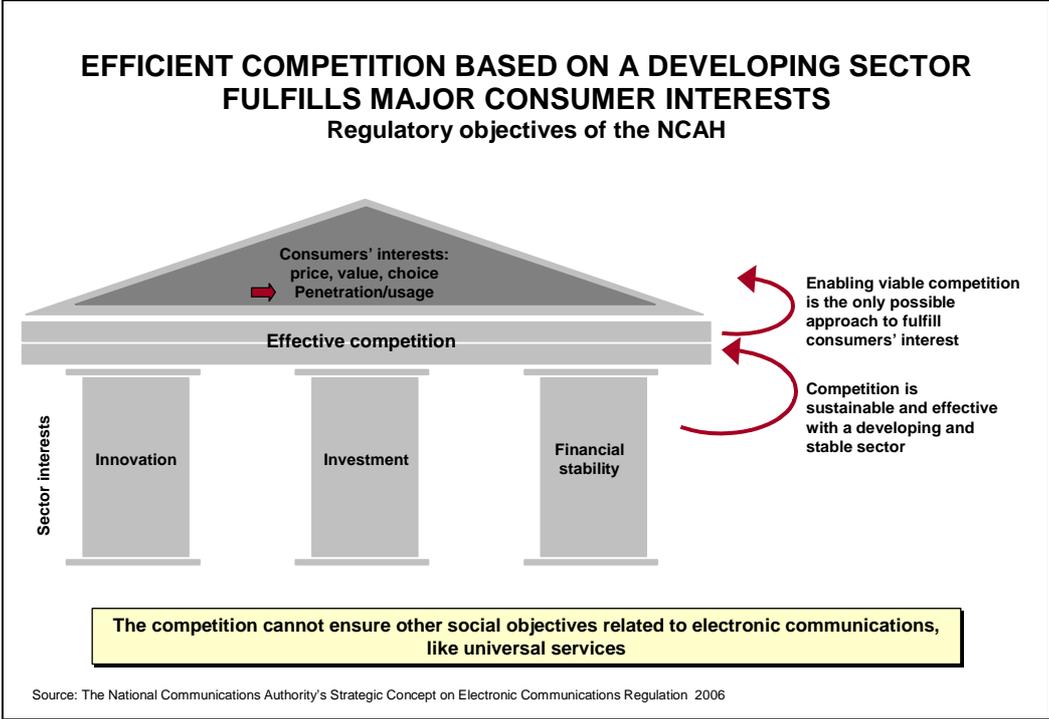
13. On the international scene widening the service offerings seems to be a promising means to reduce the decrease in ARPU (average revenue per user) caused by competition. Additionally the market players can develop targeted offers through combination of services with which they can better distinguish themselves from competitors. Strengthening subscriber loyalty is important similarly for marketing reasons.
14. International trends show that operators experience much less churn among subscribers who order a multi-component service package. This is partly due to customer satisfaction, partly because the price of multi-component packages is generally lower than subscribing separately to each component. Another fact that strengthens loyalty is that with the triple play offer the operators can transmit an image of innovative and modern market player.

2 REVIEW OF THE CATV MARKET SITUATION

15. Thorough examination and evaluation of the potential target areas which justify the regulatory intervention is a central element of the regulatory impact assessment. This work phase basically determines the scope of problems to be managed and this way also the direction of the regulatory impact assessment. The exactitude of evaluation of the situation influences to a great extent the quality of the impact assessment. The primary underlying reason is that the regulatory impact assessment functions with regard to its internal logic as a “multi-step filtering system” whose first phase is the consideration of how the potential measures contribute to changing the situation of the regulatory target areas. When the regulatory objectives and problems are not appropriately elaborated there is a risk that in-depth analysis and - in some cases - application of certain intervention scenarios is carried out unreasonably.

16. When the target areas for intervention are identified and considered attention must be paid to ensuring that the regulatory impact assessment is “strategically embedded”. The structure of assessment of the situation must basically start from the general strategic orientation of the regulatory body. With this approach we can avoid that identification of the regulatory objectives is primarily based only on the perceived problems and in a given case a proposal for a regulatory intervention is made which is not consistent with the higher level strategic goals.

Figure 5: Targets of NCAH's regulatory strategy



17. Consideration of the potential problems of the CATV sector is based on NCAH's electronic communications regulatory strategy. This provides that the regulatory authority's "the principal direct objective to be fulfilled is the creation of efficient competition. Another component of the objectives is to satisfy consumer interests appearing in low price and high value content of products and services and wide choice offered. The third component of the objectives is the interest of the whole industry which means the totality of implementing three components: high level of innovation ensured in the sector, high intensity of investments made in the sector and financial stability of the sector."
18. In the process of analysis of the situation we review according to the regulatory targets and interpret the CATV sector related regulatory areas considered to be strategically important.

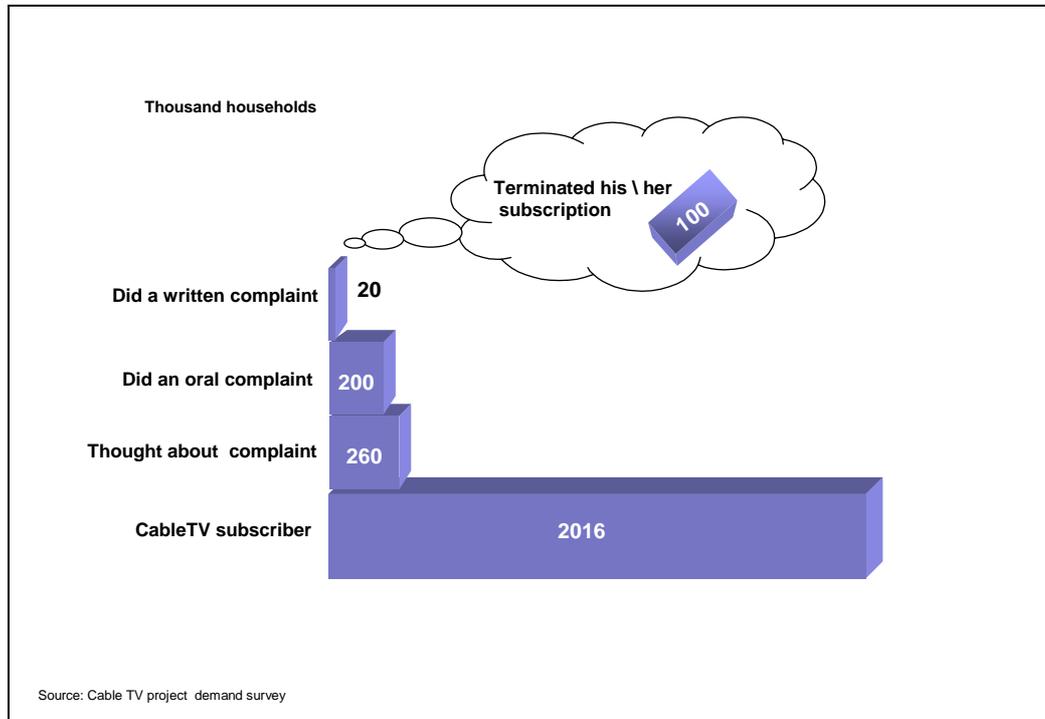
Figure 6: Criteria used for analysis of the situation

Consumer interest	Price	
	Choice	Choice of services
		Service and service provider switch
	Value	Content
		Quality
		Customer's relation
Competition problems	Single market dominance	
	Vertical leveraging	
	Horizontal leveraging	
Sector interest	Innovation	
	Investments	
	Financial stability	

2.1 Consumer interests

19. In general sense almost three quarters of the subscribers (73%) are satisfied with the CATV service, while additional 20 percent have a neutral opinion. According to our estimate only about 100,000 households cancelled so far their CATV subscription in Hungary and only about every 9th-10th subscriber have already considered making a complaint about a parameter of the CATV service.

Figure 7: CATV service “satisfaction stairs”



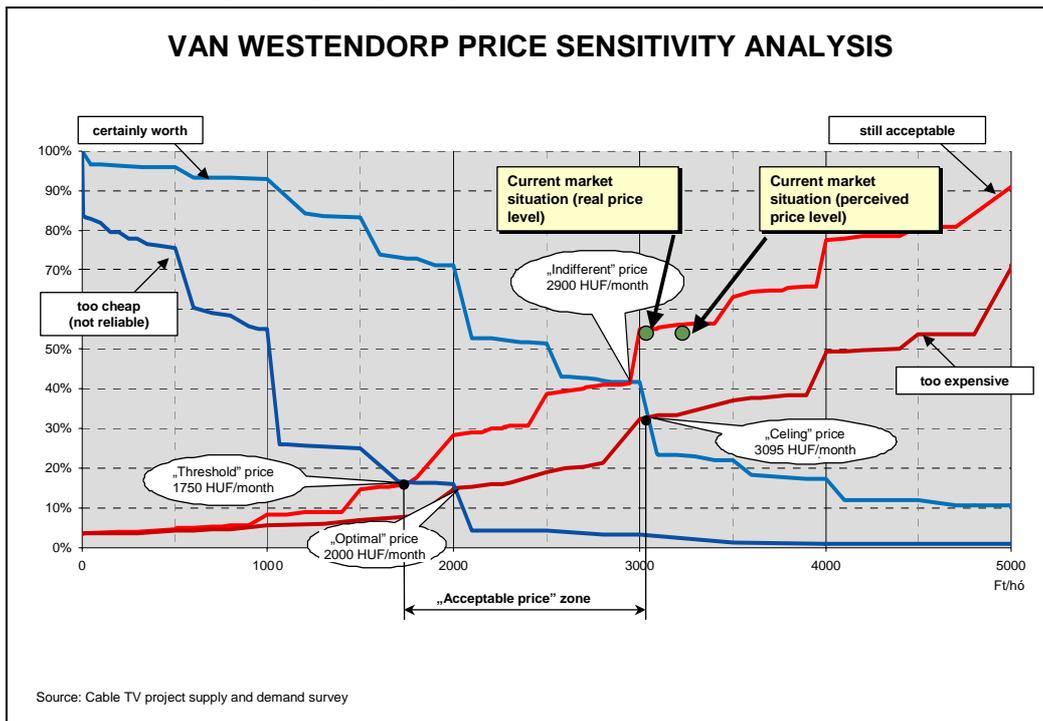
When the consumers' satisfaction is assessed by the regulator it should be emphasised that the assessment is primarily based on the consumers' perception of the given problems.

20. Analysis of the situation of consumers' satisfaction in itself does not reflect how much the given market is free of distortion in respect of competition. The consumption culture, consumers' consciousness and relative weight of a given service within the total consumption of the households and several other individual factors can have a more significant impact on the situation perceived by the consumers than the actual competitive situation.
21. With another approach – based on the experience of the CATV Project – we can declare that measurement of general consumer satisfaction is much more suitable for determining to what extent a potentially dominant operator abuses its position than for determining whether competition problems actually exist on the given market.

2.1.1 CATV service price

22. According to an estimate made in the CATV Project supply survey – notwithstanding the definitely existing methodological uncertainties – in the examined period (2002-2005) CATV service prices increased annually on the average (CAGR) by 16 percent while the annual average inflation rate was 5 percent. According to the result of the Van Westendorp price analysis⁶ notwithstanding the strong price increases the current CATV price level exceeds only slightly the level considered by the consumers to be still acceptable.

Figure 8: Consumers' subjective price perception on the CATV market

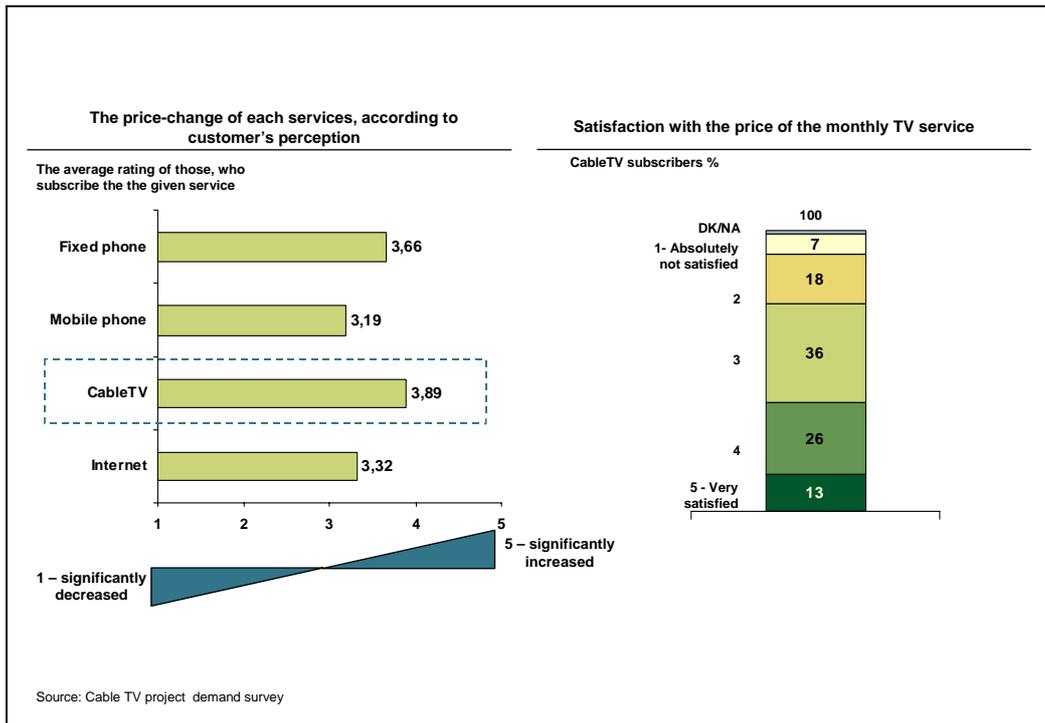


23. The price increase was significant even after filtering out the content costs (corrected net package prices): In 2004 – 2005 about 60 percent of the larger operators' (TOP40) subscribers paid an amount significantly (by one and a half to two times) exceeding the inflation rate for the part of the CATV service beyond the content costs. This ratio is presumably somewhat lower for the total consumer base since smaller operators increased their prices to a lower extent in the examined period.

However the significant price increases are not clearly reflected by the consumers' dissatisfaction with price.

⁶ On the basis of the questions asked in the demand questionnaire we can identify four different prices. "Bottom limit price" means the lowest price under which the respondents do not think to receive appropriate quality. "Optimal price" means the price level where the number of respondents considering the subscription too expensive equals those considering it too cheap. "Indifference price" means the price where the number of customers considering the subscription to have still acceptable price level equals those considering it to have a good price. "Top limit price" means the price level above which the respondents consider cable television subscription too expensive. Professionals are divided over whether the "optimal price" is really the optimal price or rather the "indifference price" would be the best solution for pricing. Presumably in an ideal pricing process the market price should be somewhere between these two levels.

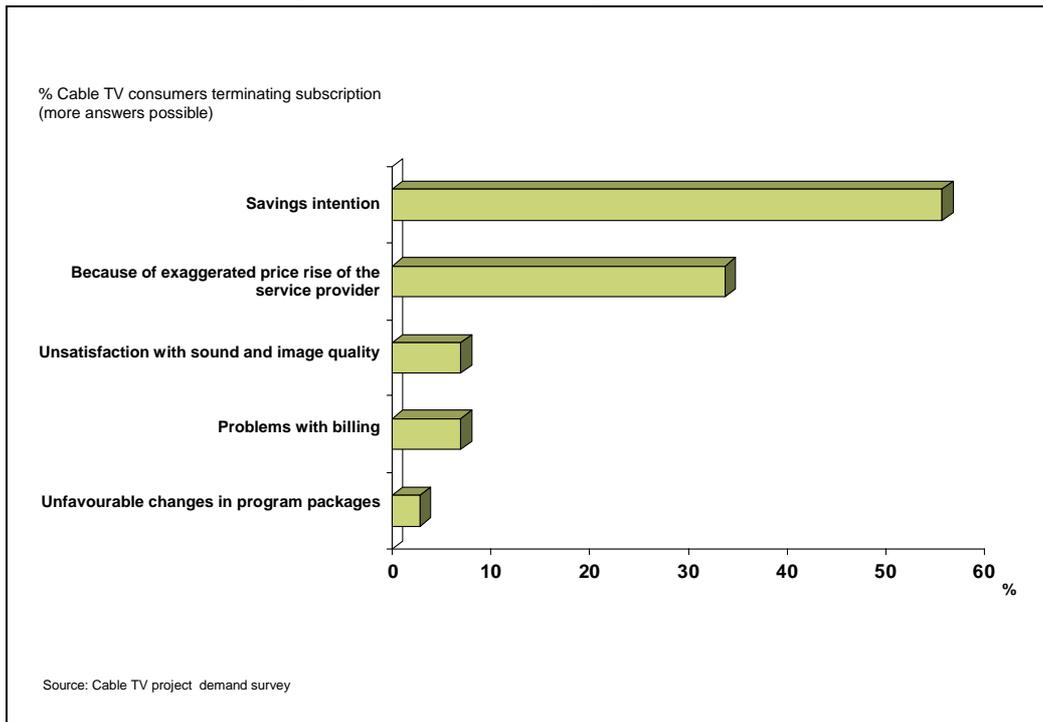
Figure 9: Consumers' general "CATV price satisfaction" indexes



24. Empirical results show that the great majority of consumers are indifferent to subscription fee or consider it still acceptable and proportionate to the value – although the majority feels that the CATV service prices rise to a greater extent than the prices of other communications services⁷.
25. Our estimate is that 25 percent of the consumers are to some extent dissatisfied with price. This means about 500,000 households. At the same time only 25,000 – 30,000 households felt it important to express their objection to price increase in writing or verbally and additional 30,000 – 35,000 (about one third of all cases of cancellation) may have cancelled their CATV service because of the price increase (although another response connected with costs, saving considerations represent 56%).

⁷ In contrast to the consumers' perception various authority analyses show that the price level of the other identified services did not rise over the last few years.

Figure 10: Reason for cancelling cable television subscription



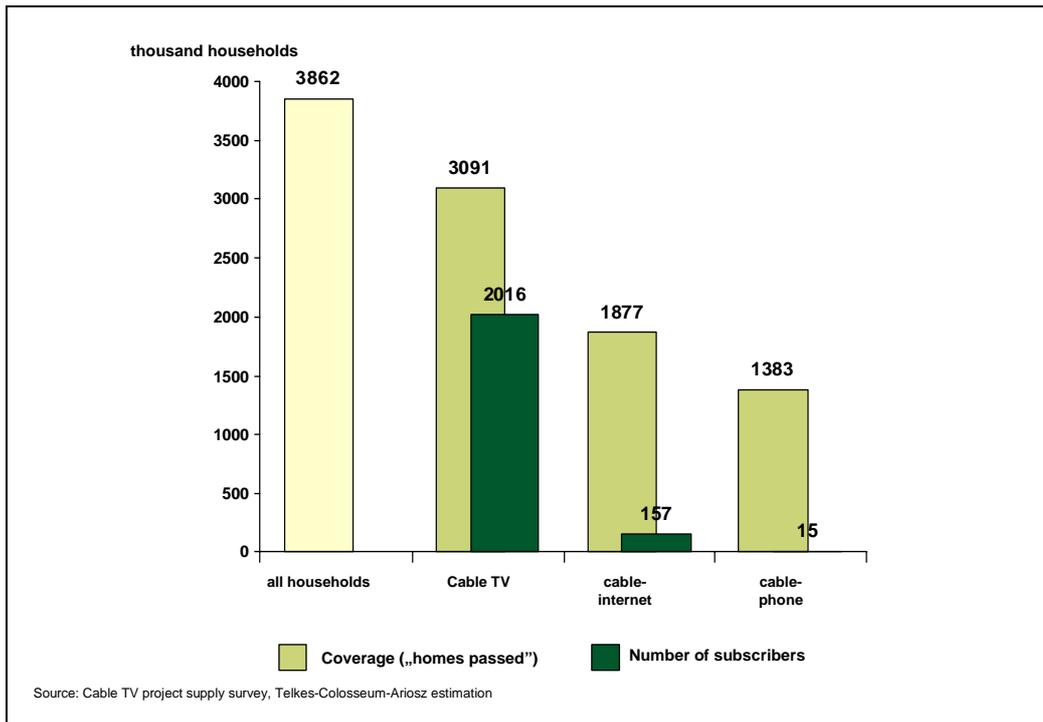
2.1.2 Choice

Service choice

26. The CATV service choice is determined by the national share of homes passed and the technological development (star structure, return channel , digitised) of networks.
27. According to the supply survey figures the share of homes passed with CATV networks is near the maximum level resulting from the town structure: currently one or more CATV network services are available to about 80 percent of households in Hungary. The ratio of subscribers connected to a tree-type network is today below 10 percent, the majority of the subscribers can choose between 2 or more programme packages.

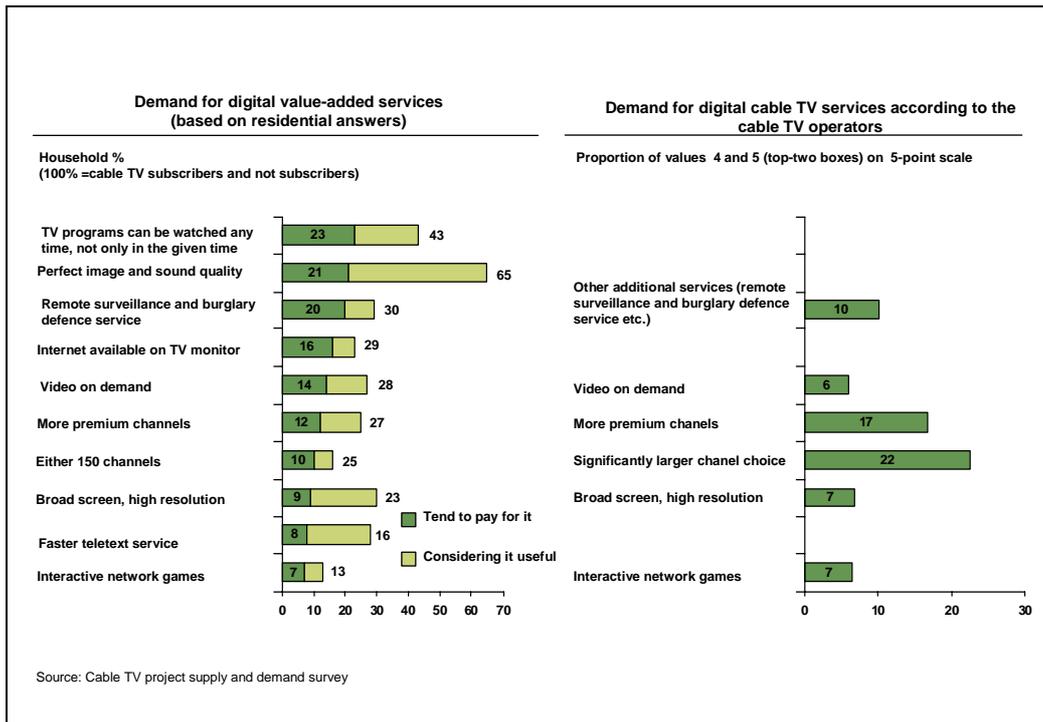
However there is a basic problem with service choice that currently out of the about 3 million homes passed with CATV network almost 1.2 million cannot access broadband CATV internet service. The situation is even worse in respect of telephone service available on cable network: the technological conditions of this service are available only for about 50 percent of the homes passed with CATV network. About one fourth of the households are connected to a digitised network, but the share of DVB-C operators and DVB-C subscribers is currently still minimal.

Figure 11: Key homes passed and penetration indexes on the CATV market, 1H2005



28. Already today there is substantial residential demand for CATV internet and CATV telephone services:
- In mid-2005 the number of CATV internet subscribers was near 160,000 and 14 percent of the homes passed think that they would subscribe to this service within one or two years.
 - Currently the number of CATV telephone subscribers is still low, but within 1 – 2 years out of the homes passed about 100,000 plan to subscribe (11 %).
29. However currently there is no significant residential demand for potential DVB-C services. This assumption is confirmed by both the survey of residential customers and operators.

Figure 12: Residential customers' and operators' opinions about DVB-C demand

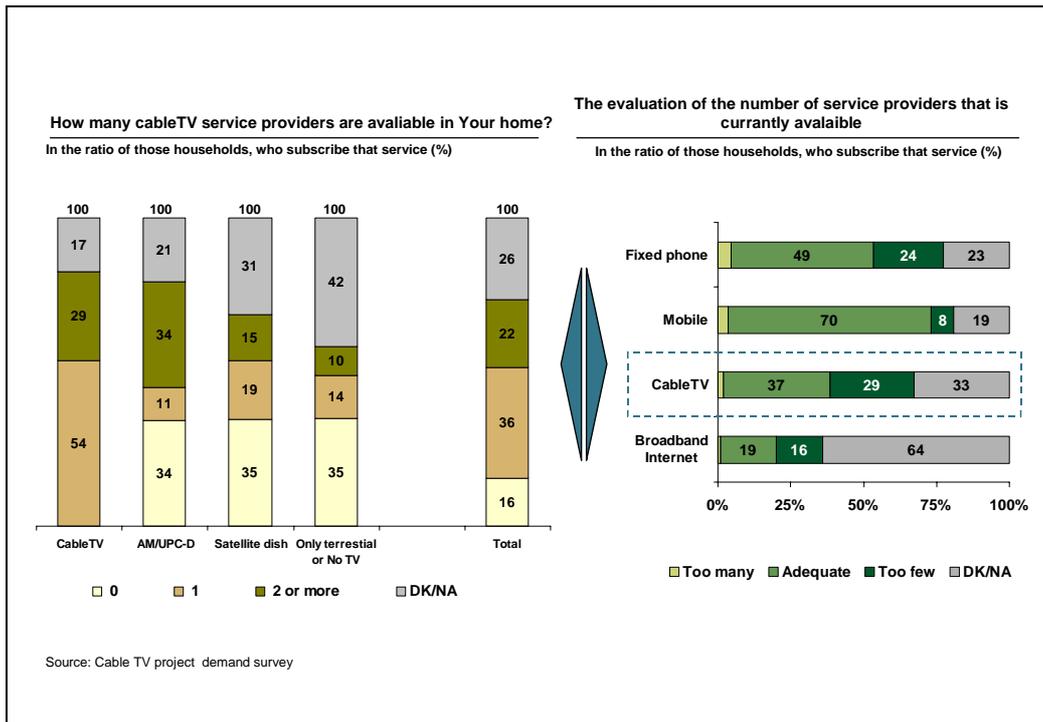


Service and operator switch possibility

There is rather low need of CATV subscribers to switch. However the possibility to switch is also restricted: the number of overlapping networks is low, possibility of substitution is limited.

30. Currently about 20 – 25 percent of the population think that more than one CATV operator is accessible for them, notwithstanding only about 30 percent think that the number of accessible operators is low.
31. On the basis of the supply survey data our view is that all in all the share of overlapping networks is lower than what is perceived by the consumers: nationally it can be around 10 – 15 percent. There is an uncertainty connected with this estimate that often the CATV operators themselves do not have exact information about the parallel networks existing in their service areas.
32. Naturally the estimated 15 percent overlapping between CATV networks is only a theoretical possibility and as such is the logical maximum of overlapping networks. Actual overlapping between operators' networks can be affected by numerous factors. The actual situation could be examined only by street or even by house and household, therefore here we list only the major endogenous (depending on the operator's decision) and exogeneous (beyond the control of the operator) barriers to converting theoretical overlapping to actual parallel service. On the basis of these considerations it is probable that notwithstanding the 15 percent theoretical overlapping the share of parallel networks actually available for users is below 10 percent.

Figure 13: Consumer satisfaction with CATV operator switch possibility



33. Endogenous and exogeneous factors hindering actual parallel access:

1. endogenous factors (business policy decision of the operator of the “challenging” parallel network):

- The connection cost of the given household to the network can in no way ensure payback (high connection costs, trench digging, wall demolition, etc.).
- Connection of the given household would ensure payback only if the customer ordered triple play service but there is no customer demand for such service.
- Connection of the given household would ensure payback but there are no other households in the neighbourhood which would ensure payback, so the operator could not satisfy the potential additional demand and therefore rather does not connect the households which would pay off.
- The operator focuses on increasing the ARPU achieved with the existing subscribers (sale of triple play package, package enlargement, etc.) because according to its calculation new connections would ensure less payback in particular in areas where a competing network is also available.
- The operator has a shortage of funds or concentrates its funds on network modernisation.

2. exogeneous factor (barriers beyond the control of the operator):

- The competing network ensures much better offers therefore there is only a minimum demand of users.
- The municipality makes new connections difficult through administrative means:
 - prohibition of the use of aerial cable
 - problems of issuing building / authority permits
 - historic monument protection and cityscape related requirements
 - requirement of renovating pavements and public areas in the given areas at high costs
- The other residents of the given building do not consent to performance of development works affecting common property parts (e.g. garden).

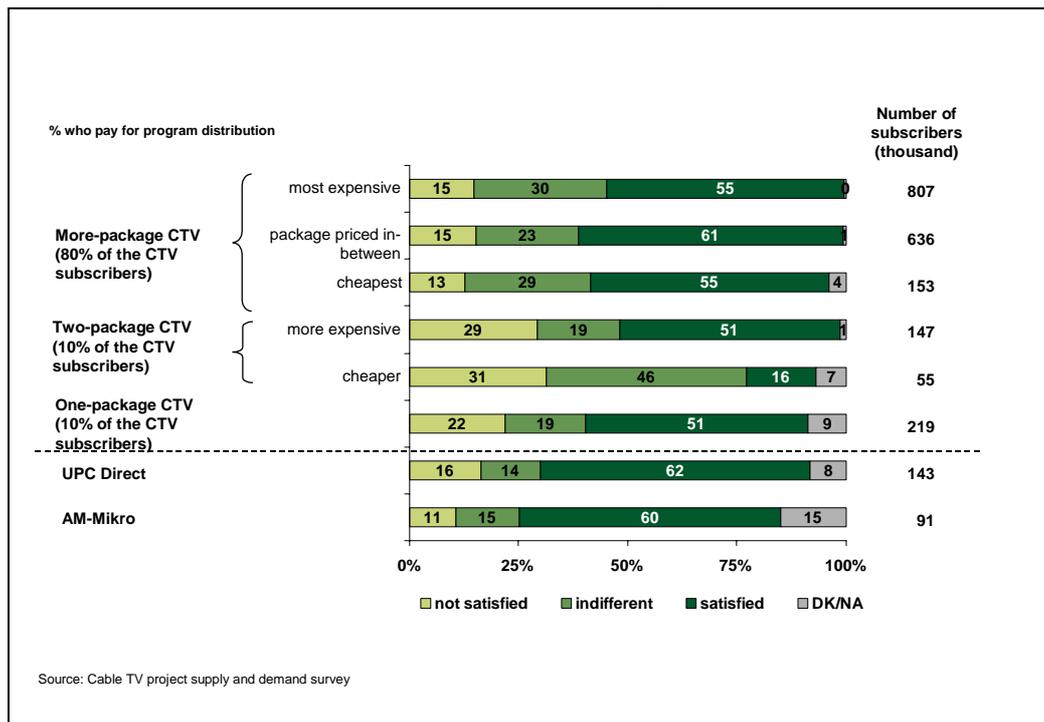
34. However it should be emphasised in connection with the possibility of service and operator switch that the majority of CATV consumers rarely face the situation that there are relatively few overlapping CATV networks and substitution possibility is limited. So far only 14.4 percent of the households subscribing to cable television service have considered at least once to cancel the service. Practically they are those who could have faced the possibility and difficulty of operator switch. It is remarkable that 55.4 percent finally remained with the operator because they wanted to continue using such service and there was no real alternative. This is practically an empirical result confirming the assumptions for limited substitution possibility of CATV service.

2.1.3 Value

Satisfaction with content

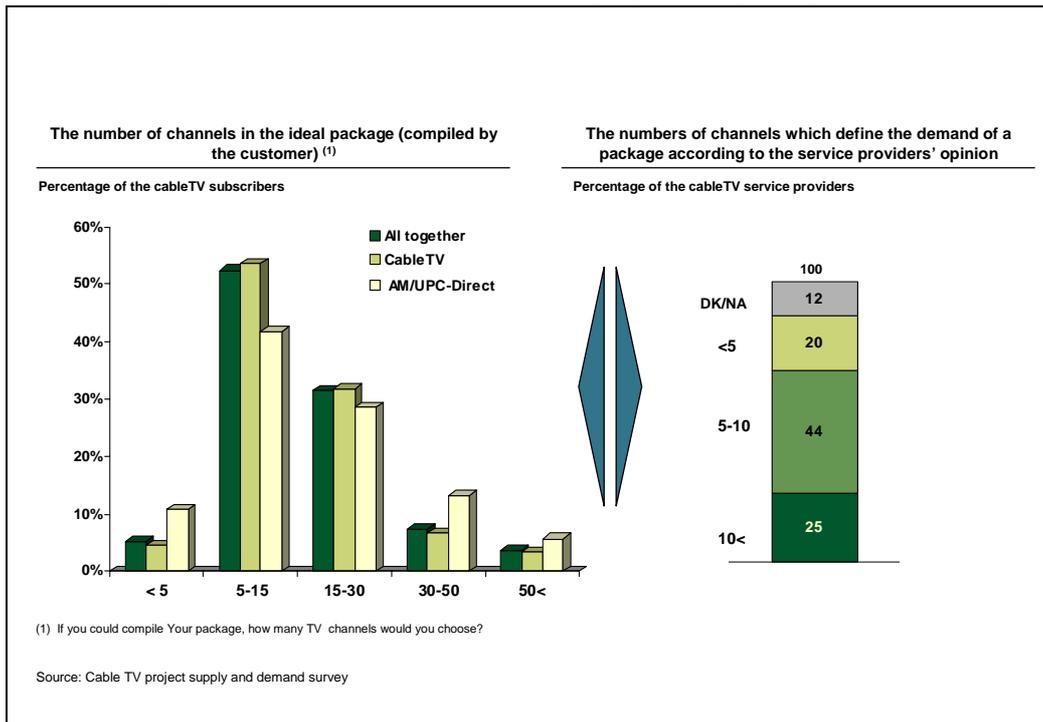
35. According to the demand survey results on the average 56 percent of the subscribers are satisfied and only 16 percent are dissatisfied with the composition of packages. No channel is missed by 70 percent of the consumers and they would very unwillingly renounce only the national commercial broadcasters (RTL Klub, TV2) and the public service broadcasters (MTV1, DUNA TV).

Figure 14: Satisfaction with the composition of channel packages



36. More than half of the consumers would identify less than 15 channels if they could compile their programme package themselves and only one fourth of the operators think that the consumers need more than 25 channels.

Figure 15: How many channels are included in the ideal programme package?



37. Additionally there is a strong commitment to the obtained choice: one third of the CATV subscribers already experienced that the operator removed a programme which he liked from the package which he selected (subscribers of larger operators more often face the situation of losing one of their favourite channels).

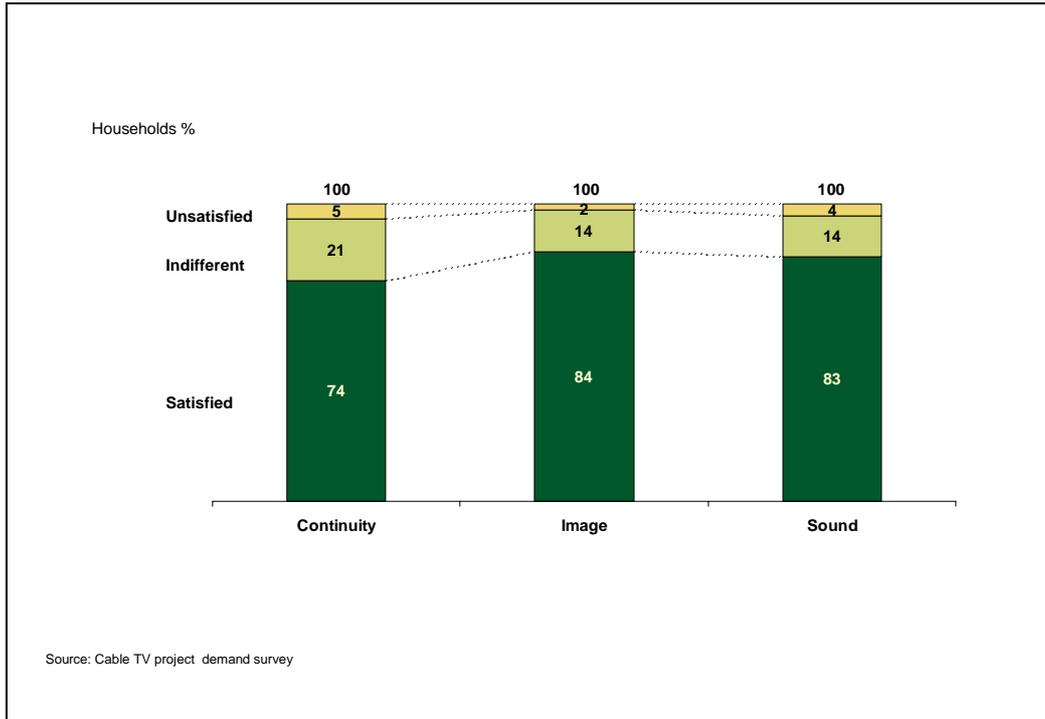
All in all on the basis of an analysis of content choice and demand we assume that on the Hungarian CATV market the reason behind raising the number of channels and making quality replacement is not only the consumer demand but can be also the need to give to the consumers and the Competition Authority justification for the price increase.

Satisfaction with quality

38. Four fifth of the households using this service declared to be satisfied with the parameters of broadcasting, the average rating of the video and audio quality was 4.2 on a scale of 5, continuity of broadcasting obtained just somewhat lower rating.

All in all only 2 – 6 percent of the subscribers are dissatisfied with the key parameters of wireline programme distribution.

Figure 16: Consumer satisfaction with quality

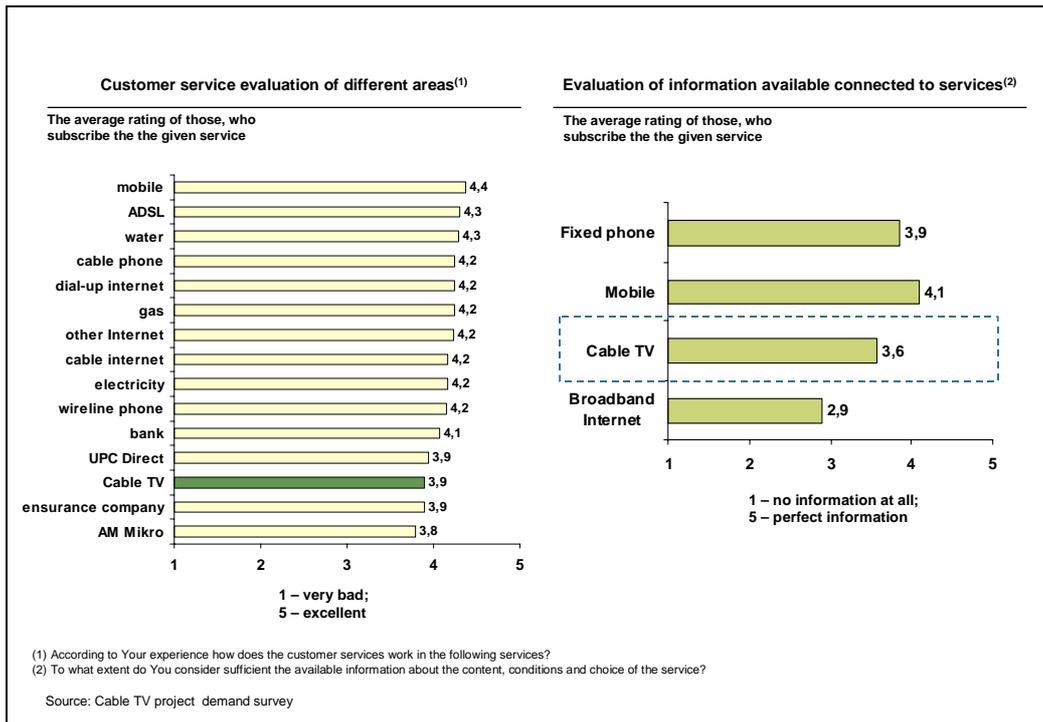


Satisfaction with customer relations

In comparison to other services the rating of the quality of CATV customer services is somewhat lower but still only 14 and 7 percent, respectively, of the subscribers are dissatisfied with the available information and the quality of customer service (answers 1 and 2 on a scale of 5).

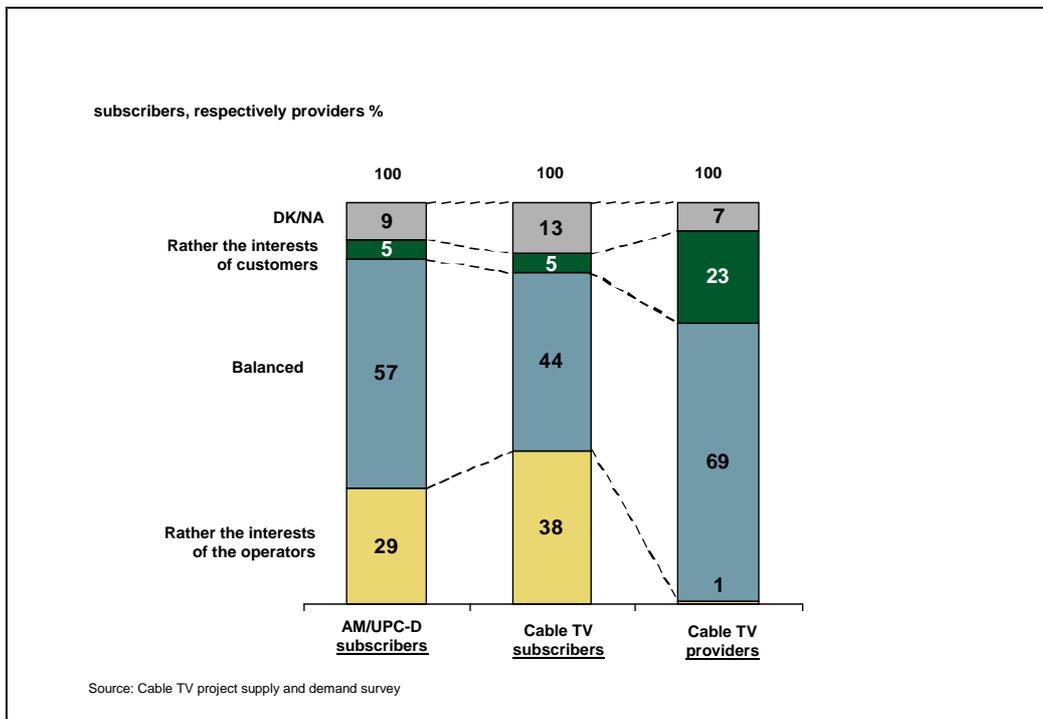
- An analysis of satisfaction with the information connected with the services shows that information connected with mobile telephone services were considered by the households to be the best and most satisfactory, while broadband internet and cable telephone services are at the bottom of the list. Information connected with cable television service obtained an average rating of 3.6 on a scale of 5.

Figure 17: Opinion about information connected with customer care service and services



An assessment of cable operators' General Terms and Conditions shows that almost 40 percent of CATV subscribers and about 30 percent of other pay programme subscribers feel helpless.

Figure 18: Whose interests are best protected by the General Terms and Conditions?



Three quarters of the cable television subscribers would find it desirable that the operator conducts a survey among the subscribers about the planned changes before a decision is made. However only about 20 percent reported to know about such survey.

Figure 19: How much do CATV operators take into consideration the consumers' opinions when their business policy is elaborated?

Cable TV subscribers %

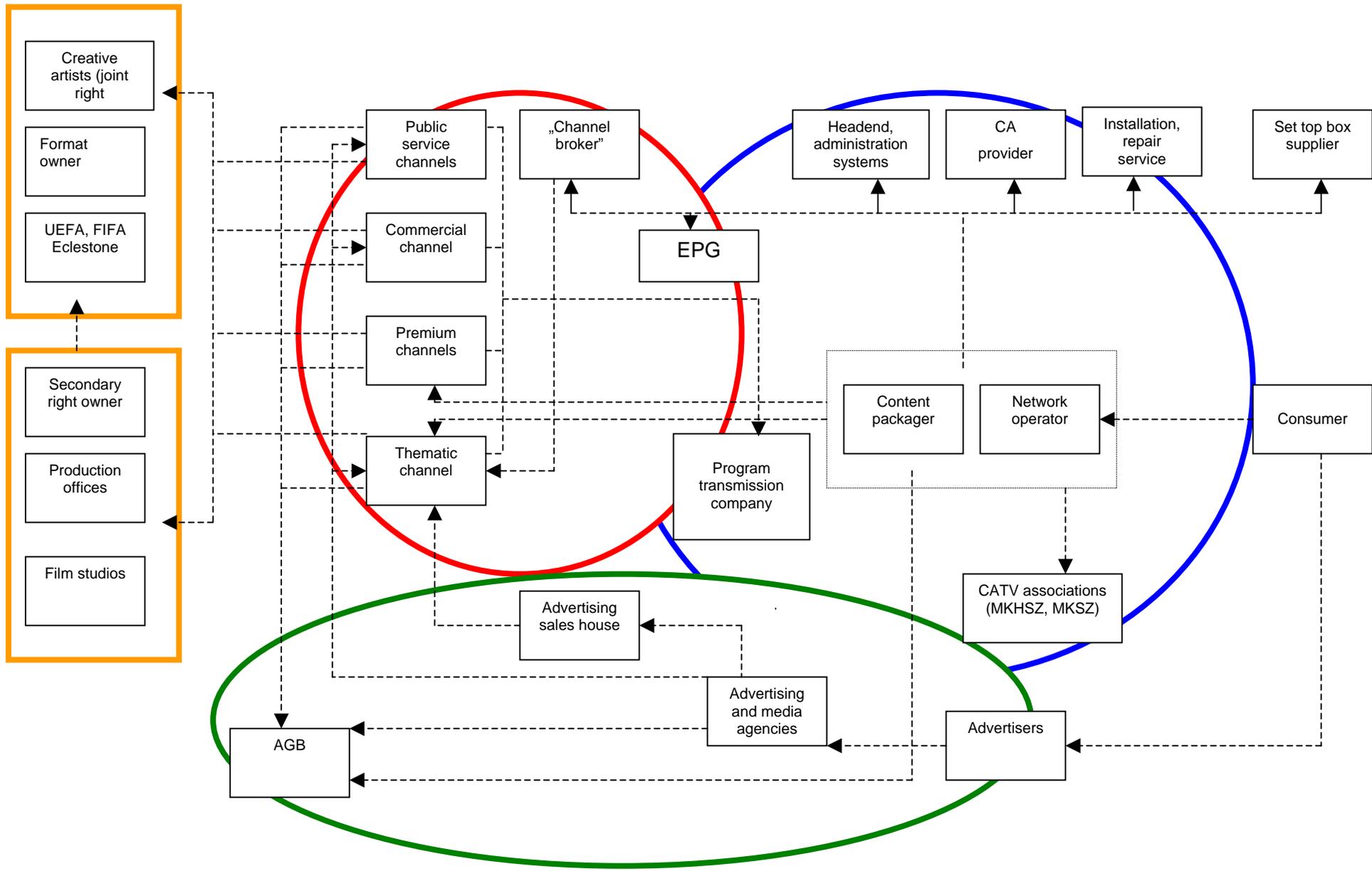
		Their providers conducted a survey		
		No	Yes	Total
They consider such a survey important	No	20%	3%	23%
	Yes	60%	17%	77%
	Total	80%	20%	100%

Source: Cable TV project demand survey

2.2 Competition problems

40. When competition problems are described it is essential to describe the operating principles of CATV markets and services and their interconnections with other services. This description means the value chain of the service provided to the end-user. The complete media market, advertising market and broadcasting value chain is shown in the following figure:

Figure 20: Detailed value chain of the CATV service



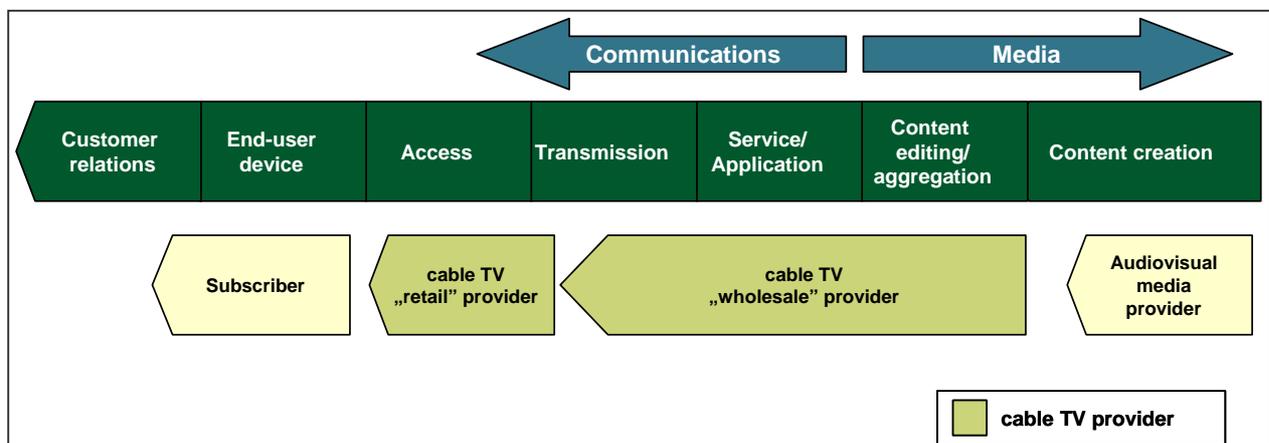
Fixed-line program distribution value chain

- players,
 → - cash flow direction
 - media market
 - advertising market
 - e-comm. market
- content market

The above figure shows all relations which can be identified on the markets of content, media, advertising and programme distribution. As it is seen in the figure the programme distribution market is not an independently existing market, but a service embedded into a larger industry system.

41. Naturally programme distribution is not the exclusive way on which the audiovisual contents produced by studios, production offices and other authors can reach the audience. However the value chains for cinema and various data recording media (VHS, DVD, CD, etc.) are beyond the scope of this survey and the processes in these segments are basically independent of the cable programme delivery market.
42. The European Commission elaborated in reaction to the fast development of the last years in this sector an amendment of the Television Without Frontiers (TWF) Directive⁸. The draft published in December 2005 by the Commission used instead of the term television broadcast already the term audiovisual media services.
43. Audiovisual media service contains not only television (called also linear) contents, but also all so-called non-linear contents (where for example the viewer can select the time of viewing) which are delivered to the public via electronic communications networks.⁹ This means that the regulation of audiovisual contents is going under a consolidation as the regulation of electronic communications services, i.e. broadcast transmission services connected thereto, was consolidated in the European Community law. Consolidation of Hungarian regulation is hindered by the current regulatory regime of the Media Act¹⁰. Notwithstanding these regulatory anomalies we use the (simplified) value chain published in NCAH's Regulatory Strategy.

Figure 21: Schematic value chain of the CATV service



⁸ Council Directive 89/552/EEC of 3 October 1989 on the co-ordination of certain provisions laid down by Law, Regulation or Administrative Action in Member States concerning the pursuit of television broadcasting activities; and Council Directive 97/36/EC of 30 June 1997 amending Council Directive 89/552/EEC.

⁹ Proposal for a Directive of the European Parliament and of the Council amending Council Directive 89/552/EEC on the co-ordination of certain provisions laid down by law, regulation or administrative action in Member States concerning the pursuit of television broadcasting activities {SEC(2005) 1625} {SEC(2005) 1626}COM/2005/0646 final - COD 2005/0260

¹⁰ Act I of 1996 on radio and television services

44. In the following section we examine the part of the value chain which falls under the scope of electronic communications. In this respect the dividing line according to the definition of electronic communications is the point up to which the service is “transmission service of content through electronic communications networks or electronic communications services and content service enabling editorial control over such content”. Our view is that the editorial control over the audiovisual content does not exist in the section marked as “communications” in the figure irrespective of the applied transmission technology. The CATV content provider determines only the content of the packages but does not exercise editorial control over the programs. The operator which creates the programme packages is only a secondary content compiler, an aggregating operator.

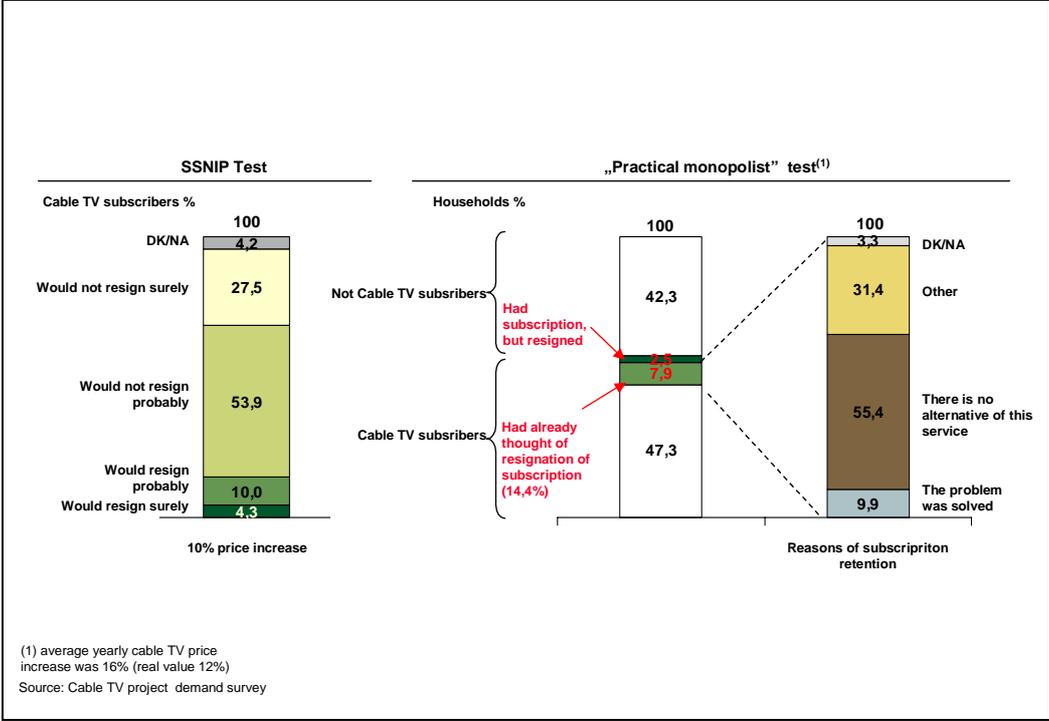
2.2.1 Single market dominance in the retail market

A basic feature of the market of cable television programme delivery is that CATV operators are present on their own service areas generally as local monopolies. The population in the area serviced by the CATV operators generally does not have the actual possibility of using appropriate substitute service.

45. The determining elements of single market dominance were raised also when the consumers' satisfaction with price, choice and switch possibilities were examined. So we only summarise here the major findings and make some additions.
46. Creation of single market dominance is the combined result of factors reflecting the lack of substitute product or low degree of substitution.
- In respect of cable networks the share of areas where the service areas of CATV operators overlap is not significant;
 - The price of the satellite (DTH) service available at the time of the survey in Hungary – UPC Direct – is positioned higher than the price of CATV service. Accordingly there is no competition between DTH and CATV platforms, the customer bases of the two service types can be almost completely separated on the basis of sociologic and geographic criteria (high income, area not supplied with other means); the recently launched DigiTV service can bring change in this area.
 - IPTV service has not been introduced in Hungary yet, the viability of this platform is expected to be decided in the next two to three years;
 - Terrestrial platform digitisation (DVB-T) has not been made yet;
 - Access to the Antenna Digital service, which is the successor of the Antenna Micro service, is guaranteed by the operator only in Budapest and within a radius of 17 km (in practice the service reception area is larger) and the subscribers can access the service only with an antenna with direct sight to the transmitting tower located on Széchenyi-hegy. Additionally this service offers basically different programme choice and tariffs than the CATV services and currently its market share seems to be decreasing.

47. The single market dominance position of CATV operators in their relations with their subscribers is established also by the Competition Authority – mostly on the basis of the arguments listed above – in its relevant decisions, and the trend of CATV market prices and the hypothetical and “practical monopolist”¹¹ test of the CATV Project also confirms it.

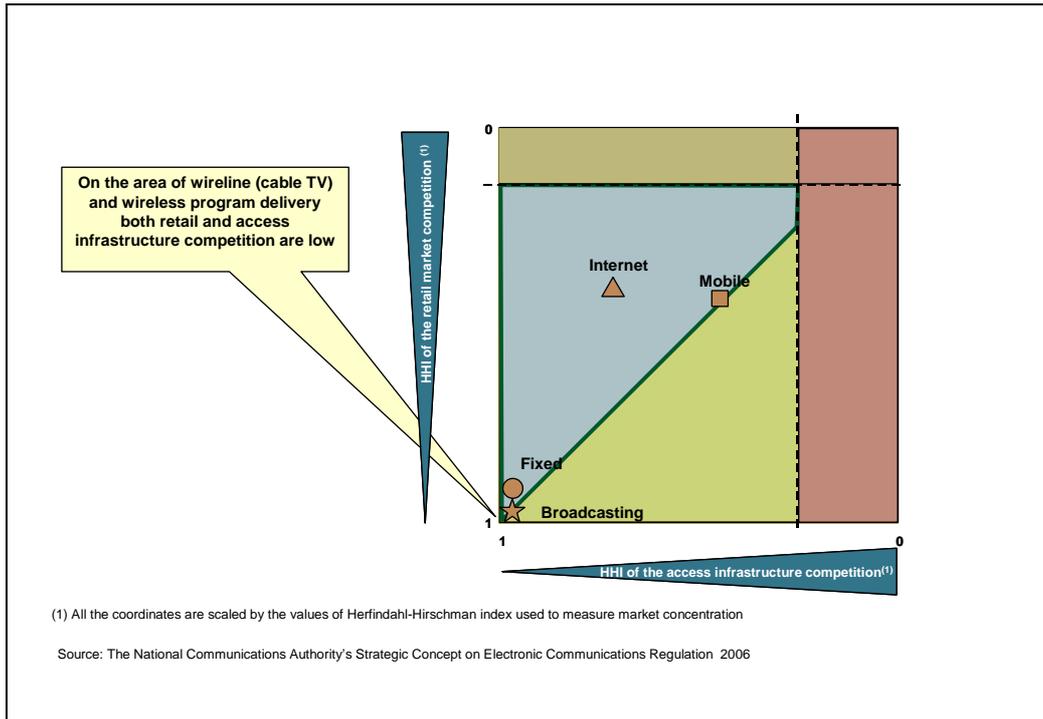
Figure 22: Hypothetical and practical monopolist test on the wireline programme distribution market



NCAH's Regulatory Strategy laid down a finding in connection with dominance on the market of wireline programme distribution matching the above assessment which can be supported also by the results of the CATV Project.

¹¹ The hypothetical monopolist test examines with the assumption of 10 percent price increase the expected market reactions and possibilities. According to the CATV Project results the average annual price increase in the period 2002 to 2005 was 16 percent. This is implied by the term “practical monopolist test”.

Figure 23: Assessment of market dominance situations in NCAH's Regulatory Strategy



48. In the following section we address the leveraging to other markets of the potential market dominance resulting from their “subscriber-owner” position.

2.2.2 Vertical leveraging of market power

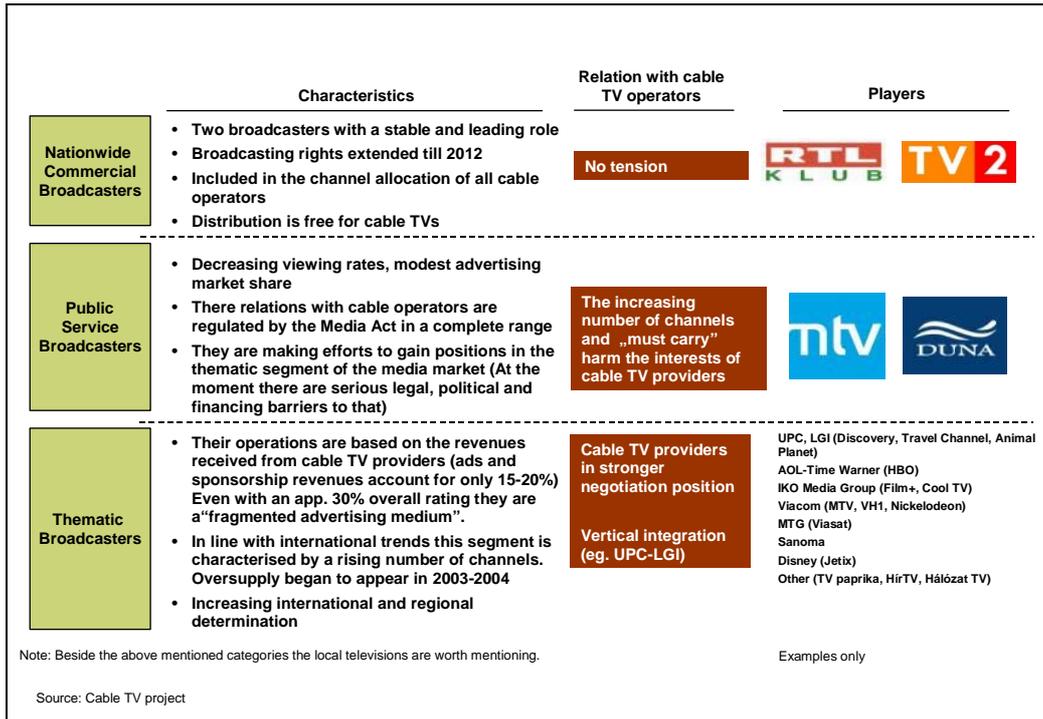
49. Vertical leveraging of market power means in respect of CATV operators transfer of anticompetitive behaviour resulting from the traditional dominance in the retail segment to other upstream markets¹².

Due to the particular relations of the programme delivery value chain CATV operators – when enabled by the number of subscribers connected to them – can transfer their local dominance existing on the retail market to the wholesale market of programme acquisition¹³.

¹² Market dominance in geographically separated areas is aggregated because the owners of headends controlled by the same owner can negotiate with broadcasters in respect of their whole subscriber base.

¹³ The CATV Project did not find competition problems in other wholesale relations (acquisition of assets, communications services, etc.)

Figure 24: Relations between broadcasters and CATV operators

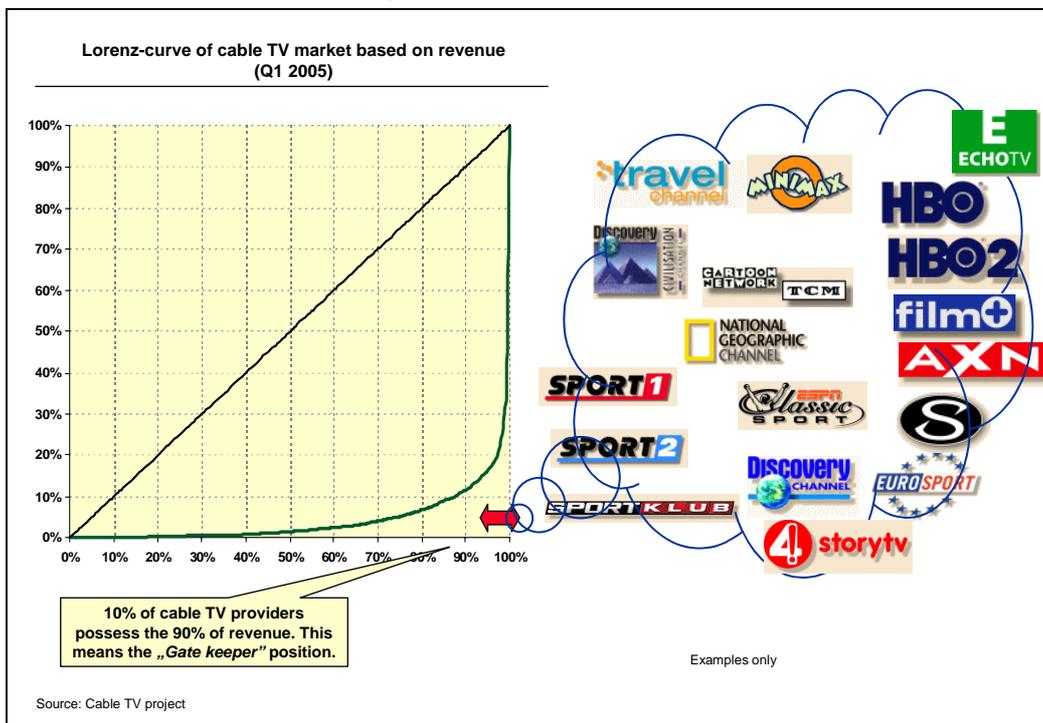


50. The possibility of transferring the dominance existing on the retail market to the wholesale market results from the following factors:

- The described value chain of programme delivery shows that the included markets are based on one-way accesses. In this relation the programme delivery companies enable the broadcasters to reach their subscriber base.
- The viability of satellite (thematic) channels depends primarily on the subscriber base reached by them. The underlying reason is that the dominant revenue source of thematic channels is the subscription fee collected from cable operators. The advertising market share of thematic channels is disproportionately low, these channels have only 3 percent share of the advertising revenues generated on the Hungarian advertising market although they have an about 30 percent share of aggregate viewing rate. Accordingly the revenue collected from cable operators is determining in the revenue structure of thematic channels.
- The thematic segment of the Hungarian media market is characterised – in line with the international trends – by a rising number of channels. Since 2002 – 2003 each year several new thematic channels started on the Hungarian market. Such as
 - Hír TV started its operation in 2002,
 - Film+ started in 2003,
 - AXN, Viasat History, Viasat Explorer and Tv Paprika started in 2004,
 - Cinemax, Cinemax 2, 4. Story Tv, ECHO Tv, Sport Klub and Tv Deko entered the market in 2005.
 - According to the supply survey results in the next 3 – 5 years CATV operators reckon with the entry of additional Hungarian language channels. (About 60 percent of the operators included in the survey agreed with this statement.)

- The rising number of channels radically changed the structure of the wholesale market: while earlier there was a seller's market situation in the winter of 2003 – 2004 the signs of oversupply started to appear. From that time basically a buyer's market structure started to evolve and both broadcasters and CATV operators expect that this situation will permanently remain.
- For cultural and language reasons the size of the Hungarian audiovisual market is small. However a television broadcaster needs to reach at least 800,000 – 1,000,000 subscribers to be viable in the long term. Consequently thematic broadcasting can be viable only nationally. In this relation it becomes particularly important that if a programme distribution company decides not to deliver the programme of a given thematic channel as a result of the decision the broadcaster – without appropriate substitute services – cannot recover the lost audience in other ways.

Figure 25: "Gate keeper" position of large CATV operators on the media market



As a result of the above factors the larger Hungarian cable programme distribution companies can act in their relations with content providers as "subscriber owners" controlling their subscriber base.

51. Naturally the size of the subscriber base owned by a CATV operator determines how efficiently it can act as subscriber owner. In this respect three types of CATV operators are distinguished:
- Top2: A determining factor in the viability of a channel is whether the content provider can get its thematic channel into the channel offerings of the two largest Hungarian cable operators UPC and T-Kábel. In this relation the two largest Hungarian cable operators can negotiate in a dominant position with the content providers.
 - Top3-10: Getting to the networks of the medium-sized Hungarian operators – e.g. Fibernet, EMKTV – generally determines the profitability of the channel. Permanence on the market of a given television channel does not directly depend on agreements concluded with these operators. Notwithstanding the negotiating

position of these CATV operators is still much better than that of the broadcasters. The underlying reason is that programme production has fixed costs. Consequently if no agreement can be reached with the medium-sized operators the total revenue lost this way reduces the profit of the broadcaster. In this relation the number of subscribers brought by the medium-sized operators is already high enough to result in serious loss for the broadcaster if the channel is not carried. In this relation it can be easily seen that the interest enforcement capabilities of such medium-sized CATV operators exceed the level which would be justified by their subscriber base.

- Small operators: in respect of the small cable operators there is no similar dominant position in their contractual relations with broadcasters as a result of the low number of subscribers of a given operator and the reducing role played by cable interest associations. The broadcasters having already concluded a contract with the large cable operators can negotiate harder with the smaller operators.

52. As a result of the significant discounts achieved by medium-sized and large operators it can occur that a higher share of the revenues of a thematic channel accessible on many small networks is generated from the subscribers of smaller CATV operators than from the subscribers of large operators although they are twice as many.
53. Since the early 2000s the limited transmission capacity of cable networks means an increasingly palpable market entry barrier. In practice it means that newly starting programs have more difficulties in getting to the channel offerings of cable programme distribution companies and the “gatekeeper” role of large cable companies is strengthening.

Larger CATV operators can in practice use in various ways their particularly good negotiating position resulting from the growing number of thematic channels offered, relative concentration and small size of the market.

54. The benefits which can be theoretically achieved by the large operators from the broadcasters which want to conclude a contract with them are the following:
 - Lower prices paid to broadcasters: the larger CATV operators generally obtain the right to distribute Hungarian thematic channels at a price much below the “listed price” of cable associations.
 - Requests of ownership in the broadcasters: this practically means the vertical integration trends which can be revealed along the programme delivery value chain.
 - Requests for the use of programme transmission services.
 - Discrimination between channels: larger CATV operators can offer benefits to broadcasting services within their portfolio.

2.2.3 Horizontal leveraging of market power

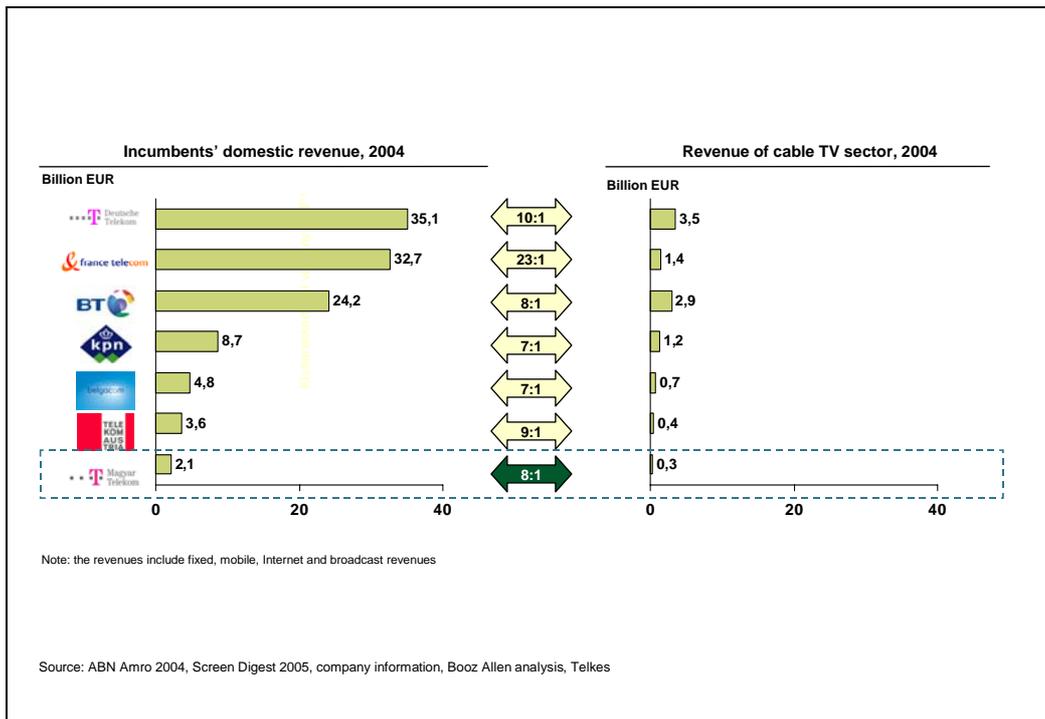
55. Several of the CATV operators – each of the largest operators – are present also on other horizontal markets. This service market is generally the broadband internet access market, but several operators provide also IP-based telephone service.
56. As a result the CATV operator can transfer its dominant position existing on the CATV or other vertically connected market to other market services. This phenomenon is called horizontal leveraging of market power.

57. Currently the following possibilities of horizontal leveraging of market power can be seen on the CATV markets:
- Cross-financing from the revenues of services provided on the CATV network.
 - Unjustified bundling of CATV, CATV internet and CATV telephone services.
 - In the case of several platforms held there is a possibility for the operator or company group to determine the prices of services provided on the different platforms operated by them in such a way that they can compete with each other to the least extent.

Notwithstanding the above horizontal leveraging of market power raises few problems in this evolution phase of the market.

58. The reason is that CATV operators are new entrants on the connected horizontal markets, such as broadband access or telephone market, so just the CATV operators are the competitors of the operators having significant power on the given market. The challenger role of CATV operators will not significantly change in the short term or even within 3 to 5 years since this is hindered by the relatively small market size and the much lower sales revenue than that of the largest incumbent operator Magyar Telekom. This means a significant disadvantage in the areas of investments, marketing and customer relations. Horizontal leveraging of market power is expected on the CATV markets just in the opposite direction: with the Magyar Telekom Group's entry on the programme distribution market with IP-based television.

Figure 26: Comparison of the revenues of European incumbent operators and of the CATV sector



2.3 Industry interests

2.3.1 Innovation

59. When the potential problems of the CATV market are reviewed innovation means

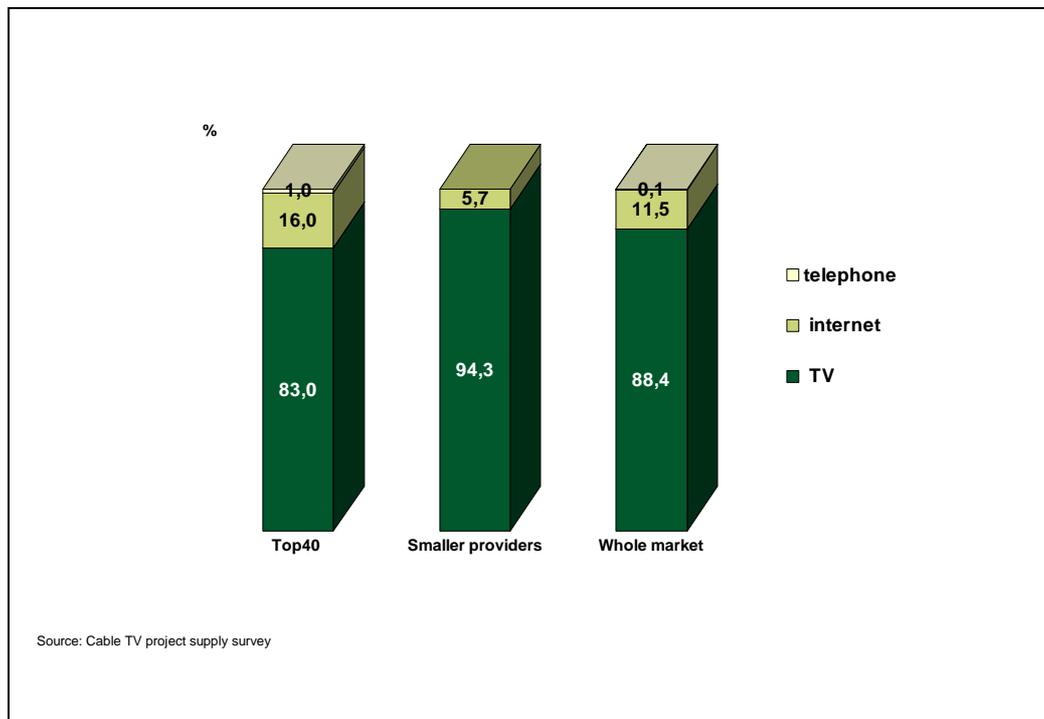
- development and introduction of new services,
- application of new business models,
- introduction of new organisational solutions,
- application of new technologies.

60. In this respect the subject of innovation is not necessarily a novelty in material form, but can be any service or procedure too. It is justified to use the above definition of innovation in respect of the CATV sector for two reasons:

- in this sector innovative activities primarily focus on adaptation of new technological possibilities and creation of the technological conditions of viable business and operator models.
- in this sector only such technology developments can be really attractive which offer already at least in the medium term attractive market opportunities.

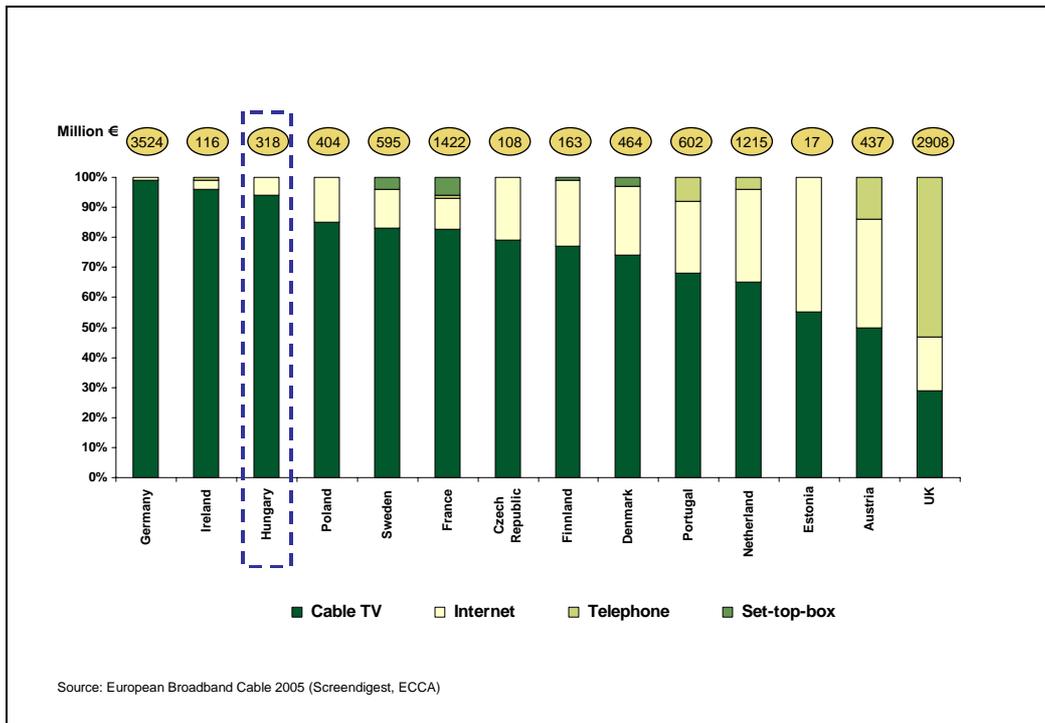
The current situation of the sector in connection with innovation is best reflected by the widespread use of double and triple play offers. According to this assessment criterion for the moment the complete sector shows a low innovation potential although positive developments can be seen at the larger operators in this respect.

Figure 27: Share of revenues from service areas in the triple play mix (in 2004)



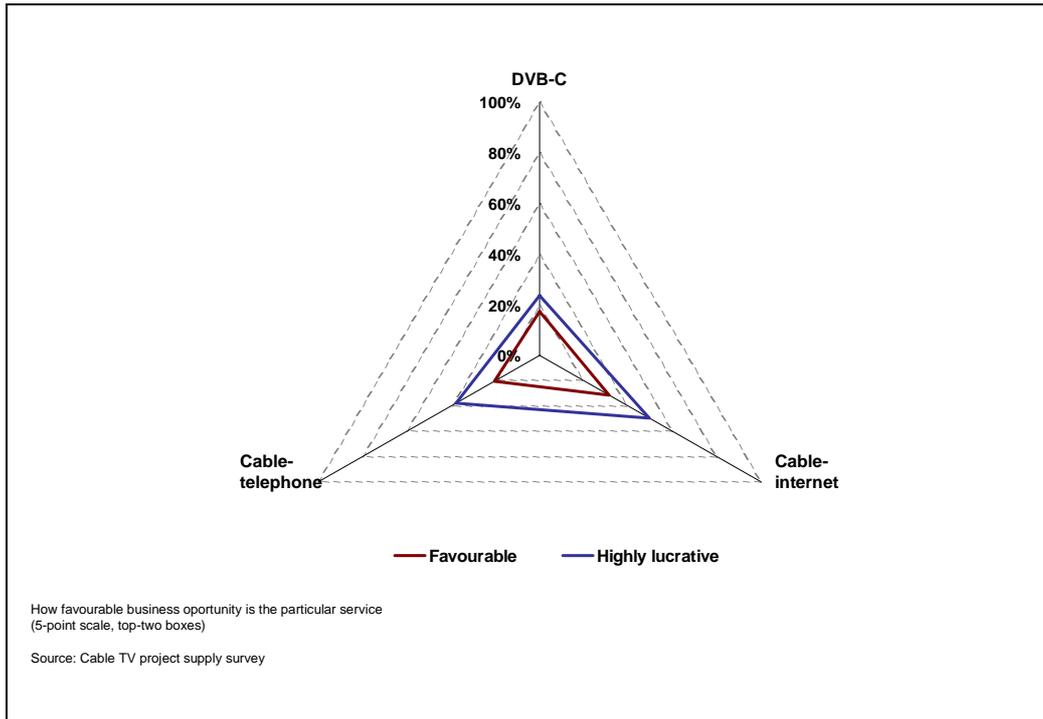
61. Notwithstanding the spectacularly spreading use of CATV internet and the launch of CATV telephone service CATV operators in Hungary still generate the overwhelming majority of their revenues from wireline programme distribution. The revenues generated from internet and telephone service do not reach even for larger (TOP 40) operators 20 percent of the revenues of all consumer services provided on the CATV network. In respect of smaller CATV operators this ratio is below 6 percent. These percentages are low also by international comparison, all in all they show a definitely poor triple play performance.

Figure 28: Revenue structure of countries, 2004



The differences in the approach to innovation are shown by the fact that according to the results of the questionnaire-based survey there is very few strategic development directions which the majority of the CATV operators would judge to be an attractive business opportunity. Neither strengthening the triple play offer, nor digital switchover is considered so.

Figure 29: Opinion of CATV operators about various services



62. The distribution of responses shows that larger operators are more confident in respect of multi-play offers, while smaller operators are more confident in respect of digitisation.

2.3.2 Investments

63. According to the CATV Project results the operators spent 10 to 13 percent – with a slightly rising trend – of their total annual expenditures on the following developments¹⁴:

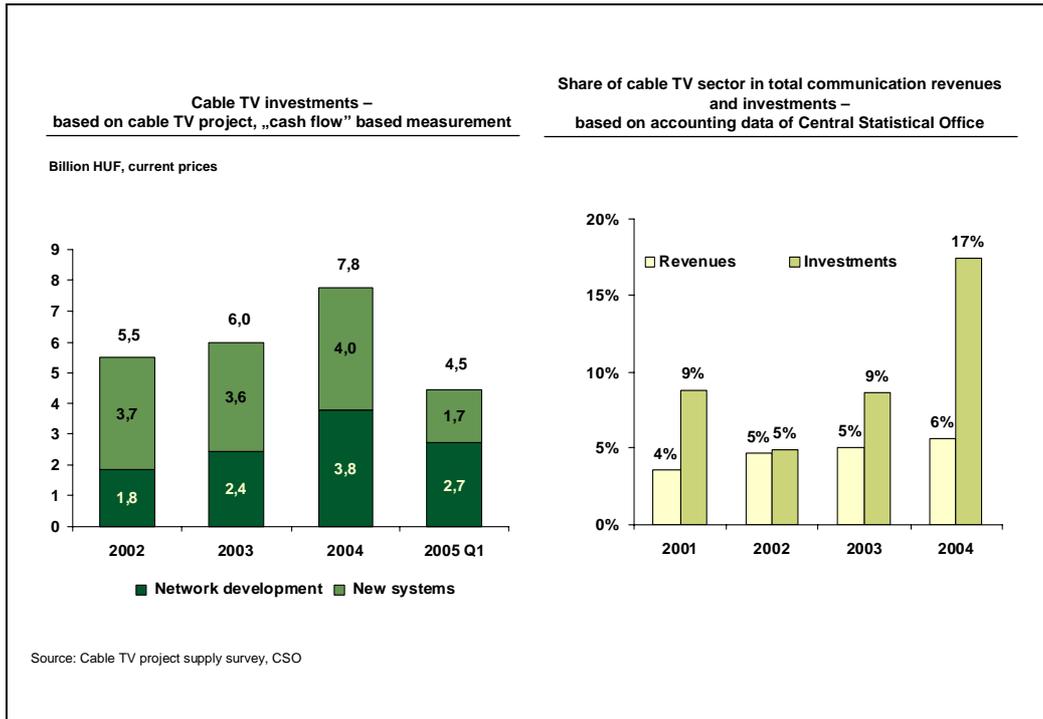
- expenditures connected with network modernisation
- expenditures connected with network development
- new system construction related expenditures

64. On the basis of accounting statements (submitted to KSH – Central Statistics Office) investments in the sector¹⁵ significantly reduced in the period 2001 to 2002, while grew at a rising pace from 2002 to 2004.

¹⁴ Network acquisition expenditures were not classified as development expenditures.

¹⁵ According to the definition used by KSH: Investment means acquisition of tangible asset or its production in own facility, extension of existing tangible assets or modification of its purpose or its transformation or renewal, and the costs of all activities carried out until bringing into operation or delivery to stocks which can be individually linked to the asset. Ongoing maintenance and repair of tangible assets is not included in investment.

Figure 30: CATV sector investments



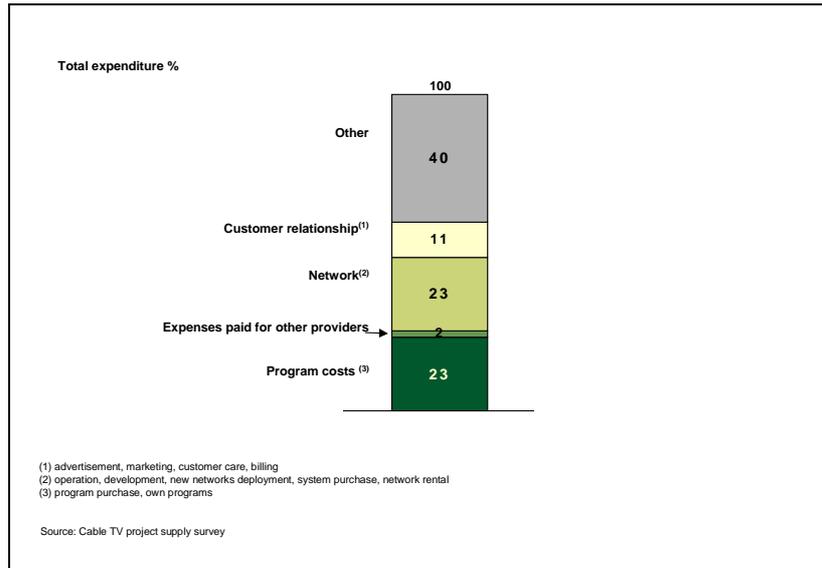
65. The investment performance of the sector is good in comparison to the determining trends of the telecommunications sector too: in the examined period the CATV sector achieved a higher share of telecommunications investments than of telecommunications revenues. This is strengthened in addition to the intensifying CATV investments also by the decreasing trend of telecommunications investments.

All in all the CATV sector investments were definitely higher than the telecommunications sector average in which the following financial stability parameters can also play a role.

2.3.3 Financial stability

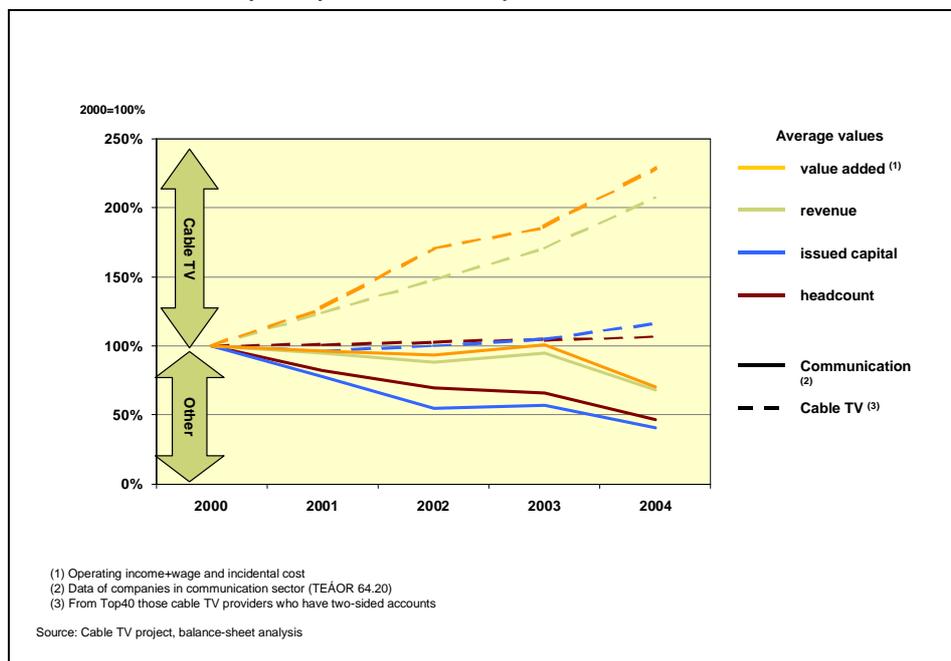
The sum of communications and programme acquisition expenditures identified in the supply survey amount to 55 – 60 percent of the total expenditures. Out of the costs quantified by the operators 40 – 45 percent are in the “other expenditures” category. This can mean practically personnel and other corporate overhead costs, interests and repayments and other “extraordinary expenditures”.

Figure 31: CATV operators' cost structure. 1H2005



Further analyses of financial stability (balance sheet analysis conducted simultaneously with the questionnaire-based supply survey¹⁶) practically confirm the results of cost analysis that there are no direct short-term threats in the CATV sector in this respect, on the contrary, their relative situation within the telecommunications sector is definitely good.

Figure 32: Comparison of the CATV sector's and the telecommunications sector's financial stability on the basis of balance sheet analysis by the CATV Project



¹⁶ The balance sheet analysis includes the 2000 – 2004 figures of the telecommunications industry (TEAOR 64.20) companies. This includes undertakings which transfer voice, picture, data and other information via cable, broadcasting station or satellite. This means that they provide telephone, telegraph and telex service, perform network management, radio and television programme transmission and offer internet access. This sector is much wider than the cable television market, but includes also the companies with wireline programme distribution activity as their core activity. Out of the CATV operators we processed the data of companies from NCAH's TOP40 list which keep double-entry books.

3 PROSPECTS: ORGANIC EVOLUTION PATH

66. Definition of the organic evolution path seeks an empirically confirmed response to the question of what changes are expected in the potential problem areas examined in the analysis of the situation if the regulatory attitude and environment remain unchanged. The resultant assessment includes already the ex ante aspects needed for consideration of regulatory actions.

The processes which will probably occur along the organic evolution path have an impact on the management of areas listed in the analysis of the situation. Analysis of these expected impacts is highly important because this can be the basis for an impact assessment of various intervention scenarios and assessment of the usability in Hungary of potential market regulation tools.

3.1 Impact on consumer problems

3.1.1 Price

If no intervention is made basically continuation of the current pricing trends is expected. The dynamics of price changes actually depend only on the operators' self-restriction and the limited restraining force of ex post competition regulation.

67. On the basis of the supply survey results in 2006 the expected average increase of CATV subscription fees will be 9 percent, but the CATV operators actually think that a 20 percent increase would be justified. In terms of distribution by size we see that larger operators raise their fees to a higher extent, while smaller operators think that a higher increase would be justified.

However it should be emphasised in connection with the consumer price correction plans that these mean rather the minimum of expected price changes – with special regard to the fact that the responses were given in connection with an official authority survey.

68. The most operators justify the expected price increase by preservation or raising of the technical standard and rising programme fees, but a reference to the increasing wholesale price of communications services is also very often made.

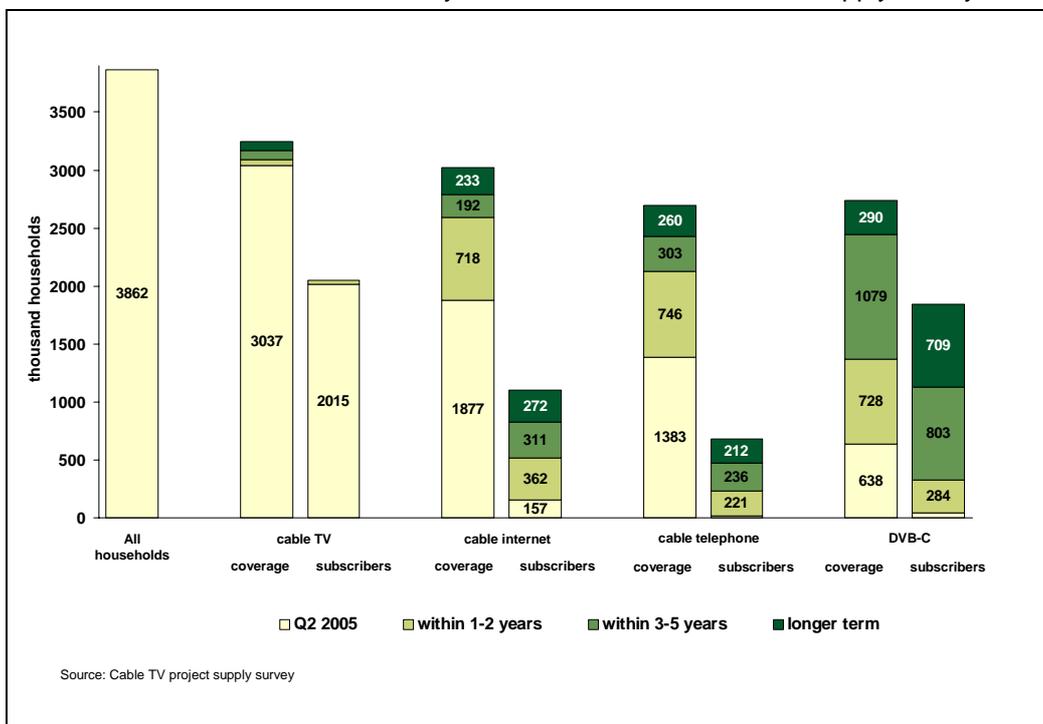
The continuing "price corrections" are not expected to lead to rising consumer dissatisfaction because in the previous years CATV operators made similar or higher price increases. So we do not expect significant increase in the number of consumers dissatisfied with or cancelling the service, but neither do we expect a decrease.

3.1.2 Choice

69. In respect of choice we examine – in line with NCAH's Regulatory Strategy – primarily the availability of services / share of homes passed with the services. Additionally we address here the expected penetration processes too although these go beyond the analysis of choice in stricter sense since penetration (and intensity of use) is not primarily a consumer interest but rather a consequence of fulfilment of consumer interest.

On the basis of an estimate of the operators participating in the CATV Project supply survey the sector is facing in the short and medium term significant evolution in terms of widening service choice and this way shift towards the multi-play service model. At the same time the central role of CATV networks in programme delivery will decrease only moderately.

Figure 33: Forecast of the CATV sector's key indicators on the basis of the supply survey



70. If the estimates taken from the supply survey are correct the CATV networks can, in addition to their central position in programme delivery, play a dynamically growing role in the data and voice segment too, i.e. contribute to a greater extent to infrastructure-based competition.

CATV homes passed

The above figure shows that the operators do not expect significant growth in terms of CATV homes passed and CATV subscribers.

71. We did not request the operators to give an accurate estimate of the expected number of homes passed since even the quantification of current number of homes passed is rather uncertain. Our estimate of limited growth in terms of number of homes passed is based on two considerations:
- About 40 percent of the operators consider it to be important and almost one third to be feasible to construct new networks (in areas with homes not passed yet). This means that there are players who plan to make such investments and presumably there will be network expansion projects.
 - The percentage of CATV homes passed in Hungary is already now rather high (about 78 – 79%). Only countries with much higher density of population than Hungary have 90 percent CATV homes passed. Therefore significant increase in the percentage of homes passed is limited for town structure and demographic reasons.
72. On the basis of the above we quantified in the forecast a moderate growth in the percentage of homes passed which means that within 1 – 2 years slightly higher than 80 percent CATV homes passed will be reached, and even in the longer term this share will not exceed 84 percent of the total households. This means that services provided on CATV networks will become available by 2007 to about 50,000, within 3 – 5 years to about 120,000 and in the longer term to about 200,000 additional households.

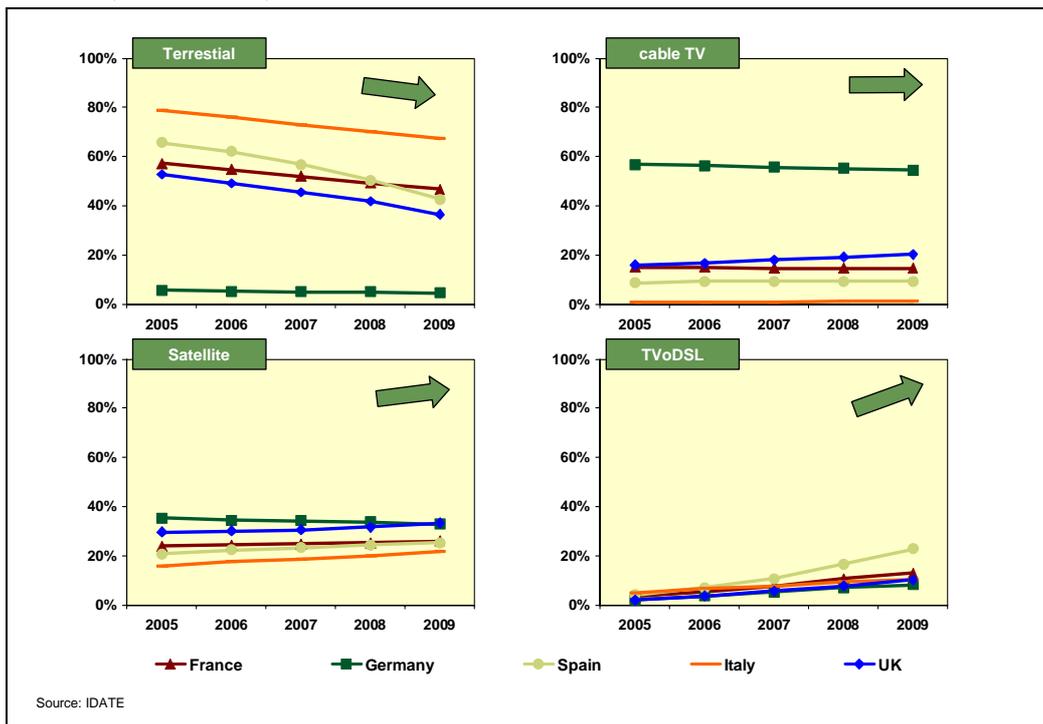
CATV penetration

The supply survey results practically enable expectations for stagnating number of CATV subscriptions in different time horizons. Our view is that it is not necessary to revise this expectation on the basis of a joint assessment of various factors.

73. It was determining for the estimation of the number of CATV subscribers that there was a large operator which expressed to expect a decrease in the number of subscribers for all time horizons. However the majority of the operators expected a moderately rising constant trend of subscriber numbers. The final result showing stagnation reflects the combined effect of these two opinions.
74. Less optimistic expectations can reflect assumptions for intensifying competition between platforms (ADSL, DVB-T). The more confident operators – primarily the smaller ones – presumably extrapolated the annual 7 percent growth in the customer base seen in the previous 3 – 4 years.

With high probability the evolution of the number of customers will be determined by the joint impact of these two trends: medium-sized and small operators, primarily in the rural areas, can still have reserves for growth by a few hundred thousand households, while CATV operators particularly in the medium and longer term will presumably lose from their customer base due to potential growth of digital terrestrial television and satellite service offerings and more dynamic DSL-based programme delivery.

Figure 34: Expected evolution of competition between programme delivery platforms in the larger EU member states (2005 – 2009)



Medium-term international expectations for competition between platforms also show that with stagnating CATV penetration growth of IPTV and satellite multichannel subscriptions and falling share of households with terrestrial connection used as main reception method is expected.

75. These assumptions are confirmed also by the CATV Project demand survey results. According to current plans of the population the restructuring of television reception method will result in the next 1 – 2 years in reducing number of terrestrial connections and rise in pay multichannel subscriptions (CATV, digital satellite).

Figure 35: Expected future evolution of reception method

All households %

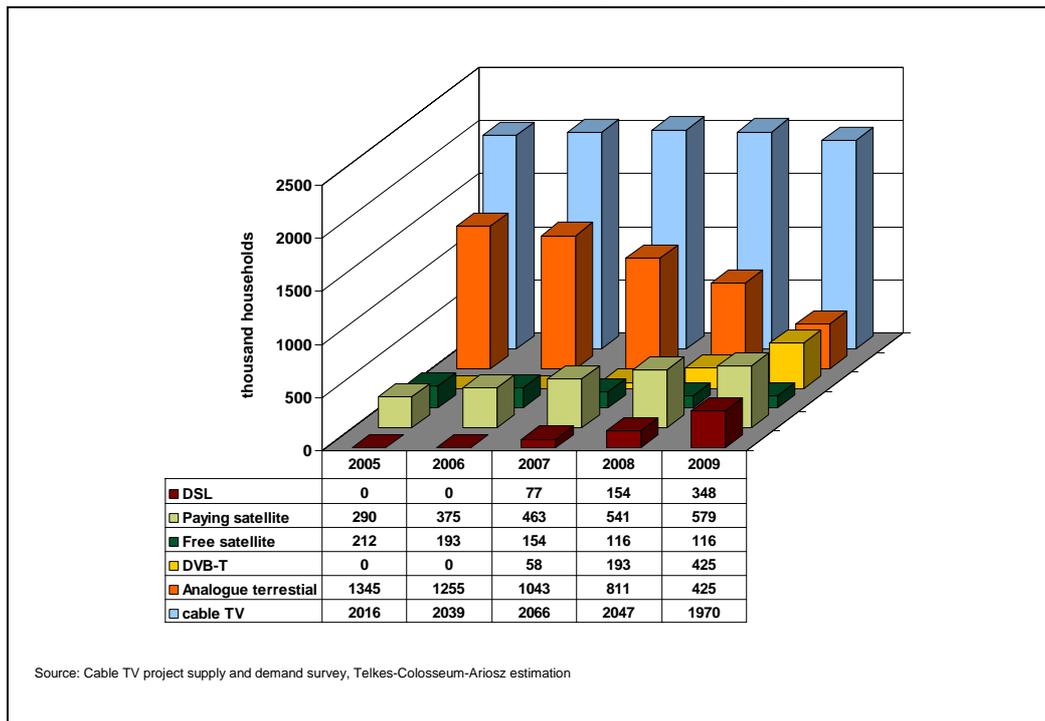
			future reception method					Total
			cable TV	UPC Direct	AM Mikro	satellite dish	terrestrial only	
Distribution			59,0%	6,6%	1,5%	5,9%	27,1%	100,0%
present reception method	cable TV	55,2%	88,7%	5,6%	0,3%	1,0%	4,3%	100,0%
	UPC Direct	3,7%	23,6%	72,4%	4,1%	0,0%	0,0%	100,0%
	AM Mikro	2,4%	36,7%	2,4%	49,7%	6,1%	5,0%	100,0%
	satellite dish	5,3%	23,3%	3,6%	0,0%	56,2%	16,8%	100,0%
	terrestrial only	33,4%	21,0%	1,7%	0,0%	6,4%	70,9%	100,0%

Source: Cable TV project demand survey

76. On the basis of the above the medium-term (2005 – 2009) forecast of the evolution of programme reception methods shows the following key trends:

- In the medium term terrestrial reception method will drop from its currently about one third share to below 25 percent.
- Households with DVB-T connection will appear in larger numbers first in 2007. Then fast DVB-T growth is expected. If this optimistic scenario is realised about half of all terrestrial households can migrate to digital reception by 2009.
- In 2005 – 2007 the number of CATV subscribers will slightly rise, then moderately decrease. The migration plans of the population, which are favourable for CATV, will be weakened in 2006 – 2007 by more attractive pay satellite offers, in 2008 – 2009 by better ADSL-based IPTV offers.
- A shift can occur within the satellite reception method to pay digital offers. With the appearance of a new entrant a shift can occur from the AM Mikro and UPC Direct side and additional demand can be expected also from terrestrial and CATV households. In this period the number of pay satellite households will double which reflects the impact of expectedly reducing price. Simultaneous with the growing satellite offerings and penetration and the reduction in the number of households with terrestrial reception method the media policy importance of this platform can rise, which can bring in Hungary to the focus the conceptual and communications policy issues connected with the public service role of satellite programme delivery (must carry, homes passed with digital terrestrial service, etc.).
- We expect that ADSL-based IPTV offers can attract a substantial number of subscribers at the earliest in 2007. According to our quantified forecast this technology will create already in the year of its commercial launch a customer base equal to that of AM Mikro, in the next two years the number of its customers can be three-four times higher than in 2007. With this trend ADSL-based IPTV would be present in about 10 percent of Hungarian households in the third business year after its launch. Such subscriber share is expected by international forecasts in Germany, the UK, Italy and France, where ADSL-based television service already exists, only by 2008 – 2009.

Figure 36: Expected evolution of competition between programme delivery platforms¹⁷



77. Naturally a forecast of competition between platforms involves many uncertainties, but it is unavoidable to estimate the size of key trends and changes when the ex ante possibilities of regulation are examined.

CATV internet homes passed

According to the CATV operators' expectations the number of households located in areas passed with CATV network but not connected to a network with return channel will drop in 1 – 2 years from about 1,200,000 to below 500,000. This would be a great step forward in respect of service offerings and consumer choice.

78. Currently the larger operators' share of networks enabled for internet access is above 60 percent which can rise within 1 – 2 years to above 70 percent, in the longer term to above 90 percent. Smaller operators plan to raise the current 20 – 40 percent share of CATV internet homes passed within 1 – 2 years to 30 – 50 percent, in the longer term to 55 – 80 percent.

79. Practically this would mean that out of the current about 1,200,000 CATV homes passed within 1 – 2 years less than 500,000, in 3 – 5 years less than 400,000 and in the longer term about 200,000 would remain without the possibility to subscribe to CATV internet. According to this scenario already in 2006 – 2007 major positive changes would occur: in the next two years about 700,000 households could obtain the possibility to subscribe to CATV internet.

¹⁷ Households were classified on the basis of the most advanced reception method. 2005 CATV subscriber figures show the CATV Project estimate. Household figures taken from the demand survey for the other platforms were accordingly corrected.

The operators' expectations taken from the supply survey are definitely optimistic. however it is a fact that both the motivation and the funds are available in the sector for making this "jump".

CATV internet penetration

The operators' estimate of CATV internet subscriptions is rather optimistic. They expect that by the end of 2007 the number of cable modem-based internet connections can triple and reach 500,000.

80. The 157,000 CATV internet subscribers estimated in 1H2005 account for 4 percent of the total population and 8 percent of CATV internet homes passed connecting to networks with return channel . According to the supply survey the number of service users almost quadrupled since 2002, while medium-sized and small operators experienced an even higher growth rate.
81. A breakdown by town size shows that almost half of the CATV internet subscribers live in Budapest and additional 30 percent in county seats.
82. CATV operators estimate that within 1 – 2 years internet penetration will be about 20 percent of homes passed. This would be undoubtedly a great progress. In 2004 this indicator was between 8 and 21 percent on the more advanced markets used as benchmark. (At the end of 2004 the penetration index calculated on the basis of CATV internet homes passed was 8 percent in Norway, 16 percent in Denmark and Switzerland and 21 percent in Austria.)
83. One of the sources of growth in the number of subscribers forecast by the CATV operators is the rise in the internet penetration from 8 to 20 percent of the current homes passed. This can mean about 220,000 new subscribers. Another source of growth in the number of subscribers can be the households planned to be passed with CATV internet in the next 1 – 2 years. This is estimated to reach about 700,000, which means additional 140,000 internet connections reckoning with 20 percent penetration.
84. The demand survey figures do not contradict definitely these expectations. On the basis of the questionnaire-based survey it seems that 14 percent of those informed to live in an area with CATV homes passed think to subscribe within 1 – 2 years. If all intentions were converted to reality this would mean a penetration of 22 percent of homes passed.

The CATV internet market expectation which seems rather optimistic at first sight cannot be definitely rejected: the significant growth in the number of subscribers in 2006 – 2007 can be accepted as an upper estimate.

CATV telephone homes passed

85. Currently about 50 percent of the CATV subscribers have the technical and technological possibility to use CATV telephone service. It should be emphasised that it does not mean that telephone service is offered in all such networks, but these networks have the technological capability to offer telephone service.

86. In this respect not only the larger operators are planning major investments. In the longer term micro operators want to raise service availability to 40 percent, small operators to 58 percent, while medium-sized operators to almost 80 percent.

According to the operators' expectations as a result of technology upgrades in the short term about 700,000, in the medium term additional 300,000 households will have the technological possibility to subscribe to CATV telephone service.

CATV telephone penetration

Although in the first half of 2005 we found only 15,000 CATV telephone subscribers the operators' expectations show also in this area significant growth in the number of subscribers.

87. According to the operators' estimate within 1 – 2 years 11 percent of the households passed with CATV networks, within 3 – 5 years 20 percent and in the longer term 25 percent could subscribe to CATV telephone service.
88. According to the demand survey out of the current CATV telephone subscribers nobody plans to cancel the service, but 11 percent of the homes passed plan to subscribe. This means additional 150,000 subscribers. If the number of CATV telephone homes passed is increased by about 700,000 we reckon with additional 80,000 subscribers with the same penetration level. For these reasons according to an optimistic estimate more than 200,000 telephone subscribers can be reached on CATV networks by 2007.

Digitisation

On the basis of the received questionnaires 18 operators have at least partly digitised network¹⁸ with a total of about 45,000 subscribers connected to them. According to the results of structured deep interviews this estimate cannot be much higher for the total sector either.

89. According to the empirical survey results within 1 – 2 years all operators want to increase the ratio of digitised networks on the average to 44 percent. In the medium term the share of digitised networks can reach three quarters of households passed with CATV network and in the longer term it can reach the 90 percent level.
90. Digitisation of CATV networks is progressing slowly also in other countries in Europe: the share of DVB-C subscribers is only 10 - 19 percent even in more developed countries.

¹⁸ This does not mean that they provide service.

Figure 37: Some digital switchover indicator figures

	DVB-C subscriber/ total TV households	DVB-C subscriber/ total TV homes passed	DVB-C subscriber/ total CTV subscribers
UK	9,8%	19,6%	76%
Israel	33,4%	39,4%	63%
Spain	4,3%	7,3%	49%
France	4,3%	12,1%	30%
Ireland	12,3%	14,5%	27%
Norway	6,8%	10,5%	14%
Denmark	8,3%	12,4%	14%
Sweden	6,9%	10,0%	11%
Finnland	5,2%	7,5%	10%
Estonia	4,0%	5,3%	10%
Switzerland	4,7%	5,1%	5%
Austria	1,7%	3,2%	4%
Netherlands	2,9%	2,9%	3%
Slovenia	0,4%	0,9%	1%
Germany	0,6%	0,9%	1%
Poland	0,2%	0,4%	1%

Source: European Broadband Cable 2005 (Screendigest, ECCA)

91. It seems that for the moment consumers do not see the strengths to be in line with the price increase so they migrate to digital reception only slowly. In Europe the major encouragement to digitisation of CATV networks is not the higher profitability, but rather the strengthening competition of alternative platforms.

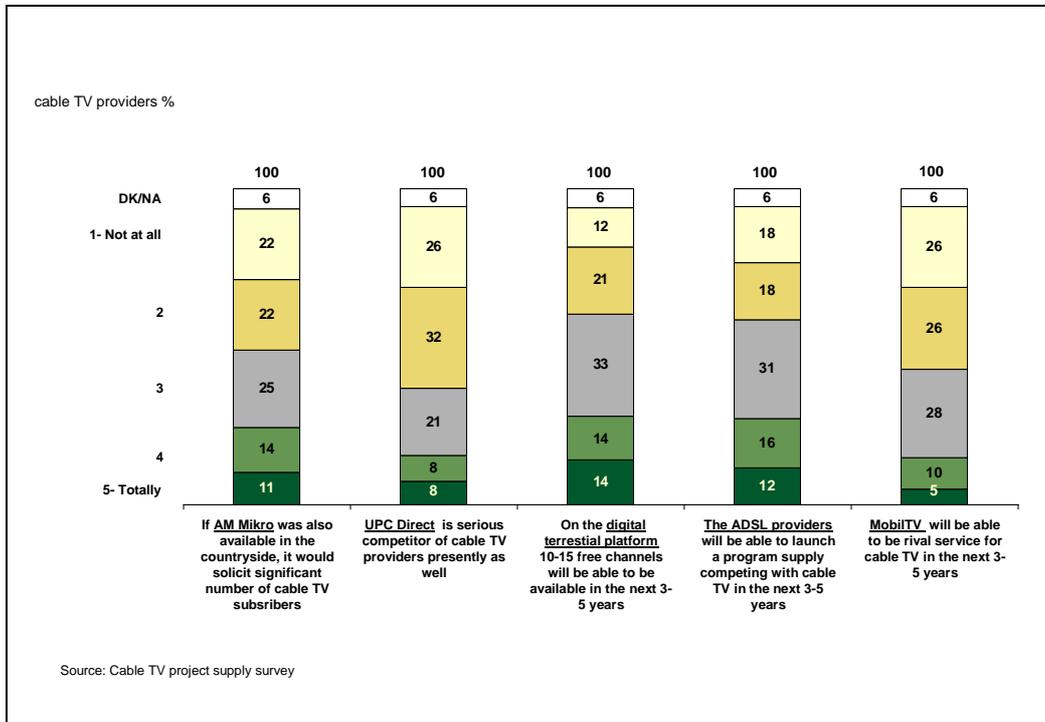
On the basis of the supply survey in respect of the total market our estimate is that according to an optimistic scenario within 1 – 2 years one fourth of the CATV subscribers, within 3 – 5 years almost half and in the longer term about two thirds will subscribe to digital service. However this estimate is for the moment not confirmed yet by operators' and residential customers' expectations for digital demand. Currently this ratio is between 10 and 20 percent even on the most developed markets.

92. According to the operators' view after digital switchover the greatest demand may arise for higher number of channels and more premium channels, but even this was stated only by less than one fourth of the interviewees. The share of those thinking that subscribers would welcome more channels is particularly low among large and medium-sized operators. Small operators currently operating less developed (low-frequency, often serial) analogue networks predict the best prospects by offering more channels.
93. According to the CATV operators' view currently there is no actual demand among residential customers for widescreen high-resolution broadcasting, interactive games, video-on-demand and other supplementary services provided on CATV networks.

Possibility of operator switch

The need for switch will presumably remain within 3 – 5 years low among the CATV subscribers, but the possibilities for switch can gradually improve.

Figure 38: CATV operators' opinion about various programme delivery platforms



94. According to the supply survey result the operators consider a microwave technology with similar price but lower reliability to be a competitor only to a limited extent. Aggregately only a low share (26%) of the operators assume that their markets would shrink in that case (answers 4 and 5 on a scale of 5).
95. According to the demand survey result migration to Antenna Digital service in the following years is considered to be possible only by only 3.5 % of the population. An interesting variation is seen in the analysis of breakdown by town type: AM Mikro subscription is planned the least by subscribers in Budapest and the most by subscribers in small towns. In this respect it is interesting that Antenna Micro (currently Antenna Digital) is available in Budapest and surrounding areas but not available in rural areas.
96. Currently the majority of CATV operators do not consider UPC Direct to be a real competitor – primarily due to its relatively high price. However a changing pricing policy or a new entrant less involved in the programme delivery market could bring significant change as it was shown in our forecast for the competition of platforms. About 6% of the population plan to introduce the UPC Direct service in the next years, somewhat higher ratio is given by those currently having individual satellite dish.

97. Terrestrial digital television is considered to be a major market challenge rather by the larger operators (about 50%). Out of the small and micro operators only every fourth sees a threat in the entry to the market of this platform. This means aggregately about one third of the operators.
98. About one third of the larger operators consider DSL-based television to be a serious medium-term challenge. However these fears will presumably strengthen over time since already today more than 90 percent of T-Com's network is enabled for 3 Mbps or higher bandwidth downloading.
99. Only about 15 percent of the CATV operators think that in the medium term entry of mobile television can generate competition for them. It is not surprising that for the moment these fears are less than with DVB-T and IPTV.
100. We did not find strong interest for mobile television in the residential survey either. One third of the potential users would consider portability an advantage, but it can be important rather for DVB-T, since only every tenth user would like to watch television content on mobile terminal.

All in all CATV operators' expectations concerning competition between future platforms can be really important in respect of their capability of "attacking the wireline programme distribution market". In this respect not the actual competition challenges are what really count, but what the active players on the given market think about it. If fears of competition are restricted we cannot reckon with positive changes in various parameters of service generated through the "feeling of being subject to attack".

3.1.3 Value

According to the demand survey result 72 – 73 percent of the households are definitely satisfied with the CATV service and about 20 percent have neutral opinion. Only 7 – 8 percent is definitely dissatisfied. In respect of CATV internet and telephone these indicators are even better. We do not expect along the organic evolution path significant change in the consumer satisfaction indicators (content, quality, customer relations).

Satisfaction with content

101. Satisfaction with content is already currently very high among the households. The demand survey basically showed that a significant share of the subscribers do not miss any channel. In this respect we do not expect perceivable change neither in positive nor in negative direction.
102. The empirical survey showed that one third of the cable television subscribers have already experienced that the operators removed a programme which he liked from the package which he selected. Such complaints will presumably increase since due to the limited number of analogue capacities it will be increasingly seen that new channels can be included in the offering only through quality replacement.

Satisfaction with quality

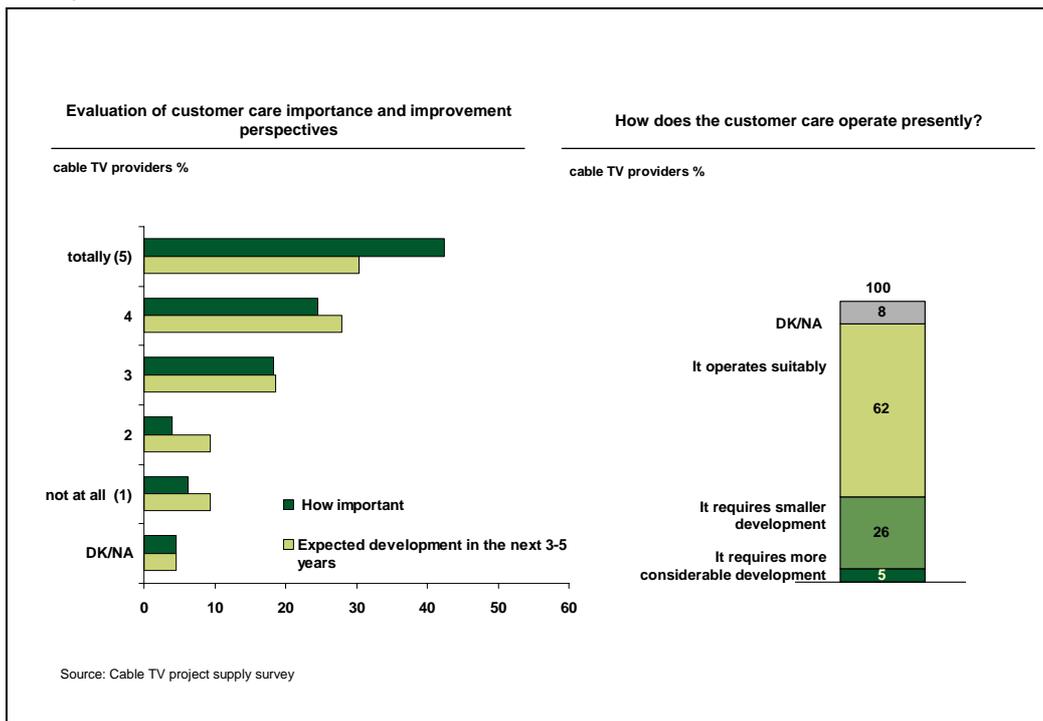
103. On the basis of the organic evolution path we think that probably the overwhelming majority of the subscribers will continue to be satisfied with service quality parameters. The share of consumers dissatisfied with video and audio quality will not rise even in the medium term to above 5 percent, but this indicator will continue to remain above the average at smaller operators.

Satisfaction with customer relations

104. The most operators consider management of customer relations important. For this reason we expect continuous improvement of this area on the basis of the organic evolution path.

105. None of the large and medium-sized operators which participated in the supply side survey think that it is not important at all to improve the customer service function. Among smaller operators this ratio is at a low level of 6 – 13 percent. Among all operators less than 15 percent do not expect any progress in this area. In the light of the above figures it is interesting that the majority of the operators think that the customer service is already currently appropriately operating.

Figure 39: Opinions about customer care service



106. We did not find resolute efforts to make the General Terms and Conditions more “consumer-friendly”. The operators rarely receive such feedback from the consumers, but we cannot expect significant progress in this area without external encouragement. It is neither probable that the operators would better involve the consumers in their decisions on change of prices and packages. Currently real motivation is lacking and the methods are not mature for this.

3.2 Impact on competition problems

3.2.1 Single market dominance

Within the examined time horizon competition problems resulting from single market dominance of CATV operators are expected to continue to exist, but may gradually reduce.

107. As we have shown in the above forecast and gave its reasons the programme delivery services enabled by alternative technologies can exert a competitive pressure on the pricing and package compilation behaviour of CATV operators only gradually and rather at the end of the forecast period (2008 – 2009).

3.2.2 Vertical leveraging of market power

CATV operators can leverage their local dominance existing on the retail market to the programme acquisition market to an increasing extent along the organic evolution path. This can have serious media policy consequences, but these impacts will be reflected in the consumers' satisfaction with choice only in the long term, presumably in a moderate and differential way and with great delay.

108. In this respect digitisation of CATV networks will neither bring a basic change. Although the technological possibilities of rising the number of channels will become greater, but the number of subscribers will not rise considerably and we cannot expect reducing concentration either. As a result larger CATV operators can play a “gatekeeper” function in the digital world, like they do now.

109. Another discrimination possibility for starting alternative platforms is that entry of thematic channels, which are dependent on the determining CATV operators, into xDSL or DVB-T offers can become more difficult. It can be particularly true in the case when these channels are more committed to a given CATV operator than in a normal broadcaster-programme distribution company relation.

110. The expected further widening of channel choice will further strengthen the large CATV operators' negotiating position which can lead to reduction of a certain share of programme fees and at the same time to the constraint to reach higher minimum number of subscribers – primarily in respect of broadcasters operating at other than regional level.

111. Additionally vertical integration trends can become increasingly determining on the Hungarian market which can add further determination to the system of package compilation and programme fee determination.

These will be enabled by the relatively “convenient” environment since on the basis of the empirical survey results the consumers having a wide range of the requested contents are not expected to give feedback which would actually impact the CATV operators' programme policy.

3.2.3 Horizontal leveraging of market power

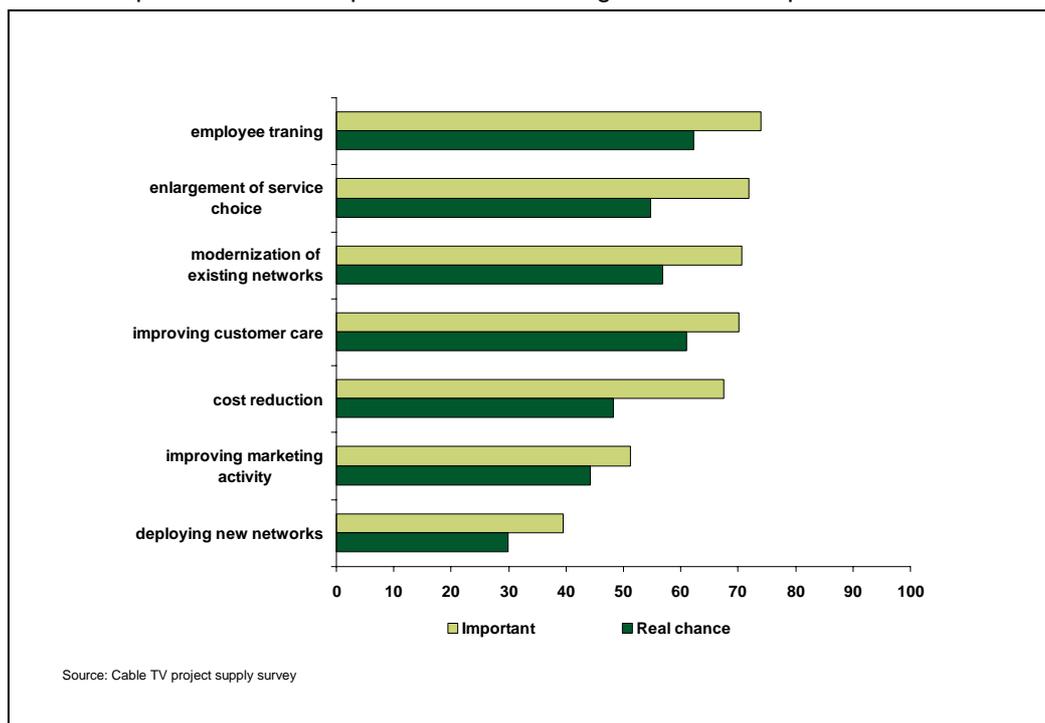
Horizontal leveraging of market power will raise relatively few problems within the examined time horizon, but can in the short term significantly reduce the consumers' possibility to have a service basket which is the most suitable for them. This way it can occur that multiplay packages in CATV services primarily aim at maximisation of the operators' revenues and not serve the consumers' interests.

3.3 Impacts on the industry interest

In the first approach significant increase in the areas passed with CATV internet, telephone and digital CATV service would already within 1 – 2 years probably result in intensifying innovation and investments.

112. Additionally the supply survey shows that almost three fourth of the operators consider it important to train its employees and widen the service choice. This presumes organisational improvement, development of new business practice and creation of the technological background. But these impacts will be different in different size operator groups.

Figure 40: Development needs and possibilities according to the CATV operators' view



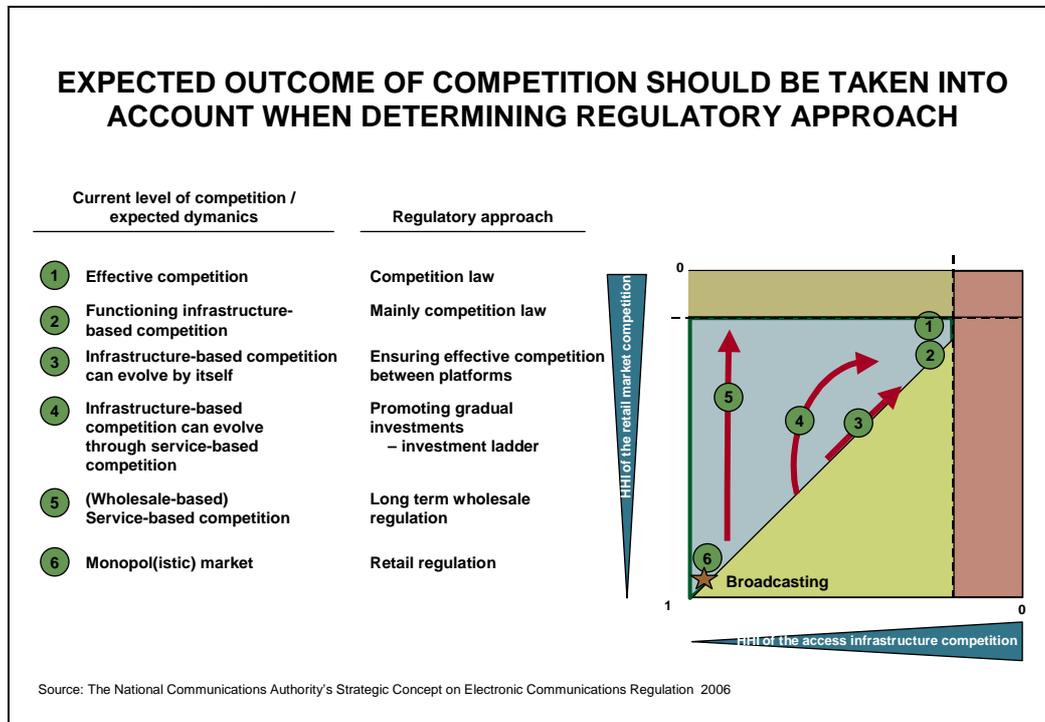
113. The supply survey and the personal interviews showed that primarily in the case of smaller operators technological change and introduction of new services and business models is hindered by lack of skills, fundamental distrust towards strategic co-operation and lack of clear strategic vision.

The financial stability of the sector is not at risk along the organic evolution path. Evolution of CATV service prices will continue to be limited only by the consumers' estimated acceptance level.

4 REVIEW OF THE REGULATORY TOOLS

114. Regulatory interventions and application of tools must take into consideration primarily the expected outcome of competition. For this purpose NCAH's regulatory strategy offers the following solutions.

Figure 41: Potential regulatory interventions



115. In respect of CATV services basically three types of regulatory tools can be distinguished: soft law action through market regulation, ex post market regulation and ex ante market regulation tools.

4.1 Soft law tools

116. Soft law tools are based on ECA and are mostly in the category of market surveillance. These tools can contribute to a varying extent to easing potential competition problems on the wholesale and retail programme distribution markets, in certain cases their efficiency is negatively impacted by the large number of market players.

4.1.1 Stricter controls of General Terms and Conditions

117. Controls of General Terms and Conditions can result in significant improvement in the legal relationship between the subscriber and the CATV operator primarily with regard to value and quality.

4.1.2 Market surveillance aiming at consumer protection

118. The authority can apply market surveillance tools not only in overall audits, but also in individual cases. Investigation of an individual complaint connected with a given large operator and taking appropriate measures can solve a problem for a significant number of subscribers. Additionally if the authority publishes the individual case it moves also the other operators towards compliance with laws.

4.1.3 Comparison of prices and services

119. The empirical survey confirmed that the Hungarian consumers are less informed and conscious than consumers in Western Europe. Comparability of price and quality of services can in many cases increase consumers' mobility and readiness to switch operator and/or service. According to Article 144 (5) of ECA the authority can require the operators to supply to the authority or to publish data on the quality, availability and price of the services which they provide. According to Article 114 (6) of ECA the authority shall publish comparative data on the basis of the information supplied by the communications operators.

4.1.4 Public hearing, co-ordination with the stake-holders, regulatory policy documents

120. Public hearing is a tool which due to its interactivity can particularly efficiently contribute to standardised application of laws, creation of appropriate law application practice and getting to know professional views and opinions connected with the law application practice. It can have a particularly great yield in cases where industry level co-operation is needed for appropriate management of the case.

121. Modern regulation increasingly applies the measure that the authority prepares and publishes so-called regulatory policy documents which make the authority's steps foreseeable. In the light of the promised regulatory measures there will be greater chance of the operators' behaviour being in compliance with laws since the operators can prepare without legal consequences for market behaviour in compliance with laws and can earlier elaborate their views about the expected regulation. This way the authority can also plan its work more efficiently.

4.1.5 Strengthening the programme delivery platforms potentially competing with CATV

122. The authority can promote through its frequency management and indirect law preparation role the spreading use of services potentially competing with CATV services, such as the introduction of digital terrestrial broadcasting (DVB-T) and IP-based television.

4.2 Ex post market regulation

123. Due to their nature the applicability and efficiency of ex post tools of competition law can be limited in certain cases of abuse of dominance. This conclusion was clearly reached by the Competition Authority in its analysis of the market of cable television services in Hungary conducted in 2003.¹⁹ The assessment analyses in detail the entities involved and the subject of the investigation, the findings, the explored behaviours infringing competition law and the potential counteractions and other regulatory tools beyond competition law tools. In that document GVH proposes an overall regulatory reform for the whole CATV sector on the basis of the experiences of competition surveillance procedures.
124. According to GVH's assessment the majority of the cases result from the operators' existing dominance, for example the overwhelming majority of the competition surveillance procedures instituted against cable television operators examined behaviours of abuse of dominance infringing Article 21 (a) of Tpv^{20,21}. This legal case occurs on two conditions: dominant position on the relevant market of the undertaking investigated in the procedure and abuse of such position.
125. In particular two types of behaviour occurred among the operators investigated by GVH: one was increasing the corrected net subscription fee of the service above the inflation rate (i.e. the case of using excessive pricing), the other was application of general terms and conditions which enable the operators to unilaterally increase prices or modify the programme package.
126. The latter finding refers to consumer protection type problems which can be remedied through ex post competition surveillance only to a limited extent.

4.2.1 Excessive pricing

127. In the case of excessive pricing subsequent sanctions can be imposed on the given CATV operator. However GVH's means alone are not sufficient for management of the excessive pricing problem because they can be used only in a specific case of a given alleged infringement of law. On the other hand there is no sufficient information and data in a potential competition surveillance procedure about the given operator's pricing method and cost figures which makes appropriate fulfilment of GVH's obligation to provide evidence significantly difficult.

¹⁹ GVH's assessment for the Economic Committee of Parliament on the regulatory proposals made on the basis of the experiences of competition surveillance procedures connected with the programme signal distribution service of cable television operators, Budapest, February 2003.

²⁰ Act LVII of 1996 on the prohibition of unfair market behaviour and restriction of competition.

²¹ Article 21 – It is forbidden to abuse dominance, in particular:

a) in business relations – including the case of application of general contract conditions – to determine the purchase or sale prices in an unfair way or require in any other way unjustified benefits or force the acceptance of disadvantageous conditions;...

4.2.2 Consumer protection related regulatory possibilities

128. GVH also examined the possibility of more frequent control of the general terms and conditions as an ex post competition law tool. They established that without appropriate technical background the operators offer to the subscribers complete programme packages compiled by the operators instead of offering each channel separately²². The Competition Authority may examine the composition of such programme packages (because it qualifies as market behaviour connected with the sale of a product) and whether they comply with the provisions of Tpv. ²³ It provides that it is forbidden to restrict production, distribution or technical development to the detriment of consumers and make the provision or acceptance of a product subject to provision or acceptance of another product. Since such investigations address individual cases the detection of abuses through compilation of a programme package is a long and complicated task. However systems enabling downloading individual programs require an investment from both the subscriber and the operator, this amount would be included in the costs connected with the network.

Regulatory Commitments – Article 75 of Tpv.

129. According to Tpv. when cases of dominant position are examined GVH performs exclusively ex post type competition surveillance activity and its efficiency can be in many cases insufficient for the management of a given market problem. Therefore to break down these limits and to introduce a more efficient “light touch” regulatory tool the institution of commitments was introduced to Tpv. through transposition of Article 9 of Regulation 1/2003/EC whereby the undertaking subject to the procedure can avoid the establishment of infringement of law and imposition of sanction through commitment of voluntary compliance with law.

130. The application of this ex post regulatory tool was already outlined in the Commission’s practice, but it has not been developed yet in Hungary – primarily due to the just six months’ history of this legal institution. It can be seen in the practice of other member states and the Commission that such “light touch” regulatory type cases were launched primarily against larger market leader operators and these were the ones with major impact on the structure and operation of the given market – just as a result of the determining role of the undertakings subject to the procedure.

²² *Currently the technical development would already enable the elaboration of individual programme packages, but it would require additional investment both by the operator and the subscriber. The operator would have to scramble each channel and the subscriber would need in each case – whether analogue or digital – a set-top-box ensuring conditional access.*

²³ *Article 21 of Tpv.: “It is forbidden to abuse dominance, in particular:*

b) to restrict production, distribution or technical development to the detriment of consumers;...

f) to make the provision or acceptance of a product subject to the provision or acceptance of another product, or make conclusion of a contract subject to commitments which due to their nature or with regard to the usual commercial practice are beyond the scope of the contract.”

Co-operation with the European Commission and the competition authorities of other member states

131. In the case of a market covering more than one member state, which can exist for certain broadcasting platforms, GVH may co-operate with the European Commission and the competition authorities of other member states. Council Directive No. 1/2003/EC, which entered into force on 1 May 2004 on the implementation of competition rules laid down in Articles 81 and 82 of the Treaty which established the European Community requires the competition authorities (and courts) of the member states in respect of implementation of the Community competition law to apply the Community competition rules in the cases of behaviours restricting competition and abuse of dominance – when commerce between the member states is concerned.²⁴
132. In connection with this directive the European Competition Network (ECN) was established whose members inform each other through close co-operation about their procedures, exchange information (of confidential nature too) between each other, may use such information as evidence in competition law infringement cases, and can carry out investigation acts upon request of each other. This way the regulation creates a system of parallel competences which help and complement each other to serve the enforcement of Community rules and thereby protection of competition. The detailed rules of co-operation are laid down in a 2004 Commission notice.²⁵

4.3 Ex ante market regulation

NCAH can apply the available market regulation tools when the cable television services have been defined as part of a relevant market. If the relevant market is not defined we cannot speak of market regulation, but only of other regulatory tools. Accordingly we present below the logic of market analysis – but without conducting a market analysis – the market definition and designation of operator with significant market power on which NCAH's market regulation is based. The following considerations are assumptions based on competition law and not conclusions based on market analysis.

133. According to the Recommendation²⁶ the relevant services must be started with an analysis of the services available to the subscriber or user. Examination of the broadcasting relations must be started with an analysis of retail services. Since the most important component of broadcasting services is delivery of the audiovisual contents to the consumers it is determining when the services are classified in groups how many and what audiovisual contents are delivered by the broadcaster to the subscriber.

²⁴ *Tpvt. itself provides for the application of Community rules when trade between member states is concerned. Article 91/A (1) provide as follows: "When Articles 81 and 82 of the EC Treaty are applied the provisions of this Act shall be applied with the deviations laid down in this Chapter and Directive 1/2003/EC." Article 91/B provides for the obligation of co-operation as follows: "When Articles 81 and 82 of the EC Treaty are applied the Competition Authority shall co-operate with the European Commission and the competition authorities of the European Union member states in the way defined in Directive 1/2003/EC."*

²⁵ *Commission Notice on co-operation within the Network of Competition Authorities (2004/C 101/03) (Text with EEA relevance).*

²⁶ *Commission Recommendation 2003/311/EC of 11 February 2003 on relevant product and service markets within the electronic communications sector susceptible to ex ante regulation in accordance with Directive 2002/21/EC of the European Parliament and of the Council on a common regulatory framework for electronic communications networks and services (2003/311/EC, OJ L114/45, 8.5.2003)*

4.3.1 Broadcast transmission

134. The currently available linear audiovisual broadcasting platforms or platforms suitable for broadcasting television programs – not according to the terms currently used in the Media Act, but according to the accepted names of platforms – are the following:
- terrestrial analogue and digital broadcasting
 - analogue and digital satellite broadcasting
 - analogue and digital cable programme distribution
 - digital terrestrial programme distribution (Antenna Digital, earlier in analogue form Antenna Micro)
 - internet programme distribution
 - mobile radio telephone programme distribution

4.3.2 Multichannel broadcasting

135. In addition to the technological capabilities of cable television services we need to examine which platform is suitable for carrying several channels and premium, i.e. pay contents, and what contents which are attractive to the subscribers are available now on them.
136. The Commission explained in cases connected with markets 18 and 19 in the Netherlands that in respect of the substitute products of cable television services only those platforms need to be examined which are suitable for reception of at least the ten channels with the highest viewing rates. This way the conditions of multichannel broadcast transmission were practically made to a criterion of assessment of technical substitution.
137. Accordingly analogue terrestrial broadcasting can be eliminated as a substitute product for cable television service since only three channels are available on this platform – although these are the three channels with the highest viewing rates.
138. Digital terrestrial broadcasting is operational only on a pilot basis and only the three public service broadcasts can be received on this platform. This means that the platform of digital terrestrial broadcasting can be excluded from the assessment of multichannel broadcasting service.
139. Broadband internet access is also suitable for multichannel broadcast transmission. This service is accessible via dedicated access with set-top-box, generally called with the acronym IPTV. In connection with this name it should be mentioned that internet protocol based digital signal transmission is a feature of not only ADSL but also of other similar technology based internet programme transmission. For example digital cable networks too use internet protocol. But currently in the professional jargon the acronym IPTV generally refers to the multichannel broadcast transmission method provided on internet access, therefore we use it in this sense in the regulatory impact assessment. The number of channels which can be carried is similar to that of cable television packages depending on the quality of the access network. On the basis of European examples IPTV can be a competitor to and a substitute product for cable television services also in respect of other service parameters. However currently this service is not available yet in Hungary, therefore it can be excluded from the available multichannel platforms. This platform should be analysed in the relevant market test as a potential future substitute service.

140. The third generation mobile services and the DVB-H standard are also suitable for carrying several channels. However when platform substitution is assessed we need to take into consideration whether a small display enables the subscribers to use the same service, like with other platforms. Additionally only T-Mobile offers free television programs (Hír TV, EchoTV, Fix.tv, ATV, Duna TV, Magyar Televízió) therefore currently mobile broadcast transmission can be excluded with great probability as multichannel broadcast transmission platform. However this platform can be taken into consideration in the relevant market test.

This means that in a market analysis substitution of the following platforms could be examined:

- a) analogue satellite broadcasting (satellite dish)*
- b) digital satellite broadcasting*
- c) analogue cable programme distribution*
- d) digital cable programme distribution*
- e) digital microwave service (Antenna Mikro's successor Antenna Digital).*

4.3.3 Assessment of substitution

141. According to the Recommendation assessment of substitution can be carried out according to the following product parameters.

Demand-side substitution

142. In addition to the purpose of usage, i.e. suitability for reception of multichannel programs, additional product parameters should also be taken into consideration. The specific content of the above listed services which can technically substitute each other should be compared, i.e. the scope, price and quality of programme channels accessible through them.

143. When the channels and prices are examined the connection fee should also be examined in addition to the subscription fee, decoder rent and deposit. Additionally the extra cost and inconvenience of the antenna and antenna installation can also be determining. Comparison by price should be conducted both for the period before the market analysis and at the time of the market analysis.

144. Out of the quality criteria the following features of the given programme package are important:

- number of channels, upgradeability of the programme offerings, availability of premium (pay) channels,
- reception quality ensured with the given technical facility, i.e. picture quality, reliability and availability of the technology,
- quantity and manageability of the necessary reception devices (separate decoder for each television set, programme recording possibility, separate remote controller), and
- scope of connected services (teletext, EPG, internet, IP telephone, availability of remote surveillance which generally depends on the availability of return channel).

145. Although on the basis of the number of channels and upgradeability of the programme offerings analogue cable television has the least reserves the programme offerings of digital satellite broadcasting and digital terrestrial programme distribution contain also many channels of low interest. The offerings of valuable attractive channels are practically identical with CATV, digital satellite broadcasting and digital terrestrial programme distribution. Digital CATV offers practically the same premium content as the other digital platforms. In the case of analogue satellite programs substitutability is questionable because the channels which Hungarian viewers want to have are not broadcast by the same satellite and therefore an engine-driven satellite dish and appropriate space is needed and premium contents are not accessible through analogue satellite broadcasting.
146. Naturally digital platforms offer better reception quality, but analogue CATV offers almost the same quality: the difference is significantly perceivable only with large-screen television sets with special sound. Digital CATV service offers the same quality as the other platforms. The reliability of digital technology is shown by Antenna Digital's higher availability than that of its predecessor Antenna Micro. In terms of the time needed for showing the selected channel the CATV service is among the best, while Antenna Digital is the third.
147. Digital platforms require a separate decoder, and a new box and remote controller can frighten many users away from the given platform.
148. An analysis of the scope of connected services makes the advantage of CATV clearly perceivable. Analogue CATV services do not have EPG, but digital CATV does and broadband internet access and IP telephone service are enabled by the return channel offered by the network. According to the current progress of technology the other two digital broadcast transmission platforms offer return channel as a subscriber service, i.e. they cannot create the basis for internet access. The CATV network enables making better retail offers in terms of not only technical conditions but also price, CATV services are offered in a single package with internet and potentially IP telephone service.

Substitution possibilities – migration

149. The so-called *migration costs* also impact whether substitutability between given services can be established. According to Community competition law in this case primarily the SSNIP test, also called hypothetical monopolist test needs to be applied. This test should be used to examine whether in the case of a minor but non-transitory price increase subscribers would migrate to an alternative platform.
150. On the basis of the Guideline²⁷ and the Recommendation in this case it is necessary to conduct separate analysis of whether the one-time subscription fees paid by the subscriber and the technological nature investments of the subscriber connected with the given platform (one-time fee of devices purchased or rented, etc.) deter the subscriber from migration. In this case the above-mentioned one-time connection fees and other costs must be considered and compared among others with the difference in subscription fees.

²⁷ Commission Guidelines No. 2002/C 165/03 on market analysis and the assessment of significant market power under the Community regulatory framework for electronic communications networks and services.

151. Additionally it should be analysed how much the operators' commercial practice, in particular the commitment periods required for connection fee or discounted price packages and the related sanctions reduce the readiness to migration.

New entrants, supply-side substitution

152. Analysis of the services of new entrants is difficult because data are not available with sufficient depth neither for the exact content of the service, nor for its price. For this reason analysis of new entrants' services can be conducted with the relevant market test of ex ante regulation.

If on the basis of the analyses it could be established that a given CATV retail service can be substituted under the current technological and market circumstances only by another CATV retail service the market analysis of CATV services could be separated from the general broadcasting wholesale market. In the following section we use this hypothesis.

4.3.4 Potential geographic markets

153. According to competition law the geographic market of CATV services is the area covered by the operator's network where the subscriber can connect to the network and use the services for the usual charge.

154. Since the duplication of CATV networks is not probable neither in the short term nor in the long term due to the very high cost of the access network the CATV network enables the provision of a service which practically has no substitute service. Apart from some network border areas there are no areas where two or more CATV services would be available.

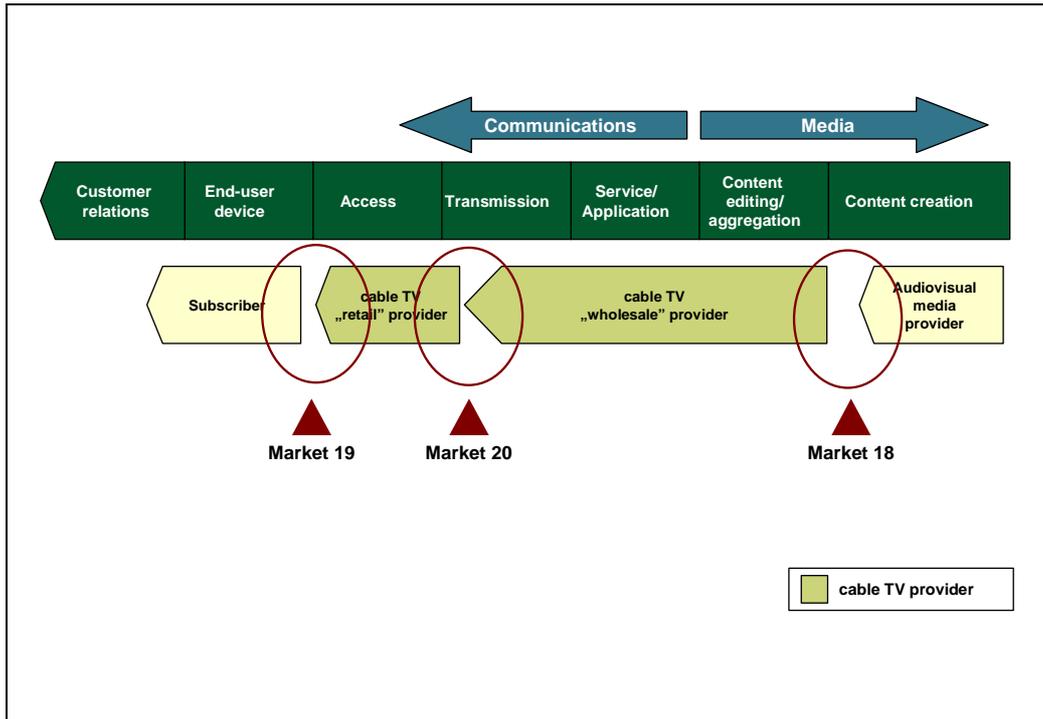
155. The areas covered by parallel networks can also be considered as the geographic market of the given operator / service. The fact that due to the parallel networks competition can be created in the given area should be assessed among the criteria of ex ante regulation and not in respect of geographic markets.

The relevant market of CATV retail services can be the area covered by the operator's network where the subscriber can connect to the network and use the services for the usual charge.

4.3.5 Names of value chain relations

156. According to the European Commission's recommendation wholesale services can be defined through analysis of retail services. On the basis of the outlined value chain model the wholesale and retail services available on the market need to be deducted from the retail services.

Figure 42: Relevant markets which can be determined on a theoretical basis



157. On the basis of the Recommendation we can declare— although not definitely – that market 18 means the relation between audiovisual media service providers and the players directly connected to them. This is the access provided by the secondary content packagers to the audiovisual media service providers for their programme packages.

158. The legal relationship between the secondary content packager, i.e. the CATV operator and the subscriber means practically retail distribution of the audiovisual media service, briefly retail programme delivery market. Since this market is not included in the Recommendation and OPTA using the possibilities offered by the framework regulation has restricted the relevant market to the CATV retail market and used the name market 19, we also refer to it as market 19.

159. As we could see it rarely occurs on the Hungarian programme delivery market that within the programme delivery function network operation and retail service provision are separated. In the case of terrestrial broadcasting the current regulatory model does not enable this and the digital broadcasting model is not mature yet. For this reason such wholesale service cannot be separated. Considering the technological particularities wholesale access which could be defined as market 20 would be possible on satellite broadcasting, CATV and IPTV platforms. This means that market 20 can be the relation whereby in the case of service-based competition the programme delivery company with significant market power must provide wholesale access services and carry the programme packages compiled by the operator entering the market. The above discussed markets 19 and 20 are not included among the markets recommended by the Commission, therefore their definition would require a methodological basis.

*Accordingly three service markets could be defined in connection with CATV services:
 Market 18 – wholesale market of access to CATV services;
 Market 19 – retail market of CATV services;
 Market 20 – wholesale access market of programme delivery on CATV network.*

4.3.6 Relevant market test for ex ante regulation

According to the Recommendation the authority may apply ex ante regulation if the following three conjunctive conditions are fulfilled in respect of a given market:

- high and non-transitory entry barriers*
- the market does not tend towards effective competition*
- insufficiency of ex post competition law for the solution of competition problems*

Condition 1: high and non-transitory entry barriers on the given market

160. It can be declared that high and non-transitory entry barriers exist on the retail market of cable programme delivery because the existing cable infrastructure cannot be duplicated. Construction of another infrastructure parallel to the existing infrastructure would pay back probably only in the very long term or never.

161. According to the Commission's practice when the entry barriers are assessed with regard to susceptibility for ex ante regulation on innovation-driven markets characterised by continuous technical development the existing technologies and infrastructure are less relevant because competition constraint is created often by the innovation of the potential competitors which are at the given time still not present on the market. This means that the regulators must take into consideration the probability that at a given moment the enterprises which are still not active on the given market in the medium term enter the market in such a way that their products or the services provided by them can become actual substitutes for the products and services of the existing operators on the market. In the above examination of substitution IPTV, DVB-T and digital satellite broadcasting should be highlighted.

162. This means that we should examine whether within the examined time horizon until the end of 2008 in Hungary the IPTV and DVB-T services, which are still not available, are expected to become substitutes in terms of price, value and choice for the analogue CATV services to such extent that they can exert sufficient competitive pressure on the market behaviour of CATV operators.

163. It should be examined separately for the given markets, i.e. markets 18 to 20. For example it should be examined for retail market 19 whether such competitive pressure would increase towards the subscribers, while for market 18 how the CATV operators' behaviours towards broadcasters would change. In respect of market 20 it should be examined whether demand for such services would arise within the examined time horizon.

164. If it can be established that competitive pressure is expected only by 2008 or later entry barriers will continue to exist for CATV operators.

Condition 2: the market structure does not tend towards effective competition

165. In respect of this criterion finally we need to assess whether with the continued existence of entry barriers the CATV operators remain in a position where they can perform their operations to a high extent independently of other programme delivery operators and the consumers.

166. The lack of competition is reflected by permanent excessive pricing, the rather low innovation level in the industry, low level of multiplay (e.g. internet and telephone) offerings and lack of digitisation. The Commission says that availability of given alternative platforms, their homes passed rate and particular homes passed rate in Hungary should be analysed separately for each geographic market. The current churn of CATV services should also be analysed. However it is difficult to answer this question in general since CATV services continuously grow: notwithstanding the price increases about 100,000 subscribers have cancelled the service so far which is not more than 5 percent of the current total subscribers. According to the Commission it should also be examined whether a given market situation evolved as a result of regulation or without it. This means that the CATV market is basically non-regulated, only the competition conditions or their lack shaped the market.
167. According to the Commission's practice it should be examined whether the 10 channels with the highest viewing rates are available on all potential competing platforms. On the one hand currently it cannot be established in connection with the DVB-T and IPTV platforms which will be launched in the future, but on the basis of the technical conditions IPTV has the greater chance for it. On the other hand on the basis of the structure of the Hungarian media market the 10 channels with the highest viewing rates are difficult to identify and the exactitude of measurements is strongly questionable.
168. On the basis of the above we have to draw the conclusion that in respect of the CATV services in the examined time horizon we cannot say that the market structure would spontaneously tend towards effective competition.

Condition 3: insufficiency of competition law to handle the identified market failures

169. Assessment of criterion 3 is a complex task. GVH has several times stated its position in connection with the insufficiency of competition law and declared that the available tools do not enable examination of the reasonability of pricing. On the one hand operators do not separately account their costs, on the other hand it is a particularity of ex post competition law that GVH must provide evidence. Reasonability of condition 3 is shown by the fact that so far only GVH attempted to regulate the market of CATV services. GVH's opinion about the fulfilment of this condition should be separately invited.

4.3.7 Relevant market tests

170. The next arising question is whether all three relations identified in the value chain, markets 18, 19 and 20 can be regulated or require regulation.
171. The market problems identified in the project and shown above are less of wholesale nature (market 18), most of them are of retail nature (market 19).
172. In respect of market 20 the project did not find any competition problem because in Hungary there is very few cases when network operation and service provision are separated in the area of CATV services. Additionally definition of the services constituting market 20 (wholesale products) is technically very difficult in respect of analogue CATV networks. Due to the limited availability of free capacities competing retail services available to the subscribers would be of reduced value. With the currently available frequency range new market entrants could offer only smaller packages. This would not create actual competition because unlike with telephone service not several but only one or maybe two operators would obtain access for making a less competitive offer. If the SMP operator were obligated to enable use of the full frequency spectrum, i.e. the regulation created a wholesale product similar to local loop unbundling, the

access obligation would create only another operator with significant market power, but would not create real retail competition. The so far limited results of local loop unbundling show that such access obligation is difficult to regulate in such a way that it creates a real market entry possibility for competitors. Additionally it should be mentioned that such wholesale service currently does not exist, it should be defined. Finally it should be mentioned that it is one of the most radical tools which can be applied for service-based competition, which can be introduced on the basis of NRF only if it can be embedded into an investment ladder in broader context. This would create a rather cumbersome and contradictory situation. For these reasons definition of market 20 as relevant market for ex ante regulation is not realistic with regard to the current technological and business parameters.

173. Another precondition to ex ante regulation of a retail market is that the tools available on the wholesale market are insufficient for management of the revealed problems. However in this respect we must see that the wholesale equivalent of market 19 is not market 18. In this respect the wholesale tools of market 18 surely cannot efficiently manage the problems of market 19.

4.3.8 Designation of SMP operator

174. According to ECA an operator with significant market power (SMP) on the relevant market “is alone or in conjunction with another operator in a dominant position, i.e. in a financial situation which enables performance of its activities to a large extent independently of its competitors, the customers and finally the consumers.”²⁸ When this is assessed the above-mentioned criteria should be taken into consideration. If this is proven the market analysis can result in designation of all CATV operators as SMP operators in their respective networks on the retail market. If it is probable that within the examined time horizon the retail market power of the CATV operators is maintained and consequently they remain in a customer owner (gate keeper) position the operators with sufficient number of customers can transfer their retail market dominance to market 18 because the CATV operators are generally vertically integrated operators.²⁹

²⁸ Article 53 (1) of Act C of 2003 on electronic communications

²⁹ NCAH's Market Analysis Methodology III.2.10. Vertically integrated undertaking, group of undertakings [86]. Vertical integration means that an undertaking or group of undertakings in the same portfolio is present also in a market that is at a higher or lower level of the value chain. In the case of vertical integration it can occur that an undertaking can transfer its dominance in one market to another market. Being in the same portfolio generally means identical ownership or controlling relationships too. [87] Assessment of vertical integration requires information about the ownership and controlling relationships of the undertaking(s) on the market.

175. Naturally only the CATV operators which can appropriately exceed the countervailing buying power of broadcasters³⁰, primarily due to their size, can transfer their dominance. These are the largest operators. However it should be mentioned that smaller broadcasters and new market entrants have very low or no countervailing buying power even towards medium-sized operators³¹. For this reason not all CATV operators have significant market power on wholesale market 18, but only the largest operators, i.e. those which perform their activities to a large extent independently of their competitors, the customers and finally the consumers. We can establish that even medium-sized operators cannot always achieve discounts and other favourable conditions from broadcasters. The wholesale SMP status of CATV operators against broadcasters can be examined also in comparison with the situation of operators of other platforms.³²

176. Information about market 18 obtained so far in the EU member states is shown in the following figure.

³⁰ NCAH's Market Analysis Methodology III.2.5. Lack or low level of countervailing buying power, Sections [75]-[77].

³¹ This way it can occur that certain channels are easily removed from the offering even "upon instruction of a mayor".

³² Starting platforms and technologies do not have a bargaining position: see DigiTV and channels or royalty owners and IPTV. Since they do not have sufficient number of subscribers and are in a challenger position and not in a gate-keeper position these upstream players have "countervailing buying power" and force higher fees on them.

Figure 43: Market 18 status in the EU member states, February 2006 (Source: Cullen International)

	Cable		Satellite		Terrestrial		Others
	Analogue	Digital	Analogue	Digital	Analogue	Digital	
AT	Excluded because it does not meet the three criteria test for ex ante regulation.		Excluded because it does not meet the three criteria test for ex ante regulation.		TV (no SMP designation yet) Radio (no SMP designation yet)		-
FI	Excluded because it does not meet the three criteria test for ex ante regulation.		Excluded because of its transnational nature - offered by foreign companies and on frequencies that are administered by non-Finnish companies		<i>Included</i> National TV: Digita National radio: Digita <i>Excluded because it does not pass the three criteria test for ex ante regulation:</i> Local TV Local radio		-
FR	Excluded from the scope of M18 because not deemed to meet the three criteria test for ex ante regulation.		ARCEP is awaiting a Commission Decision to create a trans-national market for broadcasting services by satellite.		SMP: TDF		TV over DSL: considered by ARCEP but excluded from the scope of M18 because not deemed to meet the three criteria test.
IE	ComReg defined a wholesale market for broadcasting transmission services on cable and satellite networks but found unnecessary (under the review timeframe) to undertake an assessment as these markets tend toward effective competition. However, ComReg reserved the right to reassess the competitive conditions in this market in the future if required.				TV: RTE Transmission Network Limited ('RTNL') Radio: RTNL		xDSL, DTT, Mobile 3G, Multipoint Microwave Distribution System (MMDS) and deflectors considered by ComReg but excluded from the scope of M18
IT	(national consultation) Excluded Cable TV coverage in Italy is negligible	-	(national consultation) Excluded because of its transnational nature	(national consultation) <i>Included:</i> National TV National radio <i>Excluded because does not pass the three criteria test:</i> Local TV Local radio	(national consultation) <i>Included</i> National TV <i>Excluded because it does not pass the three criteria test:</i> Local TV National radio Local radio	(national consultation) <i>Excluded because it does not pass the three criteria test:</i> Fixed line (fibre optic/xDSL)	
NL	SMP: UPC, Casema, Essent, Delta and Multikabel		- OPTA is awaiting a Commission decision to create a trans-national market for broadcasting services by satellite.		TV: excluded Radio: considered in a separate decision		TV over DSL and TV over fibre optics: considered by OPTA but excluded from the scope of (these markets tend towards effective competition).
ES	Excluded because it does not meet the three criteria test for ex ante regulation.		Excluded because it does not meet the three criteria test for ex ante regulation.		Abertis Telecom		The Commission closed its investigations (phase 1) with comments only on Nov. 4, 2005.
SE	Excluded because it does not meet the three criteria test for ex ante regulation.		Considered to be a transnational market and therefore was excluded from the PTS M18 analysis		TV SMP : Teracom Radio SMP : Teracom		IP-TV not considered to be a substitute to other transmission forms.
UK	Excluded. Ofcom contends transmission over cable tends toward effective competition because of must carry requirements		Excluded. Ofcom contends satellite transmission is outside UK jurisdiction.		ntl and National Grid Wireless Ltd (formerly Crown Castle)		

5 CONSULTATION QUESTIONS

To ensure that the Hungarian cable television market can be regulated also in the future through consideration of the market players' requests it is indispensable that NCAH's professionals get to know the exact market situation, expected movements, short- and medium-term concepts of the players.

Please summarise your comment on this document along the following key questions and send it to the kabel@nhh.hu address.

1. What comments on and additions to the assessment of the current situation of the CATV sector do you want to make according to the following dimensions?

- consumer interest (Chapter 2.1)
- competition problems (Chapter 2.2)
- industry interest (Chapter 2.3)

2. What comments on and additions to the impact of the organic evolution path on the following areas do you want to make?

- consumer interest (Chapter 3.1)
- competition problems (Chapter 3.2)
- industry interest (Chapter 3.3)

3. On the basis of the CATV project's empirical results and review of the potential regulatory tools (Chapter 4) which criteria do you think to be the most important for elaboration of NCAH's regulatory concept?

4. What other comments on and additions to the consultation document do you want to make?