MOVIE REVIEWS: WHO ARE THE READERS?

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Movie reviews: Who are the readers?

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Abstract

The analysis of the relationship between movie reviews and consumer's decision process has focused mainly on the side of critics, who have been defined as "influencers" or as "predictors" (Eliashberg & Shugan, 1997). Also, new ways to measure the impact of the critic have been introduced (Gemser, van Oostrum & Leenders, 2007) and the consistency of their opinions over time has been proved (Ginsburgh & Weyers, 1999). However, there is scarce evidence about the readers of movie reviews: who are they and what is their profile. The objective of this paper is to fill this gap. Using information of Spanish consumers, we estimate a nested logit model that identifies movie review readers. The preliminary results suggest that movie review readers are mainly employed young women without family responsibilities

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1. Introduction.

The study of the relationships between movie reviews and consumer choice has focused traditionally on two issues. First, the study of the critic as a figure, distinguishing those who are able to influence viewer preference (***influencers***) and those who simply express their own preferences (***predictors***) (Eliashberg & Shugan, 1997), and the critic's influence on total movie revenue. Second, the assessment of the impact of the general opinion of critics on the ticket sales of a movie (e. g. Litman & Kohl, 1989; Wyatt, 1991; Wallace, Seigerman & Holbrook, 1993; Basuroy, Chatterjee & Ravid, 2003; Ravid, Wald & Basuroy, 2006).

However, to this day we do not know who movie review readers are and what they are like. The present paper intends to identify those readers and discover if there is a clear profile of the readers who are influenced by reading movie reviews.

2. Literature Review

The study of the effects of movie reviews has been prolific and has allowed making approximations. As stated above, the focus of research has been the analysis of reading movie reviews without differentiating the impact due to one or some specific critics. This is perhaps the weakness of said research. There is an issue of endogeneity among them due to the closeness between the intrinsic quality of a movie and the praise contained in its review (Boatwright, Basuroy & Kamakura, 2007).

In view of the endogenous problems arisen from the analysis of summary reviews, Reinstein and Snyder (2005) suggest taking an alternative approach to movie review studies focusing on the effects of the opinion of specific critics, particularly those with high influence on the media. The results of these studies show evidence about the impact of the review on box office. Movies that received positive reviews had increased ticket box revenues up to 20 per cent during the premiere weekend (Reinstein & Snyder, 2005)[4].

Another characteristic shared among earlier investigations is the measuring method used. A lot of the empirical evidence comes from the use of the star system. In most cases, the intention was to assess the effect of the stars given to a movie on ticket revenues (e. g.

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[4] A similar approach was taken earlier by Hirschman & Pieros (1985), who measured the effect of the review by means of assessing the opinions of eight influential critics.

Litman, 1983; Prag & Casavant, 1994; Ravid, 1999). Later on, new forms of measuring the impact of movie reviews and stars were substituted by the number and size of the reviews published in the press (Gemser, van Oostrum & Leenders, 2007). As with some of the earlier research, this new approach to assess the effect of reviews on viewer behavior shows mixed results. In some cases, the number and size of the reviews published in the press directly influenced viewer behavior, specifically with art house films, while this phenomenon is not observed among other types of movies (Gemser et al., 2007).

Consistence through time has also been analyzed in movie review studies and it has been found that, according to viewers, critics easily change their opinions as time passes. For mass audiences, if they liked the movie at the movie theater they usually like it also on television. However, among critics, what they consider a masterpiece today may become a simple movie tomorrow (Ginsburgh & Weyers, 1999).

Critic partiality when passing judgment has also been analyzed. Ravid, Wald & Basuroy (2006), claim that critics can be biased towards the producers of the movie. Results support this hypothesis by showing that some critics are partial towards some production studios.

Despite extensive publication of works dedicated to the analysis of movie reviews, most of these have been conducted at the aggregate level. In general, research in this field has used box office as a proxy for moviegoer's behaviors. It is probable that this propensity was caused by the lack of micro data. Fortunately, the trend for research on the impact of movie reviews incorporates the use of micro data to assess the effect of movie reviews on explicit viewer behavior (i.e. Azuela-Flores, Fernández-Blanco & Sanzo-Pérez, 2012; Suárez-Vázquez, 2011).

The results of Suárez-Vázquez research (2011) suggest that critics can influence viewer expectations, but their power is lessened when the effect on overall satisfaction and intention to recommend are analyzed. In addition, the author warns about the effect of negative evaluations. In general, the effect of negative movie reviews on consumer expectations is much larger than that of positive reviews.

On the other hand, Azuela-Flores, Fernández-Blanco & Sanzo-Pérez (2012) used micro data from Spanish viewers to analyze the impact of movie reviews on movie attendance

frequency. The researchers controlled socio-demographic characteristics, such as cultural consumption and cultural information consumption in general, and they realized that reading movie reviews has significant direct relationship to attendance to the movies. Even if their work does not differentiate between positive and negative evaluations, it is possible to observe an always positive impact increasing the probability of attendance. Because of this, the authors conclude that regardless of the direction of the reviews, viewers use them as information instruments to reduce risks.

Notwithstanding the existence of extensive evidence of the effects of movie reviews, either from summative reviews (i.e. Gemser, et al. 2007) or from specific critic reviews (i.e. Reinstein & Snyder, 2005), on ticket box sales or on explicit consumer behavior (i.e. Azuela-Flores, et al., 2012; Suárez-Vázquez, 2011), until this day we do not know the profile of movie review readers.

3. Methodology

As stated above, the objective of this paper is to describe the profile of the movie review consumer. Given the structure of the information available, it was necessary to analyze daily press readers and, among them, review readers.

In order to conduct the present study we used data from the *Encuesta de Hábitos y Prácticas Culturales en España* (EHPCE: Survey of Cultural Practice and Habits in Spain). The survey was administered to a sample of 12,180 individuals over 15 years of age between 2002 and 2003, and its content covers a wide range of cultural activities such as performing arts, music (live and recorded), reading, use of libraries, and attendance to museums and movie theaters.

EHPCE first asks if the individual reads the daily press, and if the answer is affirmative, participants are asked whether they read among others, the movie review sections. According to the structure of the information provided, the decision to read movie reviews is conditioned to reading the printed press, so the econometric model appropriate was an nested logit.

A simple method to know who movie review readers are and how they are is differentiating who do read and who do not read the reviews, and considering the socioeconomic characteristics and cultural capital that distinguish one group from the other. This

differentiation can be assessed with a probabilistic model where the probability to read movie reviews (L=1) can be expressed as follows:

$$\text{Prob}\ (L) = \text{Prob}\ \{u_k > -\gamma Z_k\}$$

Where γ is a vector of parameters to assess, and Z is the group of explanatory variables including socio-economic characteristics and cultural capital of each individual person k.

The person (k) is faced with J possible alternatives which can be grouped in L subgroups; thus, the possible alternatives can be expressed in terms of $[c_1, \dots, c_J] = (c_{1|1}, \dots, c_{J1|1}), \dots, (c_{1|L}, \dots, c_{JL|L})$. The decision model is interpreted as follows: first, we choose among L one group of alternatives and then we choose one specific alternative within the group selected. In our case, the individual k would choose between reading daily press or not. Once reading daily press has been chosen, the person would choose between reading movie reviews or not.

The explanatory variables in our model are: $X_{j|l}$, which identifies the choice made for each alternative (in our case, these are the individual attributes indicating that the person reads movie reviews or not); and Z_l, the characteristics influencing the individual to read the press or not. That is,

$$P_{j|l} = \frac{e^{\beta' x_{j|l}}}{\sum_{j=1}^{J_l} e^{\beta' x_{j|l}}}$$

In this equation, $P_{j|l}$ is the probability of choosing alternative j within group l; in other words, P represents the probability of the individual reading movie reviews (j), after it has been established that he or she reads the press (l), according to his or her preferences assessed by means of a vector (X) of explanatory variables for that choice.

Also,

$$P_l = \frac{e^{\gamma' z_l + \tau_l I_l}}{\sum_{l=1}^{L} e^{\gamma' z_l + \tau_l I_l}}$$

where P_l is the probability of choosing group l, that is, the probability of reading the printed press (l) according to the individual preferences is estimated with a vector (Z) of explanatory variables for that selection.

According to the information obtained from EHPCE, dependent variables were constructed at the two levels of choice (both dichotomous variables). First, reading the printed press is a dependent variable (*READINGPRESS)* taking a value of one when the person decides to read the daily press (either freely distributed or paid) at least once a week. Second, we asked the survey respondents who read the press whether they read the movie review section. This is the second dependent variable (*READREVIEWS)*, which takes a value of one if the person reads that type of review or zero if that is not the case.

The vectors of the explanatory variables X and Z are very similar to each other. The most noticeable difference was found explaining the reading of movie reviews. Our model included variables related to using new technologies and other variables related to the use of alternative audiovisual products, and this explanation would not have an influence on reading the printed press[5].

Thus we have introduced socio-demographic variables that help us describe the profile of the readers in both equations. In the same manner, we introduced classifying variables such as gender and place of residence. We also included variables to assess restrictions in terms of time and money. Furthermore, we have variables such as age and marital status while to assess the levels of income we used both employment status and audiovisual equipment available to each individual.

Preference and taste formation (McCain, 1979) become central to understanding decisions about daily consumption of and investment on (Fernández Blanco & Prieto Rodriguez, 2009) cultural products, and according to Cameron (1995), we can consider movie review reading as such a product. Without intending to enter into a debate over the process of taste formation (see Stigler & Becker, 1977 and Lévy Garboua & Montmarquette, 1996), we can convene that cultural capital plays a central role in this phenomenon. In general terms, cultural capital takes two meanings (Throsby, 1999). The first, more closely related to the definition of physical capital, suggests that cultural capital is an asset that represents, stores or invests cultural value, and it is essentially tangible (Throsby, 2001). The second meaning is more intangible and it is related to the concept of human capital from economics (Becker, 1975);

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[5] The reader can find a description of the variables used in Appendix 1.

this meaning suggests cultural capital is the capacity to acquire competence in the sophisticated culture of society (Throsby, 2001).

In sum, we have opted to consider five complementary aspects to assess cultural capital[6]:

1. The individual must be enrolled in an art education program. This type of course includes specific cultural education (Fernández Blanco & Prieto Rodríguez, 2009).

2. The individual must take part in cultural activities (choral, dancing, theater, traditional dance groups, etc.). This aspect intends to identify the attitudes and abilities of the person towards culture (Fernández Blanco & Prieto Rodríguez, 2009).

3. Provision of cultural equipment is assessed as the number of books the individual owns, that is, the physical component of cultural capital.

4. Consumption of cultural information (books about cinematography, magazines or web pages with cultural content).

5. Consumption of culture in general (attending to movie theaters, popular music concerts and exposure to performing arts such as theater, traditional dance, ballet, or opera).

Finally, we have included variables related to the consumption of audiovisual products (watching television and video) and the use of new technologies (leisure time in front of the computer, downloading music or movies from the Internet, etc.) in order to explain reading movie reviews.

4. Results

Since our nested logit model implies two equations we present the results related to reading the printed press first. Table 1 shows the results of the assessment obtained from the nested logit model. It is observed that the likelihood test ratio (655.57) is highly above the critical values corresponding to the distribution χ^2 with 60 degrees of freedom, which supports the rejection of the null hypothesis of no-significance among the set of parameters assessed in this model[7].

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[6] Despite the fact that we consider movie reviews in the press as cultural products, the printed press itself is not. As such, we consider that the accumulation of cultural capital in principle does not impact on reading the press. For this reason we only included elements related to art education and the practice of cultural activities in the corresponding equation.

[7] Appendix 2 shows the marginal effects for the second equation, that is, the equation explaining reading movie reviews.

Table 1: Reading movie reviews

Dependent Variable		Readreview		Readingpress	
Category	Variable	Coefficient	t	Coefficient	t
Gender	gender	-.139939*	-3.87	.2876923*	9.80
Age	age	-.0156533**	-1.79	.0568166*	10.48
	age2	.0001563**	1.77	-.0004982*	-8.69
Marital status	single	.134463*	2.09	-.0102389	-0.19
	singleon	.0691458	0.73	.0101101	0.12
	marriedoff	.0350656	0.57	.0597353	1.15
	married18	.0398796	0.78	.0291631	0.68
	marriedon	.0324979	0.59	-.0428718	-0.91
	divorced	.1868577*	2.29	-.0456126	-0.68
City Size	citysize2	-.0582521	-1.15	.044496	1.08
	citysize3	-.0677788	-1.39	.1448381*	3.64
	citysize4	-.1032675**	-1.75	.3684858*	7.66
	citysize5	-.0779941	1.39	.0943671*	2.04
Studies	primary	-.0026724	-0.06	.2635295*	7.73
	highschool	-.0232798	-0.34	.6194412*	13.72
	profes	-.1325422**	-1.93	.5840286*	11.43
	university	.0003817	0.01	.8265506*	14.96
Economic activity	retired	-.0281071	-0.48	-.0921162**	-1.80
	unemployed	-.090101	-1.49	-.0130704	-0.25
	student	-.1285941**	-1.90	-.1503124*	-2.91
	others	-.0011482	-0.00	-.5589588*	-2.56
	housewife	.0888767**	1.67	-.3148399*	-7.64
Audiovisuals Eq.	numtv	-.0199939	-1.15	.0512745*	3.43
	numpc	-.0174846	-0.49	.1492601*	5.16
	internethome	-.0333706	-0.65	.067553**	1.66
	vcr	.0316805	0.73	.1142308*	3.52
	tvpay	-.0146112	-0.39	.1634103*	4.91
	tvfree	.0739396*	2.14		
Cultural capital	artformation	-.0418766	-0.35	.0974133*	3.24
	artpractice	-.0364637	-1.05	.0675727	0.64
	numbook	.0001468*	2.09	.000519*	7.07
Cultural capital (Information)	cultumedia	.0326471	0.66	.0781081**	1.78
	moviebook	-.3228053	-1.25		
	magazineread	.4556271*	12.27		
Cultural capital (Cultural consumption)	moviefreq	.0698657*	7.54		
	popmusic	-.0688521	-0.32		
	edvpop	.0105967	0.91		
	edvpop2	-.0001459	-1.02		
	theatre	.0968296*	2.72		
	ballet	.1190176**	1.67		
	zarzuela	.0087267	0.10		
	opera	-.0631509	-0.65		
	clasicmusic	-.0005506	-0.01		
	intcine	.0437546*	6.39		

Table 1: Reading movie reviews (cont.)

Dependent Variable		Readreview		Readingpress	
Category	Variable	Coefficient	t	Coefficient	t
Audiovisual consumption	tvhours	-.0025137	-0.29		
	filmtv	.0692439*	2.50		
	theatretv	.1130932	1.25		
	rentdvd	.0097713	0.29		
	buydvd	.0613366*	1.72		
New technologies	pchours	.0000159	0.15		
	web	.0136004	0.24		
	chats	-.0792432	-1.10		
	downmusic	.1328136	0.23		
	edbmusic	-.0119723	-0.30		
	edbmusic2	.0003995	0.65		
	downgames	-.0192461	-0.16		
	emusint	-.0473881	-0.43		
	sjuegcasa	-.1838854	-0.86		
	edsjueg	.0138062	1.24		
	edsjueg2	-.0001721	-1.29		
	constant	.2783088	0.89	-1.971945	-14.08
N	11830				
Obs censored	4788				
Obs non censored	7042				
Wald chi2(60)	655.57				
Ln likelihood	-11221.32				

*Statistically significant at 5%
**Statistically significant at 10%

4.1. Reading the printed press

Having made the decision to read the press, it is observed that men read more general information newspapers than women. The impact of age is significant and positive and it takes an inverted U shape: reading the press habitually increases up to the time when the individual reaches 57 years of age dropping from then on.

Family features do not imply significant changes. Contrastingly with other leisure activities, having family responsibilities does not appear to diminish the probability of reading the press.

Reading the printed press is also associated to the size of the place of residence. The number of readers increases as the size of the place augments up to a top population (500,000 inhabitants), to decrease from then on.

As expected, individuals' education level has a strong positive and increasing influence on reading the printed press and the highest coefficient corresponds to individuals with higher education studies. Moreover, education becomes the most central variable since the coefficients corresponding to high school and higher education studies are the highest among all explanatory variables (.619 y .826 respectively).

There is some impact derived from income: the probability of reading the printed press is higher among employed individuals than among any other employment status.

Finally, in general terms, reading the printed press increases as the individual's Cultural Capital increases. Also, active participation in cultural activities (*ARTPRACTICE*) and book ownership (*NUMBOOK*) impact on reading the printed press. Contrarily, ownership of an art education (*ARTFORMATION*) does not increase the probabilities of reading the press.

4.2. Reading movie reviews

Once press readers were identified, we tried to discover those individuals among them who read movie reviews. That was the objective of the second equation whose results are discussed in the following paragraphs.

The first interesting conclusion is the significant difference between men and women. In this case, women read more movie reviews than men. Age also had significant impact and its

influence was observed in a U-shaped distribution: the probability of reading movie reviews decreases as age increases until the age of 50 years; then, the probability augments.

Marital status also showed differentiated behaviors. As with other cultural activities it appears that the most assiduous movie review readers are individuals with fewer family responsibilities. After we concluded our analysis it was possible to observe that only the categories of single individuals without children (*SINGLE*) and single individual homes (*DIVORCED*) showed positive significant associations. Thus, and taking into consideration marginal effects, when contrasting them with married individuals or couples living on their own (*MARRIEDOFF*, reference category), singles without family responsibilities showed a 6.1% higher probability that, once reading the daily press, the individual will also read the movie review section. Moreover, among widows and widowers, divorcees, and split couples without children (*DIVORCED*) this probability increased to 7.7%.

Overall, place of residence is not determinant when identifying movie review readers since only one of the variables registering the size of the county has a negative significant value. Even though reading the printed press becomes a feature among urban dwellers, we cannot conclude that so is the reading of movie reviews.

Education level is not a discriminator either. Even if it is true that the higher the education level, the more people read the printed press, those interested in movie reviews are not found more closely in any given educational level group. There is only one negative significant

value and it was found among the group of individuals with higher education studies (*PROFES*)[8].

Income does not appear to have any impact on reading movie reviews; the variables related to assessing income were not significant.

The effects of cultural capital presented mixed results. Art education (*ARTFORMATION*) and the practice of cultural activities (*ARTPRACTICE*) were not associated to reading movie reviews. However, cultural capital acquired from obtaining information presents contrasting results since we found a positively significant association with reading movie reviews. Specifically, reading magazines with cultural content either about music, theater, cinematography, or literature (*MAGAZINEREAD*) increases the probability of reading the movie review section by 20% once the person reads general information sections in the daily press.

Cultural capital acquired from consumption was also identified as an influence on the reading of movie reviews. For instance, going to the theater (*THEATRE*) or attending to ballet performances (*BALLET*) increased the probability of reading the movie review section up to 4.5% and 5.5% respectively[9].

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[8] Having higher education studies was found to be negatively significant. We then analyzed this variable more closely and with the help of a double entry table distributing higher education studies according to gender, we observed a majority of men among the sample which helped us understand the negative association found.

[9] The positive association with the number of books at home (*NUMBOOK*) that we found can also be interpreted as following the same direction; so, each additional accessible book increases the probability of reading movie reviews by 0,017%.

Finally, according to our results, audiovisual product consumption such as watching movies on television (*FILMTV*) and buying videos—VHS or DVD (*BUYDVD*), showed increased probability of reading the movie review section.

We can conclude by sketching the profile of the movie review reader. The majority are women, employed, young, without family responsibilities. The woman movie review reader is educated and concerned with culture; she reads the reviews in search of more than immediate information, that is, she appreciates the educational content and taste formation provided by reading reviews without disregarding using a movie review as a product by itself.

5. Summary and Discussion

This study analyzed the profile of consumers of movie reviews: who these readers are and how they are. In order to achieve this, we quantified the influence that different socio-demographic characteristics have on reading movie reviews.

Given the characteristics of the information available, we proposed an econometric nested logit model that presented decisions at two levels (we first identified readers of daily printed press and then we analyzed data from those press readers who read the movie review section).

In summary, we found that movie review readers are educated women without family responsibilities. They are good consumers of cultural products so much that it is possible for them to consider movie reviews as cultural products.

Our study suggests some implications for practice that can be useful to the appropriate industrial sector. We recommend promoting the review of movies and discussion of movies in the different media, especially in those media favored by the women readers identified when searching for information about cinematography.

Evidently, this work can be improved if the impact of reading movie reviews is analyzed not only from the printed press but also from other media. Perhaps other specialized printed media (such as movie magazines) or audiovisuals (on television or the Internet) could reveal different results. We believe the profile of movie review readers would change considerably in terms of the media from which it is analyzed.

Finally, since the available information has not allowed to distinguish between the different types of movie review readers (those influenced by it against those only informed by reading the review), we propose an analysis of the profile of the reader according to the effect of the review (*influenced* or *predicted*). Such a study would offer a more attractive panorama for the industry.

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Appendix

Appendix 1. Variable Definition.
In this Appendix we define the variables used in this paper

A. Dependent Variable
READINGPRESS: Dummy variable; it takes value one when the interviewee read printed press and zero otherwise.
READREVIEWS: Dummy variable; it takes value one when the interviewee read movie reviews on press and zero otherwise.

B. Independent Variables
GENDER: Dummy variable; it takes value one when the interviewee is a man and zero otherwise.
AGE: Continuous variable; designate the interviewee's age.
AGE2: Continuous variable; designate the square of the interviewee's age.

MARITAL STATUS
SINGLE: Dummy variable; it takes value one when the interviewee is single and zero otherwise.
SINGLEON: Dummy variable; it takes value one when the interviewee is single with children and zero otherwise.
MARRIEDOFF: Dummy variable; it takes value one when the interviewee is married without children and zero otherwise.
MARRIED18: Dummy variable; it takes value one when the interviewee is married with children older than eighteen and zero otherwise.
MARRIEDON: Dummy variable; it takes value one when the interviewee is married with children younger than eighteen and zero otherwise.
DIVORCED: Dummy variable; it takes value one when the interviewee is separated, divorced or widower without children and zero otherwise.
MARRIEDALONE: Dummy variable; it takes value one when the interviewee is married living alone because his/her children are old and zero otherwise.

CITY SIZE
CITY SIZE1: Dummy variable; it takes value one when the number of inhabitants of the city of residence is smaller than five thousands and zero otherwise.
CITY SIZE2: Dummy variable; it takes value one when the number of inhabitants of the city of residence is between five and ten thousands and zero otherwise.
CITY SIZE3: Dummy variable; it takes value one when the number of inhabitants of the city of residence is between 30 and 200 thousands and zero otherwise.
CITY SIZE4: Dummy variable; it takes value one when the number of inhabitants of the city of residence is between 200 and 500 thousands and zero otherwise.
CITY SIZE5: Dummy variable; it takes value one when the number of inhabitants of the city of residence is bigger than 500 thousands and zero otherwise.

STUDIES
PRIMARY: Dummy variable; it takes value one when the interviewee has elementary studies and zero otherwise.
HIGH SCHOOL: Dummy variable; it takes value one when the interviewee has intermediate studies and zero otherwise.

PROFES: Dummy variable; it takes value one when the interviewee has occupational training (FP1 and FP2) and zero otherwise.

UNIVERSITY: Dummy variable; it takes value one when the interviewee has university studies (graduate and undergraduate) and zero otherwise.

ILLITERATE: Dummy variable; it takes value one when the interviewee is illiterate and zero otherwise.

RELATIONSHIP WITH THE ECONOMIC ACTIVITY

EMPLOYEE: Dummy variable; it takes value one when the interviewee is employed and zero otherwise.

RETIRED: Dummy variable; it takes value one when the interviewee is retired and zero otherwise.

UNEMPLOYED: Dummy variable; it takes value one when the interviewee is unemployed and zero otherwise.

STUDENT: Dummy variable; it takes value one when the interviewee is a student and zero otherwise.

HOUSEWIFE: Dummy variable; it takes value one when the interviewee is a housewife/househusband and zero otherwise.

OTHERS: Dummy variable; it takes value one when the interviewee belongs to other categories and zero otherwise.

AUDIOVISUALS EQUIPMENT

NUMTV: Continuous variable; indicate the interviewee's number of televisions.

NUMPC: Continuous variable; indicate the interviewee's number of computers.

INTERNETHOME: Dummy variable; it takes value one when the interviewee has Internet access at home and zero otherwise.

VCR: Dummy variable; it takes value one when the interviewee has VCR or DVD player at home and zero otherwise.

TVPAY: Dummy variable; it takes value one when the interviewee has pay television at home and zero otherwise.

TVFREE: Dummy variable; it takes value one when the interviewee has free television at home and zero otherwise.

NUMBOOK: Continuous variable; indicate the interviewee's number of books.

INFORMATION

CULTUMEDIA: Dummy variable; it takes value one when the interviewee visits Web sites or listens and watch cultural programs on television or radio and zero otherwise.

MOVIEBOOK: Dummy variable; it takes value one when the interviewee has movie books and zero otherwise.

CRITICREAD: Dummy variable; it takes value one when the interviewee reads movie critic at least once a week and zero otherwise.

MAGZINEREAD: Dummy variable; it takes value one when the interviewee reads cultural magazines and zero otherwise.

NEWSREAD: Dummy variable; it takes value one when the interviewee reads general newspapers (mainstream press and free newspapers) at least once per week and zero otherwise.

CULTURAL CONSUMPTION

POPMUSIC: Dummy variable; it takes value one when the interviewee attends to pop music concerts and zero otherwise.

EDVPOP Variable who interacts the interviewee's age with attends to pop music concerts.

EDVPOP2 Variable who interacts the square of the interviewee's age with attends to pop music concerts.

TEATHRE: Dummy variable; it takes value one when the interviewee attends to theatre plays and zero otherwise.

BALLET: Dummy variable; it takes value one when the interviewee attends to ballet and zero otherwise.

ZARZUELA: Dummy variable; it takes value one when the interviewee attends to zarzuela and zero otherwise.

OPERA: Dummy variable; it takes value one when the interviewee attends to the opera and zero otherwise.

CLASICMUSIC: Dummy variable; it takes value one when the interviewee attends to classical music concerts and zero otherwise.

INTCINE: Toma valores entre uno y diez, según una escala creciente que mide el interés del entrevistado por el cine.

MOVIEFREQ: Hierarchical and discrete variable, it takes the following values:

Never

1. Once per year
2. Two or three times per year
3. Four to eleven times per year
4. Once per month at least
5. Two or three times per month
6. Once per week at least

CULTURAL CAPITAL

ARTFORMATION: Dummy variable; it takes value one when the interviewee follows an artistic course.

ARTPRACTICE: Dummy variable; it takes value one when the interviewee has practiced some cultural activities (photography, video, music, etc.) and zero otherwise.

AUDIOVISUAL CONSUMPTION

TVHOURS: Continuous variable; indicate the daily hours that the interviewee watches television.

FILMTV: Dummy variable; it takes value one when the interviewee watches movies on television and zero otherwise.

THEATRETV: Dummy variable; it takes value one when the interviewee watches theatre plays on television and zero otherwise.

USEVIDEO: Dummy variable; it takes value one when the interviewee uses VCR or DVD to watch movies and zero otherwise.

RENTVIDEO: Dummy variable; it takes value one when the interviewee rents movie videos and zero otherwise.

BUYVIDEO: Dummy variable; it takes value one when the interviewee buys movie videos and zero otherwise.

NEW TECNOLOGIES

PCHOURS: Continuous variable; indicate how many hours per week the interviewee uses the computer for pleasure.

WEB: Dummy variable; it takes value one when the interviewee uses the Internet for pleasure and zero otherwise.

CHATS: Dummy variable; it takes value one when the interviewee uses the chat and zero otherwise.

DOWNMUSIC: Dummy variable; it takes value one when the interviewee downloads music and zero otherwise.

EDBMUSIC: Variable who interacts the interviewee's age with downloads music.

EDBMUSIC2: Variable who interacts the square of the interviewee's age with downloads music.

DOWNGAMES: Dummy variable; it takes value one when the interviewee downloads video games and zero otherwise.

EMUSINT: Dummy variable; it takes value one when the interviewee listen music on Internet and zero otherwise.

SJUEGCASA: Dummy variable; it takes value one when the interviewee has video games software, and zero otherwise.

EDSJUEG: Variable que interacciona la edad con poseer software de juegos.

Variable who interacts the interviewee's age with the possession of video games software.

EDSJUEG2: Variable who interacts the square of the interviewee's age with the possession of video game software.

Appendix 2. Marginal Effects

Reading movie reviews marginal effects

Category	Variable	dy/dx
Gender	gender	-.0076607
Age	age	.0042322
	age2	-.000028
Marital status	single	.0617415
	singleon	.0347156
	marriedoff	.0285654
	married18	.0248987
	marriedon	.0066782
	divorced	.0779423
City Size	citysize2	-.0187773
	citysize3	-.0029156
	citysize4	.0205011
	citysize5	-.0181277
Studies	primary	.0513377
	highschool	.0943207
	profes	.0390418
	university	.1244288
Economic activity	retired	-.0333163
	unemployed	-.0465139
	student	-.0967358
	others	-.1430268
	housewife	-.026034
Audiovisuals Eq.	numtv	.0010081
	numpc	.0224433
	internethome	-.0021663
	vcr	.0397191
	tvpay	.0253857
	tvfree	.0351251
Cultural capital	artformation	-.0063008
	artpractice	.0023754
	numbook	.0001775
Cultural capital (Information)	cultumedia	.030949
	moviebook	-.1591305
	magazineread	.2063925
	moviefreq	.0334739

Reading reviews marginal effects (continued)

Cultural capital (Cultural consumption)		
	popmusic	-.0331476
	edvpop	.0050771
	edvpop2	-.0000699
	teatre	.0459453
	ballet	.0558247
	zarzu	.0041752
	opera	-.0305398
	clasicmusic	-.0002638
	intcine	.0209636
Audiovisual consumption	tvhours	-.0012043
	filmtv	.0332089
	theatretv	.0530623
	rentdvd	.0046802
	buydvd	.029209
New technologies	pchours	.0000001
	web	.0065043
	chats	-.0383771
	downmusic	.0621275
	edbmusic	-.0057361
	edbmusic2	.0001914
	downgames	-.0092496
	emusint	-.0228693
	sjuegcasa	-.0888496
	edsjueg	.0066148
	edsjueg2	-.0000825