

The future of the media in times of digital convergence

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The audiovisual media industry has been undergoing a deep change for several years as a result of different factors. One of the most important is digital convergence of technology, services and different branches to the point that we can already talk of a metaindustry.

Telecommunications, consumer electronics, internet and audiovisual media are industries that have been always deeply interrelated, but until recently they were living parallel lives, had their own dynamics and players and a low degree of interference. They were a stable value chain.

This article intends to explain what has changed, describe the phenomena that are occurring, make an analysis of the audiovisual media industry and set out strategies allowing this branch to stay competitive in new scenarios.



Definition of the digital convergence metaindustry

The concepts of value chain and natural and disruptive competition allow us to have a first panoramic view of this set of industries. Let us deal with them briefly.

Value chain

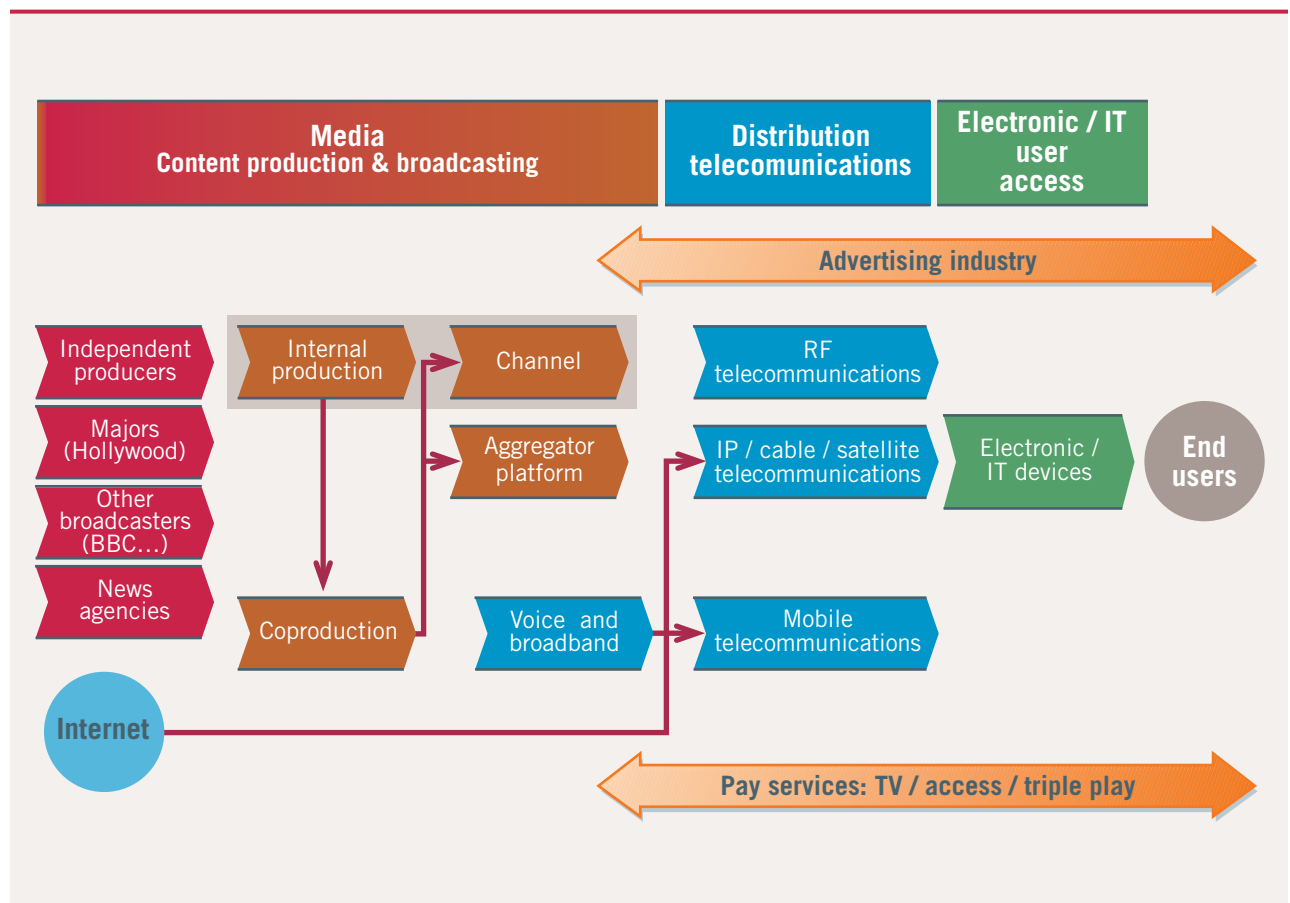
Graph 1 is a simplified representation of the value chain (VC) allowing audiovisual products and services to reach the end user. This VC

could be called traditional prior to the change we will describe in this article.

The product, a TV programme (film, series, live programme, report, etc.) is basically manufactured by production companies or audiovisual media also being producers. They are placed in a broadcasting channel, carried by telecommunications and finally received and offered to end users by means of consumer electronics (CE) devices such as TV sets and also IT devices such as computers or mobile phones.

Graph 1 sketches out the main business models in the audiovisual media industry: advertising and pay services. In this article, we will deal

Graph 1. The media value chain



Source: own

▲ Simplified representation of the traditional value chain

with advertising as the main funding source of open and free media.

Natural and disruptive competition

Before describing the different industries and analysing them within the already described value chain, it will be useful to define the instrumental concepts of natural competition (NC) and disruptive competition (DC). We consider natural competition the one occurring between companies taking one same position in the value chain. It consists of taking a market share without changing substantially the kind of business a company does. It is the one represented with red arrows in graph 2.

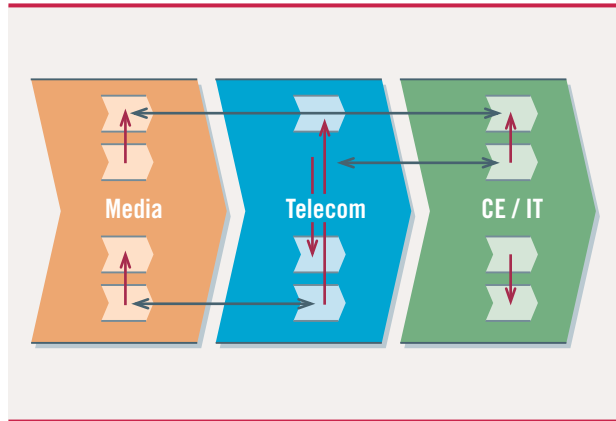
We consider disruptive competition the one generating a breakdown in the value chain, i.e. the one created between two companies taking different positions along the value chain when one enters the market of the other and opens a new business line it did not have so far. It is shown with black arrows in graph 2.

Introduction to the different industries

In graph 1 we can identify telecommunications, consumer electronics/IT, audiovisual media and internet branches, represented by different colours. While analogous technology used to be predominant, and during the first years of the digital era, when the internet was still non-existent, the three first industries had a well defined and relatively stable structure and borders. Natural competition was predominant.

For instance, in the case of telecommunications, the main players in a given subindustry such as telephone communications were well known and basically of one same kind: very large companies, often former monopolies that had opened to competition under optimal conditions, had the customers, infrastructure and know-how. **Telefónica**, **France Telecom** (FT),

Graph 2. Disruptive competition



Source: own

▲ Disruptive competition generates a breakdown in the value chain.

British Telecom (BT), etc. were the main players in the industry and their position in the value chain was solid. With liberalisation, competitors entered the market dominated by one company, but they were similar companies looking for growth in new markets thanks to liberalisation. In the mobile phone market, there is the example of BT and FT in Spain and Telefónica in the UK.

While analogous technology was predominant, the industries had a well defined and relatively stable structure. Natural competition was predominant.

Hence there was natural competition between peers (cf. graph 2), often due to geographical reasons, but there was no substantial breakdown of the value chain according to graph 1. No disruptive competition was predominant.

As to the consumer electronics (CE) industry, a very different one, much opener and more competitive, non-regulated and with a lesser geographical base, we will see that it also used to have specific borders. Many companies were

fighting for the market, but it was also natural competition, companies of the same kind. The manufacturers of devices providing contents for human sense (hearing, sight) used to be very popular brands. Sony, Panasonic, Siemens, Philips and many more used to dominate CE in the analogous era. Many are still there but, as we will see further on, companies from other industries have entered their market. Now they need to serve a double competition, natural and disruptive.

It is true that there is some exception to this general scenario. For instance, in 1989, still in the analogous era, Sony had integrated vertically towards content production and distribution by acquiring Columbia Pictures Entertainment from Coca-Cola, thus creating the Sony Pictures Entertainment division. This vertical integration was not directly motivated by technological reasons of digital convergence (perhaps it anticipated it) but out of business strategy.

Also Philips had been in the music production and distribution business with its Polygram division but sold it in 1999.

Other industries

Before entering the audiovisual media industry, which is the object of this article, we will show the stability of value chains in the analogous era, taking a brief look of other industries. In the case of music, record companies had a fierce natural competition, fighting for the recording and editing rights of creations by artists. Their labels were well known and had a long tradition. Thus classical music lovers looking for works conducted by Herbert von Karajan usually turned to the Deutsche Grammophon catalogue.

In photography and home cinema, the youth of today hardly know that this industry was almost an oligopoly of a few companies symbolised by Kodak.

Digital convergence: causes and effects

Digital technology is essentially a highly efficient method of dealing with phenomena generated by life and nature like a signal: sound, pictures, temperature, etc.

Most natural signals are physical phenomena that, no matter how limited they are in time, acquire endless intermediate values during their manifestation.

In the analogous era, the need for recording, treating, analysing, sending through distance and reproducing these endless signals forced their full treatment and thus to devote enormous resources such as memory, process and transmission capacity, etc.

With digital convergence there is a trend towards progressive standardisation of the technological items involved in the different production chains.

With digital technology, it was discovered how to do so the signal, which is naturally continuous, would not lose its whole information despite capturing only a part of it in the form of a finite number of isolated values. Thus the signal became by means of codification a set of numeric data stored in any place.

This had different consequences with an enormous impact:

- ▶ First, a dramatic reduction of resources to devote to signal treatment and thus of associated costs.
- ▶ Second, and more important: signals of totally different nature like sound and image can be represented the same way thanks to similar and compatible codification.

► Finally, all signals can be treated with the same digital devices, stored in common supports and transmitted and received in distance through the same channels and transport techniques.

These are the foundations of what is known as digital convergence. There is a trend towards progressive standardisation of the technological items involved in the different production and commercial chains, and a common space for many signals and products is being configured that were not coincident so far.

For instance, telecommunications companies became able to convey not only voice or analogous signals such as video but also data that may come packaged in a digital code with all sorts of products: image, sound, video and any other combination of data significant for anybody (person or machine). All this with a degree of efficiency and thus of capacity and cost much higher than in the analogous era.

The IP protocol and the internet, which are basically a way of packaging and routing data and a global communications infrastructure with high capillarity, place a definite level of standardisation and ubiquity to this picture.

This immense common space of transmission technologies and systems makes the traditional barriers between the different positions along the value chain easily surmountable, and what in the analogous era used to be closed, non-coincident circles of different incompatible technologies and separated businesses are now open spaces where disruptive competition is more in grasp of the different stakeholders of the value chain.

Compatibility of formats, infrastructures and know-how in the different industries allows companies to think of doing business in segments they had not dared to enter before. Breaking up the value chain is now easier: the borders between the different industries are blurring and the digital convergence metaindstry is being created.

Some examples of disruptive competition

Apple: iTunes – iPod – iPhone – AppleTV

A few years ago, Apple used to be a manufacturer of devices, mainly computers, and hardware. They had a solid position in the green layer of the value chain described before. Today, thanks to the internet, the digital convergence process and Steve Jobs' vision, Apple is in different layers of the value chain. On the one side, it manufactures IT and CE devices and hardware. The iPod is the preferred (and cult) device of most users to store and listen music.

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Besides, the iPod/iTunes service is extended to the aggregation layers in the chain. Today, Apple makes for 70% of global online music sales and is the number one in music distribution in the United States with more than 8.5 billion songs sold since 2003, 1.5 billion of which between July 21 and September 9, 2009, less than two months! Its position is so strong that it sets the rules of the game in most of the global music industry.

Telefónica: Triple Play – 4Play convergent offers

The telecommunications company par excellence in Spain defines itself as follows:

«Telefónica is one of the world's leading integrated telecommunications operators in providing communication, information and entertainment solutions.»¹

Communication and entertainment are contents circulating through its networks. This phrase makes it clear that Telefónica considers providing entertainment and information services to its customers a core business. That is, it takes a strategic position also in the audiovisual communication layer in the value chain. To understand the situation of the traditional business of a telecommunications company, we will make a brief and simple analysis of Telefónica's different business lines based on its quarterly report for the January-September 2008 period.²

Graph 3 shows a summary of this.

As can be seen, the operator is experiencing a volume growth in some business lines, but its margin is decreasing in most. The IP technology and increasing competition in the different segments cause erosion in the margin of its traditional operations. Triple Play (landline voice +

broadband + IPTV) and Quad Play (triple + mobile phone) service offers are formulas to seize, loyalise and keep customers in exchange for surrendering a part of the margin in each business line. This is an excellent example of commercial service convergence. Given this scenario, it becomes clear that telecommunications companies can grow in volume or results through:

- a) geographical expansion, positioning themselves in new markets;
- b) increasing their efficiency to improve their margin;
- c) maximum use of synergies between convergent Triple and Quad play services and loyalising customers;
- d) opening business lines in other value chain layers like IPTV.

Graph 3. Evolution of the telecom business

	Volume	x	Margin	=	Benefit	
Landline voice	↓		↓		↓↓	3ple
Narrow band connection	↓		↓		↓↓	
Broadband + Internet	↑		↓		???	4ple
Mobile phone	↑		↓		???	Play
Pay TV	↑		?		↑	
Loop renting	↑		↓		???	
TOTAL	↑		↓		???	

Source: Telefónica, Q3 2008 quarterly results and own

In the last case, video and formats called Rich Media³ are the most adequate contents to provide a return of the enormous investment these companies have made in both landline and mobile broadband infrastructures. They therefore tend to develop businesses or create strategic partnerships with the audiovisual media value chain layer, which certainly bears some risk for companies in the latter industry. Nevertheless, it is also an opportunity for them, as we will see further on.

Skype and Msn, voice via IP

Skype and Msn are two great examples of services appeared in the internet era that have seized the telephone service telecommunications companies traditionally used to render. In this setting convergence is total as it not only allows users to talk to each other with text and voice but also to see each other on video, sharing documents, games, etc. in real time.

These solutions that were initially developed for end users and evolved accordingly are now

adapted to large companies and organisations that see in these tools the possibility of improving their productivity, while drastically reducing their voice communications and travelling costs.

Digital terrestrial television and the Disney case in Spain

In the field of open hertz-wave television, real full digitisation arrives with the deployment of **digital terrestrial television (DTT)** and the shut-down of analogous TV broadcasting. Spain will complete this process in 2010. The use of digital technology in television also implies an increase of resource efficiency, particularly in the radio-electric spectrum taken by this service. Thus DTT will allow to increase the potential TV channel offer five-fold, yet the demand will not, as we will see further on.

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In this scenario, **Disney**, which so far had been a content provider for open media and an exclusive pay channel in Spain, made a quantum leap in 2008 and launched a free open channel taking a DTT slot and opened the advertisement business model. Upon the launch of this new channel, Disney Spain expected advertising to contribute to double its turnover –as we will see in the next section, to the detriment of other operators.

The above examples show the impact of digital convergence on the competitive scenario of this metaindstry. Disruptive competition is increasingly frequent and makes barriers between the different industries easier to surmount. Thus pressure on its companies increases substantially and traditional competitive strategies may turn out to be insufficient.

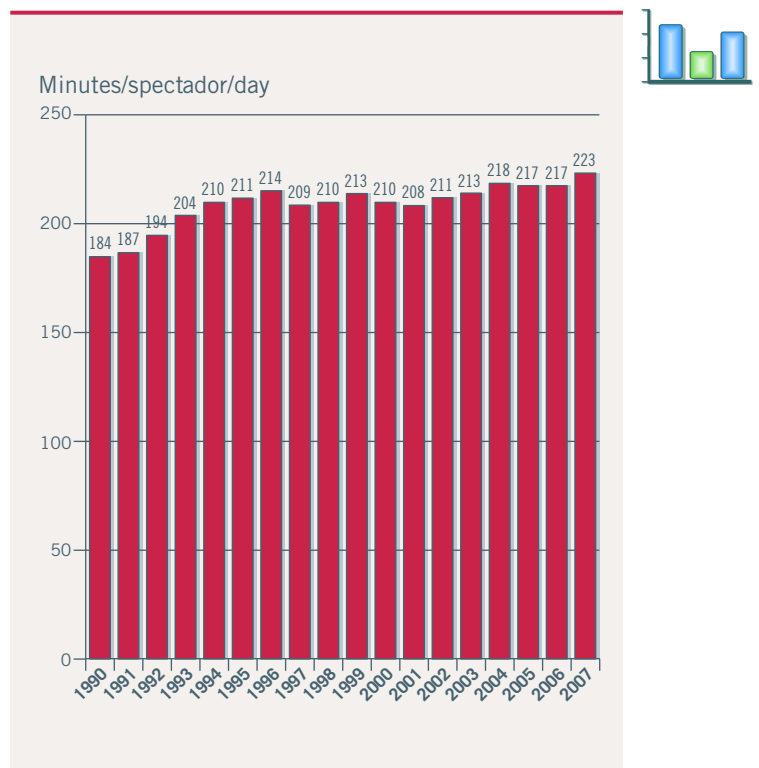
The TV market in Spain

To tackle this point, we first need to see the situation of offer and demand in this market. Then we will use Porter's five forces model to determine the competitive situation of audiovisual media. Finally, we will specifically deal with advertising, the main business model in the industry.

Offer and demand

As regards demand, graphs 4 and 5 show the evolution of overall TV consumption in Spain (source: **Corporación Multimedia**). It can be observed that demand growth between 1990 and

Graph 4. Evolution of TV consumption in Spain

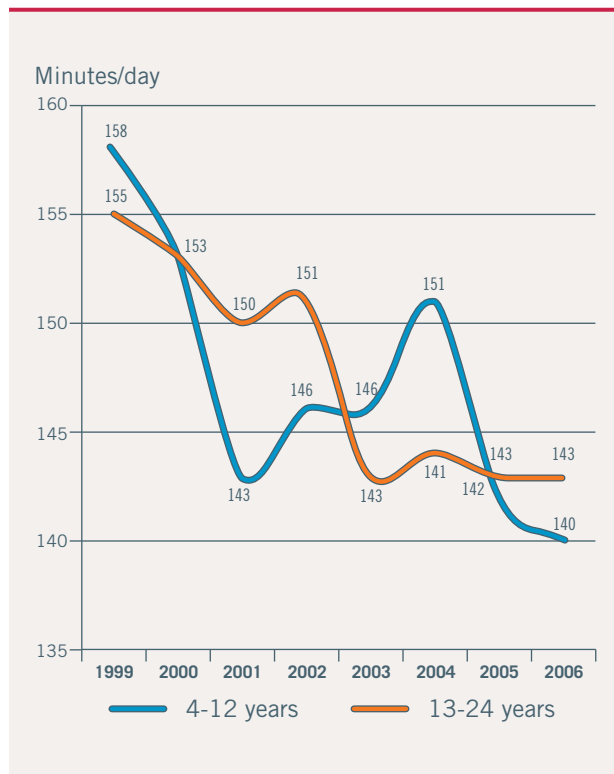


Source: Corporación Multimedia

▲ Between 1990 and 2007, demand increased at less than an annual cumulative 2%.



Graph 5. Evolution of children and youth consumption



Source: Corporación Multimedia

- ▲ The youngest segments tend to reduce TV consumption.

2007 has been low. The analysis of figures shows that it is less than an annual compound 2%.

Also, the youngest segments tend to reduce TV consumption, which has been down 12% among children under 12 in the last eight years.

The explosion of the offer in a market in which demand is hardly growing splits market shares.

As regards the offer, the regulatory and technological framework originated a radical change after 1990, the first year represented on graph 4. Opening the market to private operators in 1990 and later ongoing technological develop-

ment until the appearance of DTT has allowed a considerable increase in the number of operators providing TV services (graph 6).

Of course, the explosion of the offer in a market in which demand practically does not grow means that market shares are split. Graph 7 shows the market shares of the different operators in Catalonia between 2002 and September 2008. It can be perfectly observed how the entry of new operators affects the established ones negatively.

Hence two conclusions can be drawn: on the one hand, the industry has a big imbalance between a rapidly increasing offer in terms of operators and services and a demand that has been practically stagnating for twenty years; on the other, following the above conclusion, the situation of established operators has weakened substantially, without new entrants having reached a very solid position.

The situation of established operators has weakened, without new entrants having reached a solid position.

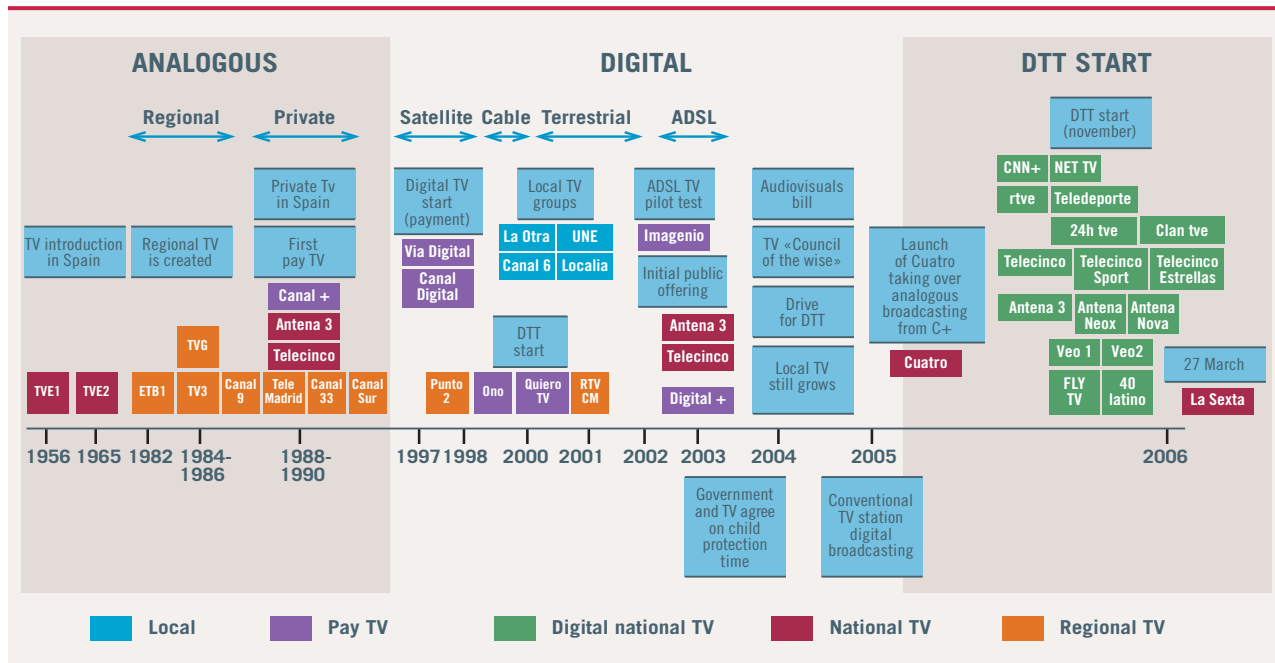
Competitive situation according to Porter's model

The five competitive forces in the model are those shown in graph 8 (on page 88). In the following, we will briefly comment the situation of each force.

a) Threat of new entrants. This force is obviously strong as the regulatory framework tends towards liberalising the industry and technology provides more alternatives to reach out to users with TV products: cable, satellite, IPTV, etc.

b) Threat of substitute products. This force is also very strong. Television is basically an entertainment and information service for users, but today citizens have multiple platforms to have entertainment and information in real time like the internet, mobile phones, online game

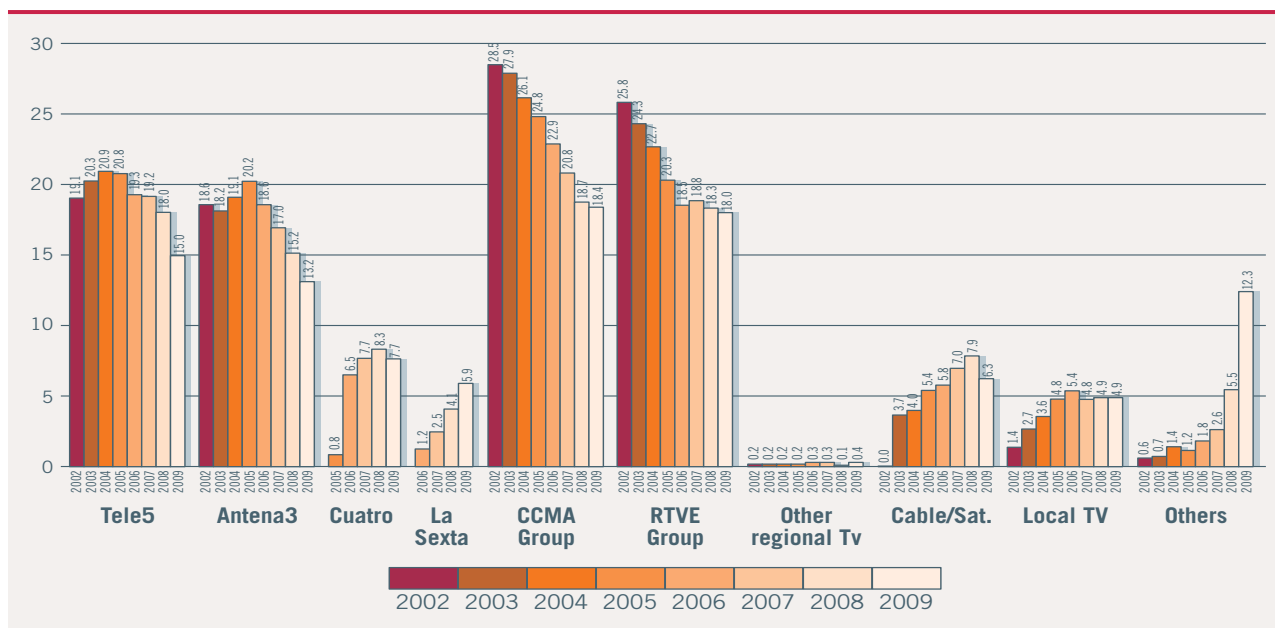
Graph 6. Milestones of television in Spain



Source: La TV en España. Informe 2007, UTECA, Deusto

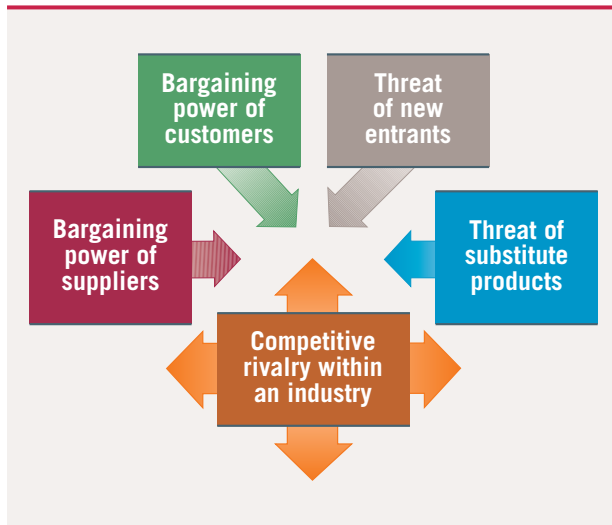
▲ The opening to private operators and technological evolution has multiplied the TV offer.

Graph 7. Annual accumulated share of TV operators in Catalonia



Source: Sofres and own

▲ Market share of the different operators in Catalonia between 2002 and September 2008.

Graph 8. Porter's forces

Source: Michael Porter

▲ Outline of Porter's five forces.

consoles, messaging, video on demand, podcast devices, multimedia centres, social networks, etc. This substitute phenomenon is especially intense among the youngest segments and young adults, which are highly valuable for the advertising market.

c) Bargaining power of customers. The bargaining power of customers is very high. In open free TV there are two kinds of customers: advertisers and audience. In both cases, the disproportion between TV service offer and demand causes customers, either advertisers or audience, to have the power of choosing between multiple options on media, which strive for their advertisement contracts or their attention. This necessarily presses prices and margins of the whole industry down to the benefit of advertisers who also can opt for doing their communication investment in new platforms. We will take up this subject in the section devoted to advertising.

d) Bargaining power of suppliers. This force is also strong. In some cases like football, Olympic Games, etc., it is even very strong. Premium content sources for television are always scarce,

often even unique. Either with sports contents (football being a typical case) or top entertainment with reputed stars, there is not a big market to resort to. Suppliers of such key contents have a strong position vis-à-vis the audiovisual media industry.

e) Competitive rivalry within the industry. The situation of each of the former four forces is a possible weakness in the position of audiovisual media operators in the industry. Hence the fifth force is a scenario of maximum rivalry between competitors. This scenario leads to a drop of margin and benefit within the chain, thus jeopardising the medium-term feasibility of the business.

To complete the picture of the audiovisual media industry, it is important to analyse the situation of advertising.

The advertising market

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Advertising, the main business model in the industry, is also experiencing deep change. Traditional media and new platforms compete fiercely for investment by advertisers.

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In September 2007, the IBM Institute for Business Value published *The End of Advertising As We Know it*⁴, a report with a growth forecast of the advertising business for the 2007-2010 period in different media as shown in graph 9. As can be seen, the expected growth of new platforms in 2007 was much higher than that of traditional media. The internet was predicted to grow 15% above television (Global Broadcast/Radio).

The global economic and financial crisis that broke out in late summer 2008 blew up that forecast, but the gap has been maintained. Thus in September 2009, TNS Media Intelligence published the result of the US advertising market for the first semester 2009 as compared to the same period in 2008.⁵

While advertising investment in television in the American market dropped a 10% in one year, the internet kept growth at 6.5%.

In the case of Spain, the reduction in income has been much stronger. In its half-year investor report for the first semester of 2009, Tele5 reported a 43.3% reduction in advertising income as compared to the first semester of 2008.⁶

Finally, the growth rate gap kept over years has led the internet industry to catch up with and even overtake television in terms of advertising investment. On September 30, *The Guardian* wrote:

«Internet overtakes television to become biggest advertising sector in the UK: The UK has become the first major economy where advertisers spend more on internet advertising than on television advertising, with a record £1.75bn online spend in the first six months of the year 2009.»⁷ This trend will doubtless continue.

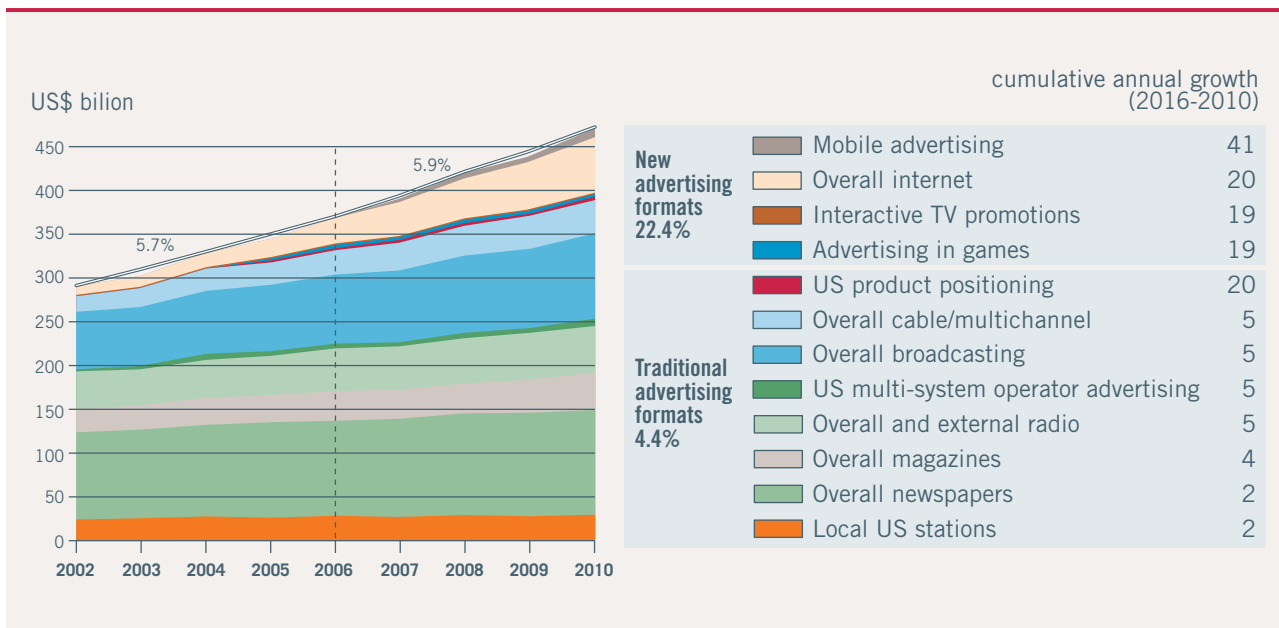
Chart 1. Change in advertising expenditure in the US

January-June 2009 as compared to January-June 2008*

Media industry • Medium (By order of expenditure 2009)		Change in %
TELEVISION		-10.0
INTERNET (only shown ads)		6.5
RADIO		-24.6
TOTAL		-14.3

Source: TNS Media Intelligence, 16/9/2009

Graph 9. Overall advertising expenditure in the US by category



Source: Analysis of the IBM Institute for Business Value, based on a combination of industry forecasts

▲ Pre-crisis forecasts already suggested a higher increase of advertising in the internet than in other media.

The challenges of the audiovisual media industry

If we summarise the different points dealt with so far, we see that on the one hand, the audiovisual media industry and related branches –telecommunications, consumer electronics and IT, internet– are in a process of transformation by which barriers between them are blurring due to technological evolution and digital convergence, thus creating an immense metaindustry.

On the other hand, the competitive position of traditional media is vulnerable, with a big rivalry among themselves due to a lack of growth in demand as compared to offer and the ongoing appearance of substitute products and services. Finally, the main business model of audiovisual media, advertising, is affected by the internet as it seizes similar advertising investment figures to those of television but still grows at a clearly stronger rate, about 15% more.

Does all this mean that the time of audiovisual media is over and this sector has no future? To me, the answer is clearly no. Our information and knowledge society is characterised by a great need for relevant, accurate and reliable information in real time, but at the same time also by saturation of information sources of all sorts. Also, our society clearly tends towards increasing consumption of leisure and entertainment products and services.

The information and knowledge society has a great need for relevant, accurate and reliable information in real time.

Hence the main challenge audiovisual media are confronted with is not the obsolescence of information and entertainment services for the society but rather progressively outdated formats and distribution channels as they have been used so far exclusively (TV and radio).

And this involves other outdated items: organisational form, processes, technological infrastructure, production and cost structures, business models, competencies of people, relations with customers, suppliers and collaborators, etc.; that is, practically the whole business standard in the industry.

This is an enormous challenge as it affects the whole production and management structure of audiovisual media. And it affects especially the organisation culture. The challenge lies in adapting to the new competition conditions in the metaindustry and to act upon all mentioned areas. Adaptation is only possible if it is managed as a shift in the business and culture model. A deep and urgent change, as **Ashley Highfield** said at the Edinburgh International Television Festival in late August 2009, using the metaphor of an impending «iTunes moment» for media.⁸ Highfield, who was the internet leader at BBC and its head of Technology and New Platforms until 2008, drew a simile with the music branch, which was unable to foresee the threats (and opportunities) of digital convergence, not reacting by changing its structures and products according to what technology placed within its grasp and losing control over the industry.

The music branch did not change its structures and products according to technology and lost control over the industry.

Finally, to assess the depth of change to be done, we will specify in the following some areas requiring action, taking up and updating the recommendations made by the **IBM Institute for Business Value** in different reports.⁹

Recommendations for the media industry

► **Be 100% digital factories.** The whole production will need to be digital. Historical archives

will need to be digitised in order to be available and easily locatable at any time.

- ▶ **Give value to contents as functional assets.** Content management will always be geared to maximising its value and flexibility.
- ▶ **Multi-distribution.** Contents will be distributed through all media, with a specific format and language for each case. Thus traditional and new media will complete each other's potential to access different target markets and create synergies to offer innovative services allowing to serve the user at any place, any time and through any communication device.
- ▶ **Flexible products, services and prices.** Capacity to combine products swiftly, adapting them immediately to market needs, tastes and prices.
- ▶ **Create value.** It is necessary to open new product windows, new spaces allowing access to and consumption of contents. New business models and new means of revenue associated to innovative services with a high growth potential are needed.
- ▶ **Digital infrastructure with integral management in real time.** Internal operations and relations with customers and suppliers need to be articulated in an integrated infrastructure of information systems allowing to have relevant information in real time to analyse the business (business intelligence) and take decisions in a minimum time. Implement CRM (customer relationship management) activities aimed at optimising customer relations and satisfaction in order to increase service consumption.
- ▶ **Partnerships and collaborations.** An active policy to create partnerships with the rest of stakeholders in the industry and metaindustry. Partnerships will allow to cater for demand of more complex and valuable products and services, in which the experience of the rest of players is needed. Adding to reach farther and share created value. Solid, long-standing

partnerships and partnerships with variable geometry for specific market needs.

- ▶ **Become a company on demand.** Going beyond the exclusively lineal model of audiovisual media and offer also all entertainment and information contents and services in real time based on customer and user demand.
- ▶ **Identification of and focus on core activities.** Investment of own human and material needs to concentrate on core activities, those generating a real competitive advantage. The rest of activities needs to be outsourced.

Implementing these recipes means to take action in almost all areas of the organisation.

Final conclusions

The rules of the game have changed in the audiovisual media industry and related sectors: telecommunications, consumer electronics/IT and internet. This is a highly turbulent metaindustry due to digital convergence and is still evolving rapidly and continuously.

Swift organisational structures; innovative products and services; low and variable cost structures; new business models and growing income lines are needed.

The demand in audiovisual media services is growing and becoming sophisticated: there are opportunities in the market. However, in this deeply unstable setting, audiovisual media need now to thoroughly reinvent themselves and keep their ability to adapt to the future continuously. They require swift organisational structures; innovative products and services adapted to all platforms; low and variable cost structures; external partnership policies; etc. All in all, the very culture of these organisations needs to change. And all this needs to

occur within relatively short time, a few years. Vision, innovation, will of change, leadership and management capacity to carry it out will

be indispensable to keep audiovisual media competitive and relevant as information and entertainment services for most people.

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He has had leading positions in technology, finance and production. At the CCMA Group, he has been the director of external production and news and deputy director of technology.



Notes

1. TELEFÓNICA. *Annual report 2007*.
2. http://www.telefonica.com/es/shareholders_investors/pdf/rdos08t3-esp.pdf
3. Internet advertisement allocated to a website using advanced technology like video on demand, programme download interacting with the user and advertising changing when placing the cursor on it.
4. http://www-03.ibm.com/industries/global/files/adqrfinal_qr.pdf?re=media&sa_message=title=download_executive_summary
5. <http://www.tns-mi.com/news/09162009.htm>
6. http://www.telecinco.es/inversores/es/documentacion/1S09_SPANISH_CNMV.pdf
7. <http://www.guardian.co.uk/media/2009/sep/30/internet-biggest-uk-advertising-sector>
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