THE MEDIA INDUSTRIES AND THEIR MARKETS

Quantitative Analyses

Edited by

Patrick-Yves Badillo and Jean-Baptiste Lesourd
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and
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The Effects of Competition on the Profitability of European Television Channels

Juan P. Artero, Cristina Etayo, Mónica Herrero, Mercedes Medina and Alfonso Sánchez-Tabernero

9.1 Introduction and literature review

As history shows, until the 1970s, television in Europe had not yet benefited from the effects of competition. Television channels were owned by the state and their aim was to supply information, education and entertainment to all citizens. Television was, therefore, just a mere public function rather than an audience competition between different channels.

During that period, the literature considering television in Europe has focused in particular on topics such as the balance of information, the fulfillment of the public service obligation, the rights of minorities and the opportunity to educate good citizens. Television was far from being a marketplace. Given this situation, neither academics nor the people working in the field considered the economic aspects of the channel.

However, in the past three decades, the deregulation of the audiovisual sector – shaped by technological and legal factors (Brown and Picard, 2005) – has changed the landscape of television in Europe. Today, in each national market, very different channels coexist:

- Between two and three state-owned channels which reach a national audience.
- Between two and four private channels seeking to increase their market share.
- Multiple regional, local and some specialised channels which broadcast to audience that have common interests.

The field of media economics analyses the behaviour and structure of media markets. According to Picard (2003: 78), 'media economics
is the study of how economic and financial pressures affect a variety of communications activities, systems, organisations and enterprises, including media and telecommunications. Albarran also includes consumers in his definition. According to him, ‘media economics is the study of how media industries use scarce resources to produce content that is distributed among society to satisfy various wants and needs’ (2002: 5). On the other hand, Doyle points out that it ‘combines the study of economics with the study of media. It is concerned with the changing economic forces that direct and constrain the choices of managers, practitioners and other decision-makers across the media’ (2002: 2).

Since the 1980s, the majority of studies have focused on the privatisation of television companies and market liberalisation and their influence on television programmes and audiences. The diversity of approaches have cohered into three distinct schools of research.

Firstly, there is the critical school which advocates media protectionism to avoid excessive concentration and to guarantee pluralism. This literature argues that the communication sector is an industry which has a substantial impact on the development of society. According to them, media products must be protected because of their cultural nature, and that is how it is understood in distinctive circles and international institutions (Wright, 1994; Shaughnessy, 1990; Machet, 1998). Some of these theorists consider the position that media hold as hegemonic, in line with a type of research known as Critical Theory, which draws on Marxist approaches taken from sociology, cultural studies and the political economy of the media. All of the authors appear to share certain misgivings about the operation of the market, and so defend state control. In this sense, the work carried out by Mattelart (1979), Garnham (1990), Dyson and Humphreys (1990), Mosco (1996), Golding and Murdoch (1997), Compaine and Gomery (2000) and Beglikian (2000), among others, seems relevant.

Secondly, the liberal school is committed to a free market of ideas that regulates itself and balances itself out. In contrast to the protectionism of the previously mentioned school of thought, this market analysis of the media is carried out based on an assumption of the advantages of the free market, in respect of both company management and media consumption. The market itself brings with it balance and pluralism in the news. In respect of cultural issues, the most significant are those of the competitive market in which the media operate. These authors introduce a tradition of applied research and the most liberal ones hold that the media should not be subjected to any state intervention.

For those authors who belong to the moderate third school, protectionism is simply not possible within the global context of communication. Nonetheless, neither is absolute liberalism, unless it is considered that the freedom of the agents is founded on the responsibility of achieving the common good. Among the proponents of this approach are Toussaint (1996), Picard (2002), Albarran (2002), Nieto and Iglesias (2000) and Doyle (2002). Some authors have studied the market with a more practical objective in mind – that is, with the aim of influencing regulation. Specifically, those that stand out are Noam (1985), with his study on the implications of the growth of competition, and Hendriks (1995) and Sánchez-Tabernero and Carvajal (2002), with their analysis of media concentration in Europe. With respect to international expansion and the creation of multinational media companies, it is worth mentioning the research conducted by Gershon (2000) and Hollifield (2001). Finally, there are those that have centred on the study of a specific market, Dunnett (1990), for example; or that of one country, for example Collins, Garnham and Locksley (1989).

Alongside the theoretical framework, in recent years academics have paid special attention to particular aspects of the television industry:

(i) Main problems related to the issue of cultural identity (Antcliffe, 2005). This field includes the study related to the effects of the globalisation of television markets – in particular, in small and medium-sized countries – and also related to the interrelationship between television firms and political power.

(ii) Television management, which includes articles and monographs about corporate and business strategies. These have included studies about the different aspects related to the governance of the television firms which have focused on the following subjects:

- Studies about models and strategies of channel programmes (Adams, 1993; Litman et al., 1994; Park, 2005).
- A management advertising analysis, the search for an alternative to the conventional ‘spot’ and advertising price policies (Leahy, 1997).
- Answer to the growing intensity of the competition such as specialisation of subjects, the creation of distinctive brands and the identification of profitable market niches (Jarrett, 1995; Mash, 1999; Powers, 2001; McDonald and Lin, 2004; Gabszewicz, Laussel and Sonnac, 2004; Van der Wurff, 2005).
- Pay television channel strategies and their prices subscription policies (Anstine, 2004).
- New business models based mostly on technological innovations that affect the distribution and marketing of audiovisual products.

(iii) Television market analysis. In this area, some monographs and articles stand out because of their content which is essentially the phenomenon of deregulation and concentration and also the consumer's behaviour and the development of products and substitute services (Burnett, 1992; Chan Olmsted, 1996; Li, 1999; Young, 2000; Yan, 2002). Frequently, such studies identify the market's most relevant aspects and the ways in which channels compete with one another. Within this context researchers study aspects such as the diversity of companies, vertical or horizontal integration strategies, and in general models of the companies' growth (Brown and Picard, 2005).

(iv) Research which integrates economic and technological aspects such as the digitalisation of the channels, new content based on public participation and new ways of distribution such as the Internet or the mobile phone (Davis and Walker, 1990; Wu et al., 2004). From our point of view, considerable merit is to be found in those works that not only describe what technology can allow companies to achieve but that also outline business models that will favour the development of high-tech projects.

In the past few years there has also been an increase in the range of methodological approaches to the study of television economics. On the one hand, the descriptive model applied to successful television companies has been applied widely in academic writing. In the case of public television, the BBC has been studied from different perspectives as a model of a publicly funded organisation (Ojeda, 2009), whereas the German public channels, ARD and ZDF, have been analyzed as offering examples of an intermediate model. On the other hand, and considering commercial television, there are very few studies about the international expansion of commercial television channels such as Fininvest or RTL. Finally, the activities of Canal Plus and BSKyB have established the principles for the development of pay television channels (Herrero, 2003).

Moreover, as a consequence of the uncertainty in the European audiovisual sector, comparative pan-European studies have played an important part in this research field (Sánchez-Tabernero and Carvajal, 2002; Medina, 2005). Recently, there has also been substantial development of the empirical method. The search for quantitative evidences that can validate the hypothesis is the main aim of this kind of research, in which intangible values play a substantial role. The results can be of benefit to both policy makers and media managers.

9.2 Methodology

9.2.1 Sample

In order to study those factors that influence the profitability of television networks, we have analyzed data from the period 1995-2004, which correspond to 11 television networks that operate in five European countries: Spain, France, the United Kingdom, Germany and Portugal. The size of the sample was determined by the difficulty of obtaining data for some of the variables that have been studied. Although it would have been desirable to have used information from a larger number of networks, the difficulties of securing accurate company information about the networks and, therefore, of ascertaining its financial status, has prevented us from drawing upon a wider range of observations. Nevertheless, it is necessary to emphasise that the sample includes networks that are very different in nature. For instance, there are public and private networks, as well as both recently created and longer established television companies.

9.2.2 Measurements

Dependent variables

We used data corresponding to three variables of different results in order to obtain an accurate picture of the economic behaviour of the television network in terms of results.

The first variable we considered is the margin or sales profitability, defined as the operating profit obtained in the economic exercise divided by the amount of sales of the period. This variable shows the profit obtained in that period, considering the income.

The second variable considered is the financial profitability of the company, ROE (return on equity), which is defined as the quotient of the net benefit of the exercise of their own funds.

Finally, we also studied economic profitability as a dependent variable, ROA (return on asset), defined as the quotient of the operating benefit by the company assets.

The use of these three variables allows us to clarify if there are current patterns of influence of the independent variables. In this way it is possible to obtain better information on the management mechanisms or managerial aspects that are influenced by the different exogenous variables under consideration.
The data regarding these three variables were obtained from the balance and results accounts of each one of the considered television networks.

**Independent variables**

In our analysis, we used information about four independent variables, which have been considered, from the theoretical point of view, to have a potentially high influence on the level of profitability enjoyed by television networks.

**Audience.** The variable audience reflects the audience share of each network in terms of a percentage of the total television audience in each country. Data on this variable have been obtained from the annual reports compiled by the European Audiovisual Observatory.

**Channels per household.** This variable attempts to gather information on the existing competition level in the television market of the country in which the network operates. For this purpose, we created this variable, which was defined as the number of channels/networks existing in each country divided by the number of households (in thousands). Higher values of this variable are indicative of vigorous competition in the television market, since a greater number of channels contend for the same number of homes. Lower rate values respond to a situation with a smaller degree of competition. The information on the number of households in each country was obtained from Informa Media Group, 2002.

**Time.** This variable indicates the average number of minutes per day that the inhabitants of each country devote to watching television. Higher values of the variable indicate that it is a country whose inhabitants dedicate a long time to watch television. The data on this variable were obtained from the European Audiovisual Observatory, 2005.

**Seniority.** This variable gathers the number of years that each channel/network has been in operation, that is to say, its seniority as a television broadcaster. Seniority data were obtained from the date of appearance of the channel/network.

**9.2.3 Estimation method**

In view of the structure of the sample, with data of a series of companies for a series of years, the estimation methods used are based fundamentally on techniques of panel data, since these allow the combination of the cross-section structure of data with temporary series.

Thus, we estimated three different models for each dependent variable. In the first place, a model of minimum ordinary squares was considered, which does not take into account the existence of several observations for the same company. Later, we studied models of both fixed and random effects. The election, among the three of them, of the definitive model was made using LM and Hausman tests. The first of the tests has allowed the determination of the convenience or not of the panel data models against the model of ordinary least squares, whereas the second has allowed a choice to be made between the model of fixed effects and that of random effects (Greene, 2003).

### 9.3 Results

As previously mentioned, we considered three models for each of the dependent variables under consideration. The results obtained for the dependent variable margin appear in Table 9.1. The most suitable model, in agreement with the values obtained for the test LM (9.50, p value = 0.002487) and the test of Hausman (49.47, p value = 0.0000), is the model of fixed effects, whose results are commented on below.

According to the information provided in Table 9.1, the variables that are significant in the model of fixed effects are the audience rate, the number of channels per household and the age of the network. Both the audience share and the network seniority have a positive influence on profitability, that is to say, the higher both the audience share and the number of years of broadcasting in the country, the greater is the margin. On the other hand, the number of channels per household has

<table>
<thead>
<tr>
<th>Variable</th>
<th>OLS Coefficient</th>
<th>S. e.</th>
<th>Fixed effects Coefficient</th>
<th>S. e.</th>
<th>Random effects Coefficient</th>
<th>S. e.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Audience</td>
<td>0.749***</td>
<td>0.020</td>
<td>2.935***</td>
<td>0.458</td>
<td>1.005***</td>
<td>0.292</td>
</tr>
<tr>
<td>Time</td>
<td>-0.539</td>
<td>0.090</td>
<td>-0.122</td>
<td>0.091</td>
<td>0.098</td>
<td>0.077</td>
</tr>
<tr>
<td>Seniority</td>
<td>-0.943***</td>
<td>0.145</td>
<td>1.693***</td>
<td>0.499</td>
<td>-0.665***</td>
<td>0.219</td>
</tr>
<tr>
<td>Constant</td>
<td>46.920***</td>
<td>19.591</td>
<td>7.927</td>
<td>16.529</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R2</td>
<td>0.740</td>
<td>0.912</td>
<td>0.740</td>
<td>0.891</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adjusted-R2</td>
<td>55.21***</td>
<td>45.67***</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p < 0.10, ** p < 0.05, *** p < 0.01.
a negative influence: the greater the competition within the country measured in terms of the number of existing channels divided by the population (the number of households), the lower is the profitability of the network. However, the time devoted to watching television in each country does not turn out to be a significant variable in explaining the profitability of the chains.

In addition, three models were considered, once again, for the variable of financial profitability, ROE. The tests $t = 5.19$ (p value = 0.022744) and Hausman = 7.14 (p value = 0.128439) and for a significance level of 1 per cent, the most suitable model to explain ROE is the model of random effects. The results obtained are presented in Table 9.2.

As may be observed, the audience rating of the channel is not explanatory of the dependent variable in this case and the seniority of the network has a negative influence on its financial results. On the other hand, the variable number of channels per household is significant with a negative sign, which indicates a positive effect of company concentration on financial profitability. Time is not a variable that explains ROE, just as it happened in the case of the variable margin.

Finally, we estimated the explanatory model of the variable economic profitability, the ROA. The results of this estimation appear in Table 9.3. The tests $t = 8.96$, p value = 0.002758 and Hausman = 10.69, p value = 0.030254, for a significance level of 1 per cent, indicate that the most suitable model to explain ROA is the model of random effects.

### Table 9.2 Estimations of the explanatory models for ROE (N = 70)

<table>
<thead>
<tr>
<th>Variable</th>
<th>OLS</th>
<th>Fixed effects</th>
<th>Random effects</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Coefficient</td>
<td>S. e.</td>
<td>Coefficient</td>
</tr>
<tr>
<td>Audience</td>
<td>1.002</td>
<td>0.434</td>
<td>3.814**</td>
</tr>
<tr>
<td>Channels per household</td>
<td>-56.376**</td>
<td>12.090</td>
<td>-63.549</td>
</tr>
<tr>
<td>Time</td>
<td>-0.349*</td>
<td>0.191</td>
<td>-0.305</td>
</tr>
<tr>
<td>Seniority</td>
<td>-2.025**</td>
<td>0.328</td>
<td>0.412</td>
</tr>
<tr>
<td>Constant</td>
<td>145.421**</td>
<td>39.653</td>
<td>0.0463</td>
</tr>
<tr>
<td>R2</td>
<td>0.460</td>
<td>0.643</td>
<td>0.0427</td>
</tr>
<tr>
<td>Adjusted-R2</td>
<td>0.460</td>
<td>0.643</td>
<td>0.0427</td>
</tr>
<tr>
<td>F</td>
<td>13.85***</td>
<td>7.76***</td>
<td></td>
</tr>
</tbody>
</table>

* p < 0.10, ** p < 0.05, *** p < 0.01.

### Table 9.3 Estimations of the explanatory models for ROA (N = 38)

<table>
<thead>
<tr>
<th>Variable</th>
<th>OLS</th>
<th>Fixed effects</th>
<th>Random effects</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Coefficient</td>
<td>S. e.</td>
<td>Coefficient</td>
</tr>
<tr>
<td>Audience</td>
<td>0.930**</td>
<td>0.315</td>
<td>2.226</td>
</tr>
<tr>
<td>Channels per household</td>
<td>-64.952**</td>
<td>29.172</td>
<td>-332.801**</td>
</tr>
<tr>
<td>Time</td>
<td>-0.376**</td>
<td>0.112</td>
<td>-0.337**</td>
</tr>
<tr>
<td>Seniority</td>
<td>-1.248**</td>
<td>0.260</td>
<td>-2.549**</td>
</tr>
<tr>
<td>Constant</td>
<td>135.767**</td>
<td>29.151</td>
<td>7.46</td>
</tr>
<tr>
<td>R2</td>
<td>0.433</td>
<td>0.746</td>
<td>0.433</td>
</tr>
<tr>
<td>Adjusted-R2</td>
<td>0.365</td>
<td>0.664</td>
<td>0.365</td>
</tr>
<tr>
<td>F</td>
<td>6.32***</td>
<td>9.14***</td>
<td></td>
</tr>
</tbody>
</table>

* p < 0.10, ** p < 0.05, *** p < 0.01.

As can be seen from Table 9.3, all of the variables included in the model are significant in the explanation of ROA. The coefficient of the variable number of channels per household has a negative sign, showing that competition in the sector reduces the level of economic profitability. The variable time, that is to say, the average number of minutes that the inhabitants devote to watching television in a given country, also has a negative sign. In other words, the greater this value, the lower the level of economic profitability of the network.

The variable audience has a positive influence on the economic results of the company, so that a greater audience means a higher level of channel profitability. Finally, the seniority of the network negatively influences its economic results, as had been the case in relation to financial results.

### 9.4 Conclusions and discussion

Results regarding return on sales (ROS) confirm the main research hypothesis, which is related to this independent variable. The critical factor on profitability is the ability of television networks to attract massive audiences in order to ‘sell’ them to advertisers, media buyers or advertising firms. Differences on gross profit margin among channels with a similar audience market share are explained in terms of both internal causes – that is, sales force efficiency or cost control pressures – and external ones – that is, aggregate advertising expenditure in each country, rules established by each regulatory institutions and the
impact of substitutive advertising media on each national market, as it is the case of below-the-line commercial communication.

The correlation between seniority and profit margin arises from the ability to create valuable brands throughout experience in a particular market and stable habits of audience consumption. This phenomenon is especially pronounced in the case of European television markets, because the oldest private televisions broke the public monopolies and they appropriated the positive attribute of favouring the public's freedom and choice. The newest television networks tend to neutralise their competitive disadvantages through a variety of strategies: to develop a cost structure that is sustainable on audience shares of less than 10 per cent; to look for 'killer applications' in programming - such as the acquisition of sports rights - to attract viewers from other channels; to hire well-known professionals who are traditionally linked with the leading networks - these personalities play a role as 'sub-brands' providing prestige and credibility; to promote particularly creative marketing campaigns; and to establish a very aggressive commercial policy, with strong advertising discounts for advertisers. Nevertheless, in most cases, the leading networks in the late 1990s have been able to dominate the market continuously and to obtain higher levels of profitability than new entrants.

The negative impact of the number of channels on profitability is the logical effect of the intensification of competition in television markets. In part, the relatively slow development of digital television in Europe may be explained by the dominant operators' attempts to delay the implantation of a technology that will presumably challenge the oligopoly situation that has prevailed in domestic television markets over the course of the past three decades.

The results of this piece of research do not confirm one of the hypotheses. Consumption time does not prove to be significant, in spite of the fact that wider television consumption would seem to imply an increased ability to attract advertising expenditure in competition with other available options for advertisers. The high level of television consumption seems to depend moreover on supply variety, on existing entertainment alternatives, on weather conditions and on economic and cultural development. It is probable that the greater time devoted to television consumption does not imply an increase in the average profitability of the industry, in as far as two generators of consumption - the large number of competitors on the market and a fall in the level of revenues - are unlikely to lead a higher gross profit margin.

However, on having measured the results related to other dependent variables such as return on equity (ROE) and return on assets (ROA), we can observe some differences that are opposite to the factors associated with the high profit margin.

With regard to ROE, firm's audience share and market experience stop having positive correlation. This is explained by the fact that the leading channels are also the oldest in the market and those which normally fund their operations through the accumulated reserves they have achieved in previous years. When the denominator of this ratio of financial profitability grows substantially, logically there is a diminution of the quotient. The variables of number of channels - or competition intensity - and of consumption time behave in a similar manner as seen in the analysis of gross profit margin. The first affects in a negative manner. The second does not demonstrate any correlation.

As far as ROA is concerned, the number of channels independent variable presents a negative correlation, as in both previous ratios and for analogous causes. In this instance the average viewing time also has a negative significance. Paradoxically, ROA is low on markets with higher levels of consumption. Probably the level of economic profitability is ballasted again by the fact that high consumption depends in turn on the extent of supply and on the relatively small average revenue per viewer. Market experience also impacts negatively, as in the case of ROE and for similar reasons. On the other hand, the audience recovers the positive correlation demonstrated in ROS, probably because the denominator of the quotient - in contrast to ROA - includes all of the company's assets, including the part financed with external resources. It seems to be reasonable to conclude that companies with higher audiences, having generated more cash flow, are less indebted.

The results of this research are entirely provisional, because the number of case studies is insufficient to draw definitive conclusions. Furthermore, this study could be useful in outlining new hypotheses for further and wider quantitative analysis. In order to achieve this aim it is desirable that television companies should be increasing their transparency, so that the analysis of their balance sheets and profit and loss accounts - often presented alongside other assets from the same group - give a fair and complete information of their economic and financial reality.
Note

1. Juan Pablo Arteo is an Assistant Professor of Media Management and Structure of Media Industries at the School of Communication of the University of Navarra, Spain; Cristina Etayo is an Assistant Professor at the School of Communication of the University of Navarra, Spain, Department of Media Management; Mónica Herrero is an Assistant Professor of Media Management and Dean of the School of Communication, University of Navarra, Spain; Mercedes Medina is a Professor at the University of Navarra, Spain; Alfonso Sánchez-Tabernero is Vice-President of the University of Navarra, Spain, and Professor of Media Management in the university’s School of Communication.

References


