

**MARKETING AND TECHNOLOGY
SOPHISTICATION AS HIDDEN
WEAPONS FOR FOSTERING THE
DEMAND FOR 'ART HOUSE'
CINEMA FILMS: A CROSS COUNTRY
ANALYSIS**

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**Marketing and technology sophistication as hidden weapons for fostering the demand
for ‘art house’ cinema films: a cross country analysis**

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Abstract

Existing studies on the motion picture industry tend to explore demand for cinema films focusing only on a single country, aiming to assess the probability of a movie’s success. This means that the determinants of consumer demand, from a cross-country perspective, are relatively unexplored. The international film industry may be seen as offering two heterogeneous products falling into two experiential ranges, according to their artistic content (‘art house’ films), and to the intensity of their special effects (‘mainstream’ films). This research examines the extent to which the cross country demand for the two given types of films (‘art house’ and ‘mainstream’), are associated with individual factors, industrial factors, and cultural-social-structural factors. Estimation results, based on logistic regressions on a sample of OCED countries, indicate that: 1) cinema tastes diverge into different patterns across countries; 2) larger marketing investments emerge as a key determinant for the consumption of art house films, and 3) technological level/sophistication plays a significant role in creating stratified consumption for art house films.

Keywords: demand; mainstream films; art-house films; marketing

JEL-Codes: D12; Z11

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1. Introduction

Cinema films are appealing to members of our culture partly by virtue of their ability to offer something to everybody or, at least, to provide different sorts of value to two very different kinds of target viewers (Holbrook and Addis, 2008). Some people consume films as part of their appreciation for the art, while others relish the big-budget, mass-marketed productions that thrill them on the big screen and send them from the movie theatre with the desire to recommend an exciting cinematic experience to others (Holbrook and Addis, 2008).

The international film industry may be seen as offering products of heterogeneous quality falling broadly into these two experiential ranges, according to their artistic content ('art house' films) and to the intensity of special effects ('mainstream' films) (Bagella and Bechetti, 1999). Typically, definitions tend to refer to the degree of 'artistic' versus 'commercial' quality (Bagella and Bechetti, 1999; Baumann, 2002), and according to several authors (e.g., Austin, 1989; Wallace et al., 1993; Holbrook, 1999; Jansen, 2002), it may be reasonable to assume that most studio-produced American films aspire to the sort of mass or mainstream appeal associated with commercial success, whereas domestic films (other than American) cater more to art house crowds or to other specialized audiences.

Understanding the determinants of the consumers' demand for cinema films has been the object of research by many scholars in various domains (Lazersfeld, 1947; Smith and Smith, 1986; Eliashberg and Sawhney, 1994; De Vany and Walls, 1999; Baumann, 2001). Researchers on consumer behaviour (e.g., Eliashberg and Sawhney, 1994; Zufryden, 1996; Eliashberg et al., 2000), interested in the experiential aspect, attempted to understand what drives movie consumption, that is, the reasons for selecting films. Using data information, these authors developed a conceptual framework to predict aspects of movie enjoyment and market performance. Economic-related studies (e.g., Prag and Casavant, 1994; Litman and Ahn, 1998; Ravid, 1999) aggregated industry data in order to understand the influence of the films' various attributes on their financial performance. Broadly speaking, these studies suggest a positive relation between the films' performance and their budget, reviews and star-drawing power. In the same industry-related line, other studies (e.g., Dodds and Holbrook, 1988; Eliashberg and Shugan, 1997; De Vanny and Walls, 1999; Holbrook, 1999) include exclusively box office data to assess the power of the actors, filmmakers, critics and awards achieved in the choice of a certain type of movie. Based on the work of Bourdieu (1989), López-Sintas and Garcia-Alvarez (2006) concluded that the consumption of audiovisual products is determined by a number of structural factors. Thus, the field of cultural demand, in which film consumption takes place, can be viewed through its internal structures, for

which Bourdieu (1989) conceptualized a ‘habitus’ with patterns of consumption that individuals develop over time. Bourdieu (1984) claims that culture serves as an indicator of class structure internalized in people, determining cultural choices (taste) that reproduce the class structure itself, a theory which finds supported in a number of media reception studies to understand film consumption. Staiger (2005) illustrates how taste has been formed within the context of political science, as well as linguistic, social and psychological contexts, and in so doing, she distinguishes between high and low forms of culture. Social scientists have assumed that structural factors, in the broader sense, determine lifestyle behaviour (Katz-Gerro, 1999). The concept of lifestyle behaviour denotes individuality of taste and a distinctive choice of activities associated with specific groups. Common lifestyle indicators include cultural consumption, and cultural tastes related to music, reading and films (Rojek, 1985; Featherstone, 1991; DiMaggio, 1994).

A majority of the existing studies on the demand for motion pictures focus on single-country, longitudinal analyses (e.g., Bagella and Becchetti, 1999; Collins and Hand, 2005; Thureau et al., 2006), aimed at assessing the probability of a movie’s success. Therefore, viewing the demand for a given country’s cinema production as a cultural (taste) marker is challenging yet feasible, based on the type of film people like and choose (DiMaggio, 1987). Given the extent to which cultural standards underlying such tastes may diverge across countries, we hypothesize that countries with higher cultural standards tend to demand relatively more art house films in comparison to mainstream films.

Our study aims to assess which are the most important determinants of the demand for ‘art house’ versus ‘mainstream’ films from a cross-country perspective. In other words, we intend to assess which factors – ‘Individual’ (consumption patterns/experiential motivation), ‘Industrial’ (films produced, average production budget, number of screens, share of creative employment), and ‘Cultural-social-structural’ (population, income, level of education, field of graduation) – are most relevant in explaining cross-country choices of movie types.

The study presented in this article is, to the best of our knowledge, the first attempt to carry out an international empirical comparison of demand patterns regarding art house films versus mainstream movies. It is therefore a contribution to determine the extent to which cinema consumption reproduces the countries’ social structure in terms of high or low forms of culture. Moreover, it is important to underline that consumer research and marketing literature have paid little attention to the consumption of movies as artistic products (Wohlfeil and Whelan, 2008). An understanding of the demand for cinema at the international level may be

considered relevant in developing marketing strategies aimed at targeting new audiences for less mainstream films.

The study is structured as follows. Section 2 provides a review of the literature on the determinants of the demand for given types of cinema films. The methodological considerations are detailed in Section 3, and Section 4 puts forward the results of our empirical analysis encompassing a cross-country sample. Finally, we address the main conclusions and highlight some of the limitations to our study, as well as the contributions our methodology brings to the literature.

2. Determinants of the demand for cinema films. A review of the literature

The level of uncertainty over any film's success is well known. Many researchers (e.g., Albert, 1998; De Vanny and Walls, 1999; Ravid, 1999) developed empirical models relating a film's attributes to the likelihood of consumer demand. Despite the difficult endeavour it represents, knowing which factors and conditions affect the demand for cinema films is of great value for the international motion picture industry.

In the following sections, we detail the determinants of the demand for films categorized into three factors – individual factors (consumption patterns/experiential motivation); industry-related factors (production and distribution and marketing); and cultural-social-structural factors (social/cultural context, education, population dimension, per capita income, share of creative employment). This categorization will support our modelling effort involving the cross-country analysis of the demand for 'art house' versus 'mainstream' films.

2.1. Individual factors: consumption patterns/experiential motivation

Cinema films are experiential goods (Cooper-Martin, 1991, 1992) that consumers engage in for fun, enjoyment and leisure (Holbrook and Hirschman, 1982; Eliashberg and Sawhney, 1994), which means that hedonic value (e.g., pleasure, thrill) is the main motive for the film experience, whereas utilitarian motives (e.g., killing time - Austin, 1989) play an ancillary role (Cooper-Martin, 1991; Holbrook and Hirschman, 1982). Thus, an active audience consumes films for goal-directed purposes (Katz et al., 1974).

This approach suggests that the consumer's experiential "needs", such as emotional arousal, result in motivations for film demand (Holbrook and Hirschman, 1982; Austin, 1989), and that consumption and needs are associated with perceptions concerning gratifications provided by the cinema (Lichtenstein and Rosenfeld, 1983).

O'Brien (1977) indicated that film demand served creative and self-fulfilling needs and met social and entertainment goals. Austin's (1989) findings suggested that demand is positively

associated with an enjoyable and pleasant activity, followed by relaxation, arousal/excitement and social activity, and that frequent cinema-goers reported a greater level of identification with these motives than occasional or infrequent ones.

For some people, motion pictures are more than just another form of entertainment through which one can spend some quality time alone or in the company of friends (Wohfeil and Whelan, 2008). For frequent cinema-goers or fans, fascination with movies meets pretty much Bloch's (1986: 539) definition of *product enthusiasm* where the *product* (in this case *cinema films*) plays an important role and is a source of excitement and pleasure along sensory and aesthetic dimensions in a consumer's life (Wohfeil and Whelan, 2008).

To sum up and as stated earlier, some consider films as part of their appreciation for the finer things in life, regarding film as art (Bourdieu, 1984; Bauman, 2001; Holbrook and Addis, 2005), while others relish big-budget movies that have been overtly designed to entertain and reflect the popular tastes of mass audiences (Holbrook and Addis, 2005). But ultimately, what really counts for the consumer is the enjoyment of film as a holistic experience in its entirety (Wohfeil and Whelan, 2008). Whatever the motivations, in the present paper, we assume that all cinema-goers are looking for quality (Holbrook, 1999) and satisfaction in the films they choose.

When dealing with products whose quality is difficult to ascertain prior to purchase, one may expect a greater reliance on attributes that help consumers in their selection process. Mass communication researchers emphasized the importance of a film's genre as an attribute that influences cinema attendance (Austin and Gordon 1987), meaning that an individual's preference for a given type of film may be used as a predictor of their enjoyment (Eliashberg and Sawhney, 1994). Since film type and content are not independent, the ultimate choice is based on the expectations raised by each alternative (mainstream versus art house film) to best gratify the individual's needs (Lichtenstein and Rosenfeld, 1983). In this vein, the following question can be put forward: 'Are the viewers in a given country more driven to see a film as entertainment or art?'

Elements such as the market share of U.S. and domestic films, the *top ten box-office* admissions and the per capita admissions may provide us with an overall picture of the individuals' preferences in the demand for a given type of film.

H1: The higher the market share of U.S. films in terms of the top ten box-office admissions (or per capita admissions), the lower the demand for art house films across countries (i.e., the share of domestic films released in a given country).

2.2. Industry-related factors: production, distribution and marketing

Production quality

The market success of motion pictures can be expected to be influenced by the consumers' assessment of a movie's quality (Prag and Casavant, 1994). Quality, however, is difficult to ascertain prior to viewing, thus, audiences can interpret production budgets as signals of a movie's high quality, i.e., professionalism of concept and execution.

Distribution concentration

Increased concentration leads to market power (Hergott, 2004) and, according to Chrzanowsky (1974), economic development has brought an extension of concentration to almost every field of economy, including film production and distribution. The word "concentration", now used widely as "integration", depends on various factors, such as the degree of concentration in the industry, the capital intensity of investment and the risk of losses (Chrzanowsky, 1974). The degree of concentration arises from high-capital intensity and motion pictures rely heavily on capital assets due to expensive special effects and digital production, strongly increasing salaries for actors and large marketing campaigns (Gupta et al., 2006).

U.S. film producers were the first to sink endogenous costs into large-scale marketing and distribution which meant that Hollywood became and has remained comparatively more efficient at serving mass markets (Bakker, 2005) than film clusters in other large film-producing countries. It was also Hollywood companies that went furthest in integrating production, marketing, distribution and exhibition into Chandlerian corporations (Hoskins et al., 1997). They were thus able to overcome liabilities of foreignness by participating in local distribution and locally adapted marketing campaigns in a high number of export markets, by dubbing films, and, in some export markets, creating cultural preferences for Hollywood-style aesthetics and narrative, as well as English-language films rather than other domestic/foreign films (Hoskins and Mirus, 1988; Hoskins et al., 1997; Papandrea, 1998; Elberse and Eliashberg, 2003). The film industry is prone to domination by major companies (Breton, 2000) which tend to control other industrial firms with the aim of integrating the entire value chain (Chrzanowsky, 1974). In practice, it is impossible to separate distribution and production revenues, because functions, not to mention accounting, are intertwined (Noam, 2009). Distribution is key to the film industry. For producers, it provides the only means by which their products reach an audience. For exhibitors, it means dealing with a more or less risky supply of films to screen (White Book, 1994), thus, financing is less problematic if producers are affiliated with a studio. It increases their chances of securing bank loans or

tapping into the studio's own capital, thus securing favourable distribution and exhibition (Eliashberg et al., 2006). Relationships between distributors and exhibitors change over time to reflect the considerable degree of mutual advantage that is to be gained by minimizing the risks that are intrinsic to the film industry (White Book, 1994).

Taking the above aspects into account and considering the weight of the market share of the most important distributors in each country, it is possible to assess the extent of concentration in the film industry.

H2: The higher the degree of market concentration, the lower the demand for art house (versus mainstream) films across countries.

Marketing investments

Generally speaking, an aspect that remains unchanged is the acceptance of the notion that value can only be created and acknowledged by the consumer in the act of consumption. It is in the act of consumption that value is recognized and embodied. Value can only be evaluated in terms of the consumption experience (Kerrigan, 2010), and even though information about a film is available (e.g. word-of-mouth, reviews, trailers) prior to purchase, the quality of movies can be assessed by consumers only when watching them (Hennig-Thurau et al., 2006), because it is hard to judge prior to viewing (Sawhney and Eliashberg, 1996).

While box-office figures respond to a variety of stimuli and wider publicity, we also need to understand the selection of a certain film over another. For experiential products, such as cinema films, consumers search for two types of information sources: experiential and non-experiential sources. Previews, television and internet advertisement are experiential sources: they provide a chance to try the film. Friends who have seen the film can describe it and are hence another experiential source. The same applies to reviews. Non-experiential sources such as printed and radio advertising, are less useful because they do not illustrate or mimic consumption (Cooper and Martin, 1991). Thus, experiential sources are particularly valuable to consumers for information on subjective features, those characteristics which reflect the personal nature of consumption, for example, what it is like to see or hear a film (Cooper and Martin, 1991).

Motion picture demand appears to be heavily influenced by the opinions and choices of others. "Others" could refer to friends and acquaintances, critics, and other opinion leaders, as well as the market as a whole (Eliashberg et al., 2006). That is why film marketers have pioneered "buzz marketing", by giving opinion leaders free access to previews, with a view to stimulating positive word-of-mouth so as to sustain the film in the market. If a film does not

succeed, it is usually forced out by a new product coming in behind it (Squire, 2004). Film marketing professionals believe that word-of-mouth is central to the success or failure of a film (Kerrigan, 2010).

Marketing expenditure is itself determined by production cost, the presence of a star, and film genre (Prag and Casavant, 1994). This makes sense since, when a major actor is cast, filmmakers are likely counting on the star's drawing power to attract cinema-goers. Informing people about the star's presence in the film through advertising is one way to make use of that.

A similar argument could be made about expensive productions (Prag and Casavant, 1994), since they are more appealing and a demand predictor (Basuroy et al., 2003). Usually, motion pictures with higher production budgets also receive a high marketing budget (Eliashberg, 2006), in order to raise the consumers' awareness of the film's quality and to influence their attitude toward it (Hennig-Thurau et al., 2006). A movie's heavy up-front investment and short life means that it has to be strongly promoted to capture audience interest prior to release, taking maximum advantage of the "buzz" surrounding its opening. Studies have established a link between marketing expenditure and box-office revenue (Prag and Casavant, 1994; Zufryden, 1996, 2000).

Film consumption is characterized by network externalities arising from phenomena of mimicry and social infectiousness. To reduce their uncertainty about the quality of films, most consumers tend to consume films they have heard about (from friends, press, publicity) or which achieve the most commercial success (Moreau and Peltier, 2004). In this line of reasoning, marketing expenditure associated with films may influence the demand for them.

In summary, film consumption seems to be heightened by investments in publicity and by the power of distributors resulting in a concentration of admissions to a limited number of films. We can conclude that a marketing strategy embodies a higher or lower level of marketing effort and can be measured by the size of its production budget and by the intensity of screen distribution – representing a film's position as mainstream with a high budget and opening on numerous screens, as opposed to an art house film with a small budget and restricted opening on a few screens.

To assess this assumption we analyze the weight of marketing expenditure on high-budget (mainstream) and low-budget (domestic) films in the *top ten box-office* admissions per country.

H3: The higher the investment in the marketing of low-budget films, the higher the demand for art house films across countries (i.e., the share of domestic films released in a given country).

2.3. Cultural-social-structural factors

Education, occupation and social/cultural status

Researchers in stratification (Bourdieu, 1984; DiMaggio, 1994; Katz-Gerro, 1999) pointed out the relatively close connection between various social status indices and cultural consumption. According to Bourdieu (1989) and Ritzer (1992), cinema consumption and orientation is not objectively determined, nor is it the outcome of free will, but rather the result of the dialectical relationship between action and structure and the outcome of this dialectical discourse is the “habitus”. Bourdieu (1989) defines habitus as consisting of resources or capital derived from one’s socialization in society. It composes the individual’s personal cultural baggage and taste in such things as music and film which reflect objective divisions in the class structure.

Drawing on the work of Bourdieu (1989), López-Sintas and Garcia-Alvarez (2006) examined the link between social class and types of audiovisual consumption, and their findings demonstrated that it is easier to find film and audiovisual fans in higher classes than in any other category. Still pursuing the descriptive side of film research, this link between class status and the cultural hierarchy has received attention in numerous empirical studies. Collectively, such studies have established a clear and pervasive connection between education and an appreciation for high culture (Gans, 1974; DiMaggio et al, 1978). Bourdieu (1984) presented empirical research to suggest that viewing art films, as opposed to mainstream films, was associated with different levels of education.

It seems that people’s interests, developed in connection with education, have a decisive influence on the development of a cumulative pattern of film demand (Augedal, 1972; DiMaggio, 1994). Education leads individuals to be more interested in more aspects of their environment, and they will try to get in contact with these elements. As Bourdieu (1984: 2) asserts “a work of art has meaning and interest only for someone who possesses the cultural competence, that is, the code, into which it is encoded”, thus, higher education increases the cultural capital which is a function of the cultural competency to fully appreciate any cultural artwork (Bourdieu, 1984).

It has also been suggested that people with a high educational level have a relatively higher income (Augedal, 1972) and the probability of going to the cinema rises with income, which contradicts the theory of “escapism for the masses” (Collins and Hand, 2005).

A strong tradition in sociology emphasizes the link between cultural lifestyle behaviour and class standing. Members of a given social class are characterized by a lifestyle-shaping “generative principle” that governs the disposition to prefer certain cultural objects whose appreciation helps to confer class-based distinctions (Bourdieu, 1984; Bourdieu and Wacquant, 1992). Individuals in higher social strata are those who prefer and predominantly consume high culture, and individuals in lower social strata are those who prefer and predominantly consume mass or low culture. In the case of films, Bourdieu (1984) also emphasizes the oppositions found in the field of cinema where he concludes that professional occupations with more cultural capital than economic capital, generally prefer art films “that demand large cultural investment”, whereas business occupations, possessing more economic capital than cultural capital, tend to prefer mainstream films, defined as those “spectacular feature films, overtly designed to entertain”.

There exists a community of interests, habits and tastes within occupational classes, which is considerably different from those of other classes (Katz-Gerro, 1999) and film consumption serves as an indicator of class structure that reproduces the class structure itself (Bourdieu, 1984).

Indeed, film-viewing practices provide an excellent arena for examining the relationship between social class, cultural repertoires, and popular culture. Films are considered to be a form of popular culture, but they are also considered to be an important form of art (Barnett and Allen, 2000). As matter of fact, cinema film is a medium whose content can span the spectrum from introspective art to mass entertainment, but perceptions of what is art are directly affected by the status of audience members (DiMaggio, 1982; Levine, 1988). A cultural product’s association with a high status audience can help to legitimate the product as art (DiMaggio, 1982).

With respect to our conceptualization of cinema demand, we rely on the general proposition that low cultural capital consumers prefer entertainment that is less demanding in the difficulties it poses, whereas the taste of consumers with higher cultural capital gravitate more toward challenging art house films of higher complexity and difficulty which are more intellectually demanding.

Finally, recent technological advances in the film industry, as well as in related industries, have revolutionized the industry’s production processes, distribution channels, and

consumption trends. The rise of digital film production with new methods, more creative contents, and the rapidly increasing digitization of cinemas is creating a window of opportunity for international cinema, with centres of innovation in permanent change (Cousins, 2004). Thus, it is likely that differences in the countries' technological level will lead to differences in film consumption patterns.

Social-structural factors such as income, education, and occupation/field of graduation, are likely to constitute important 'predictors' of the demand for a certain type of cinema films, namely mainstream versus art house.

H4: The higher the social and cultural status of a population (proxied by the level of income per capita/formal education/share of creative occupations/R&D intensity in a given country), the higher the demand for art house films across countries (i.e., the share of domestic films released in a given country).

3. Methodological underpinnings

3.1. The econometric specification

Our dependent variable 'Demand for art house versus mainstream film' is taken as a dummy-variable which assumes the value of 1 when the market share of art house films is below a given threshold (20% or 10%).

The aim here is to assess which are the main determinants of the propensity of the demand for art house films in comparison to mainstream ones. The nature of the data observed regarding the dependent variable ['Demand for art house films at a given threshold (20% or 10%) (dummy=1 if Yes and 0 if No)] dictates the choice of the estimation model. Conventional estimation techniques (e.g., multiple regression analysis), in the context of a discrete dependent variable, are not a valid option.¹ The approach used, therefore, involves analyzing each situation in the general framework of probabilistic models.

The empirical assessment of the propensity of the demand for art house films is based on the estimation of the following general logistic regression, which in order to obtain a more straightforward interpretation of the logistic coefficients, can be rewritten in terms of the odds of an event occurring. Thus, the *logit* model becomes:

¹ Firstly, the assumptions needed for hypothesis testing in conventional regression analysis are necessarily violated – it is unreasonable to assume, for instance, that the distribution of errors is normal. Secondly, in multiple regression analysis the predicted values cannot be interpreted as probabilities – they are not constrained to fall in the interval between 0 and 1. The logistic regression model is also preferred to another conventional estimation technique, discriminant analysis. According to Hosmer and Lemeshow (1989), even when assumptions required for discriminant analysis are satisfied, logistic regression still performs well.

$$\log\left(\frac{\text{Prob}(\text{art} - \text{house})}{\text{Prob}(\text{mainstream})}\right) = \beta_0 + \underbrace{\beta_1 \text{Experiential_motivation} + \beta_2 \text{Consumption_patterns}}_{\text{Individual}} +$$

$$+ \underbrace{\beta_3 \text{Production_concentration} + \beta_4 \text{Distribution_concentration} + \beta_5 \text{Marketing_Investment}}_{\text{Industry}}$$

$$+ \underbrace{\beta_6 \text{Education} + \beta_7 \text{Occupations} + \beta_8 \text{Per_capita_income}}_{\text{Structural-Cultural}} + \varepsilon_i$$

The logistic coefficient can be interpreted as the change in the log odds associated with a one-unit change in the independent variable. Then e raised to the power β_i is the factor by which the odds change when the i^{th} independent variable increases by one unit. If β_i is positive, this factor will be greater than 1, which means that the odds are increased; if β_i is negative, the factor will be less than one, which means that the odds are decreased. When β_i is 0, the factor equals 1, which leaves the odds unchanged.

We estimated three models, depending on the threshold considered for the proxy of the dependent variable: market share of domestic films (proxy for art house films) below 10% or 20%.

3.2. Some considerations on the data and data sources used

To measure the cross-country demand for art house versus mainstream motion pictures, the reference year of 2007 was used, the most recent year for which we were able to obtain statistical information. We built our framework using the 30 OECD countries, both because of the ease of data gathering and, most importantly, because of the composition of this sample. Indeed, OECD membership includes not only European countries but also Canada, Mexico, Australia, New Zealand, Japan, Korea, and the United States, which expresses different realities in the cultural field of cinema.

Other countries have specific characteristics that make them interesting from a research perspective. South Korea is interesting from the outset because of its film quota system. Together with Japan, it is as culturally distant from the U.S. as it is from Europe. Mexico and Canada are geographically close to the U.S., therefore, it could be assumed that they are more culturally influenced by the latter. New Zealand is the second most popular location for offshore American film production after Canada, thanks to tax incentives and an impressive combination of technical and production infrastructure (Squire, 2004). Iceland is extremely important since its 311,396 citizens have the world's highest per-capita cinema attendance.²

² We did not consider the important film industries of countries such as India and Nigeria, which may be considered a limitation to this study, due to a lack of statistical data (macro and industry). Although the number of films produced in India and Nigeria are greater than in the U.S., these figures do not correlate to the level of international exposure. The Nigerian film industry is also more focused on video distribution and films are

Our measures of the constructs (proxies) were derived from a number of different sources available. The data was gathered from various organizations and was based on the analysis of the countries' macro statistics, provided mainly by the OECD, EU, the countries' official government sources, and cinema statistics systems in place in the selected countries. When available, we preferred to gather data from the European Audiovisual Observatory because it provides a greater guarantee of homogeneity among the data from the different countries in the sample.

3.3. Construction of the proxies and data sources

The dependent variable

With reference to cinema films, various scholars (Baumann, 2001; Bordwell, 2006) have emphasized the contrast between mainstream and art house films. In this connection, numerous studies (Bagella and Bachetti, 1999; Holbrook and Addis, 2008) have tested the widespread assumption that high-budget productions are more connected to the mainstream, and low-budgets are more related to art house films. On the matter of country of origin, and according to the literature, we have set mainstream films as American films and art house films as domestic films (other than American).

To clarify the procedure, we have discussed that, in general, most studio-produced American films are viewed as a collectively shared form of entertainment that tends to direct cultural production to the lowbrow standards of mass tastes, and thus, they serve as a proxy for mainstream films. With regard to domestic films (non-American) or from other countries beside the U.S., they cater more to art house crowds or to other more specialized audiences (Austin, 1989; Nichols, 1976; Wallace et al., 1993), who see cinema as an individual experience. In this vein, domestic films are used as a proxy for art house films.

The share (percentage) of domestic/art house films released in the overall country market is used as an indicator for our dependent variable.

In testing our hypothesis, quantitative data are particularly useful to discover forms of behaviour among groups (countries), and cultural consumption such as cinema films has been empirically analyzed, mostly in the form of patterns. The patterns are "regularities" in consumer behaviour that can be influenced by several factors. The following individual, industrial, and cultural-social-structural measures are used as explanatory, independent variables in the analyses of this study.

watched either at home or in video parlours, places where communities come together to watch films (Kerrigan, 2010).

All the aforementioned aspects have gained some support in the literature and in the various assumptions and explanations given with regard to demand in terms of film preferences. It is important to bear in mind that quantitative research designs are characterized by the assumption that human behaviour can be explained by what may be termed as “social facts” (Horna, 1994). Thus, in the first part, the individual factor is portrayed by the distribution of titles seen in relation to national categories, which expresses the films the audience has the possibility of seeing, but does not to the same extent reveal their priority in cinemas and attendance. Gross box-office figures or audience figures show the types of films which attract an audience.

With regard to the second factor, some supply industry measures are provided in order to facilitate comparisons. But, when film supply is considered, the density of admissions must also be taken into account because it plays a role in shaping consumer patterns, since economies of scale are more efficiently reached in large nations. The second part will already provide some tentative conclusions regarding film consumption patterns both at national and cross-country level.

The third and more substantial part addresses, more specifically and thoroughly, the film consumption patterns that are constructed based on the cultural-social-structural factor. For example, few factors stand out as being the most valid and most fitting to understand the taste formation process and the reasons underlying the demand for film as art. Those mentioned relatively often in the research on the field are resources stemming from education (see, for e.g., Bourdieu, 1984; DiMaggio and Useem, 1978; Katz-Gerro, 2000; López-Sintas, 2006). Education has proven to be one of the most central variables affecting the patterns of cultural consumption, as educational credentials are regarded as a reflection of the amount of cultural capital one possesses (Bourdieu, 1984). In short, the aim is to find the factors that are associated with the stratification of film consumption patterns.

The explanatory variables

Individual factors

1. Experiential motivation

Experiential motivation suggests that consumption and needs are associated with perceptions, and that the individuals' choice is based on the attributes of each film that best gratify their needs. The judgment, and hence the market value, of a film is related to the degree by which the aesthetics and narrative of its content are *differentiated* (Burke 1996) from incumbent films on the market. To have experience value, a film needs to differentiate its content in terms of both narrative and aesthetics. If cinema-goers place high value on the film they want to see, it is believed they will engage in behaviour to demand for it.

There has been a reasoned debate on whether cultural (cinema) consumption patterns were to be measured as taste or whether realized consumption practices should be applied. On the other hand, there are studies that emphasize action or behaviour, that is, they measure realized consumption. According to Van Rees and colleagues (1999), to analyze the predominant trends or tendencies in cultural (cinema) consumption, cultural practices and preferences must be broadly covered, which means that items such as film attendance must be included. Looking at the distribution of admissions over the total number of released films seems a proper indicator of consumed diversity that makes it possible to assess whether consumers tend to go to the same films or, on the contrary, each film obtains a similar audience.

Given that it was impossible to obtain the complete set of data on the distribution of admissions by film as it is unavailable for most countries, we calculated the domestic/mainstream film market share in *the top ten box-office* admissions by country of origin. This provides a proxy measure for assessing the individual's behaviour. Assessment of behaviour stands as a proxy for experiential motivation to see a mainstream or art house film.

2. Consumption patterns

The assessment of different patterns of film consumption should rely on both types of supplied and demanded cinema films. The variety supplied is measured by the number of produced and released films in a given country over the year 2007, and by the number of available screens.

To determine the proportion of the films released in countries where data was unavailable (released films by origin) we requested a list of all films released in 2007 from the countries' film institutions. After receiving the lists, we searched each movie, one by one, on the Internet

Movie Database (IMBD) site,³ to ascertain the geographic origin of production. This task gained an important dimension in this research study for two reasons: first, because without this exhaustive effort we would not have been able to build our framework, and secondly, due to increasing international co-production arrangements. Today, nations often band together, either to pool funds or creative resources and the supra-national identities of these films often raise difficulties in the concept of national cinema. For example, the controversy surrounding the national identity of the film *A Very Long Engagement/Un long dimanche de fiançailles* (Jean-Pierre Jeunet, 2004), which prevented it from competing at both the Academy Awards and Cannes, hinged on the film's financing from a French subsidiary of Warner Bros (Cook, 2007). Despite the legitimate problems in attempting to attribute the national identities to certain films, the IMBD provided valuable information which, in cases of doubt, enabled decisions with high levels of accuracy in relation to our framework. In the German case, the list of released films used was taken from the Box Office Mojo International at www.boxofficemojo.com.

On the consumption side, an intense level of demand is a necessary condition for the consumption of the two different types of film. Intense demand maximizes the chance that each film supplied will be consumed. The variety consumed is thus evaluated on the basis of average admissions per capita.

Industry factors

3. Production quality

As mentioned earlier, the market success of motion pictures can be expected to be influenced by the consumers' assessment of a film's quality. Quality, however, is difficult to ascertain prior to viewing, thus, audiences can interpret production budgets as signals of a film's high quality, i.e., professionalism of concept and execution.

Accordingly to Prag and Casavant (1994), the production budget is an indicator of a film's quality because rational producers/directors will plan for a big-budget film only if they have reason to expect the film to be well received. Accordingly, we assume that the larger the domestic budget in a film's production, the more likely it is better perform in the market (Chang and Ki, 2005). Thus, the average budget of domestic films is used as a proxy for the production quality of domestic films.

³ <http://www.imdb.com>.

4. Distribution concentration

Film demand and supply are highly interrelated within and across countries. That is, film performance in the market depends, among other factors, on the extent to which distributors make the product available to consumers. The classic concern is that distributors of cinema films, who are also producers, favour their own movies, that vertical integration may become the norm in the industry, making it difficult for non-integrated producers to survive, and thus the choice of a given type of film (namely art house) becomes very limited given the supply 'constraints'.

The degree of concentration is a measure that addresses the inequality dimension, by stressing the relative position of the largest firms. This ratio shows the percentage of total market share to which the largest firms contribute. The concentration ratio is effective in showing the dominance of the top firms and, from this perspective, industrial concentration can be measured using the distributors' market share and the possible impact on the consumer's choice across countries, since exhibitors also receive a constant proportion of domestic box office revenue.

5. Marketing investments

As a reflection of budget characteristics, the marketing strategy for motion pictures also embodies a higher or lower level of marketing clout. That is, the film's degree of marketing effort – as manifested by the size of its production budget and by the intensity of its cinema distribution – represents its position as a proxy for mainstream film. By contrast, a small budget with lower marketing clout and weak distribution represents its position as an art house film, since they serve, generally, the domestic market.

It is important to note that our variable 'average film marketing investments' includes P&A (prints and advertisement). Prints are the actual physical films that are shown in cinemas. Each cinema needs at least one print and possibly more depending on how many screens the film is playing on. The advertising part of the P&A budget is the amount spent on just that, advertising (TV, newspapers, magazines, internet, cinema advertising).

When distributors (responsible for the film's marketing campaign) are confident that a film will perform well and they have invested in a costly marketing campaign, they generally opt for wide release (Kerrigan, 2010). Much research, specifically that undertaken by Elberse and Eliashberg (2003) and Elberse (1999), has indicated that wide release is the most beneficial strategy for distributors as it means that they can take advantage of a publicity blitz. According to Fellman (2006), a wide release in the U.S. would see a film opening on 700 to

3000 screens, a limited release sees a film opening on between 50 and 700 screens, and the platform or exclusive strategy that is usually reserved for art house films has such films opening on a very small number of specialized screens (Fellman 2006).

Furthermore, another proper measure to assess marketing investments is the number of copies released per film. This would enable us to measure the degree of inequality in competition among different films. Unfortunately, this data is not available for all the different countries in the sample. Thus we adopted the approach of Zuckerman and Kim (2003), who suggested a two- tiered market structure in which the market share is mirrored and, indeed largely determined, by a corresponding inequality in the number of screens allocated to the film type (Zuckerman and Kim, 2003).

Although this approach can be used in our framework, it is fair to say that not all art house films are premiered only on specialized screens. Norway, for example, does not have a divided system, given Norway's municipal system, where the majority of cinemas are publically owned. The cinema enterprise in Norway is a cultural-political affair, where municipals cinemas have the responsibility in providing cultural diversity when it comes to showing films (Rodsand, 2009). However, recent changes in municipal legislation made it possible to organize cinema as more of a business enterprise and some municipal theatres have been transformed into joint stock companies. The municipality still sits as owner, but is less able to interfere. Although the joint stock companies are not allowed to make any profit, they do need the income of mainstream films to make the company "even out" (Rodsand, 2009). Now, two cinema types are considered typical for Norwegian cinemas, even though not representative in a statistical way, they can be seen as representing (Rodsand, 2009) bigger cinemas in the 3-4 cities that generally carry a high number of American titles (Asbbjornsen and Solum, 2003), and the smaller theatres which stick to the more traditional cinema activity under the "umbrella" organization of Film and Cinema. For cinema activity as a whole, this means a kind of hybrid form of cultural organization, which develops both commercial aspects of cinema and traditional commitment to local communities (Rodsand, 2009). The Norwegian reality is important to illustrate that even for markets for which we were unable to collect figures on art cinema screens, these markets are structured in terms of an opposition between market identities.

As indicators, we use the average film marketing expenditure in the overall production budget and the available screens for each type of film. As detailed next, the data described above was derived from a number of different industry sources, some available on EAO, others in Media Salles, and in the annual reports by the countries' film institutions. With regard to the average

marketing cost per film (P&A), and since this data is not available (with some residual exceptions), first, we contacted the film institutions, which were in a few cases able to provide this information. In a second stage, an email was sent requesting the figures on the average marketing cost per film (P&A), and we contacted (274) film distributors that had distributed a domestic film in 2007 or in an adjacent year, in order to collect the missing data. This attempt was not very fruitful because many refused to give “confidential” and “market sensitive” information. In the subsequent contacts made, we stated that the data was confidential and for academic purposes only.

Although the collected data is reliable and provided by direct sources, it is important to note that most distributors were reluctant to share these figures and did not want to be quoted; therefore, they cannot be used as ‘official’ sources.

Cultural-social-structural country factors

6. Education levels

We argued above that the broadening of education has provided larger audiences for film as art, thus, probably the most important factor explaining consumption of cinema films as art are levels of education. High education is likely to be a good proxy determinant of artistic taste.

In order to test this hypothesis we use the number of graduates from Tertiary-type A and advanced research programmes in each country. A positive correlation is expected between the number of graduates and the market share of domestic/art house films.

7. Field of graduation

Consumption of cinema films is reinforced during the process of education; therefore, it is more likely that people with similar education backgrounds will resemble each other in leisure habits (Katz-Gerro, 1999). From our data sources we were able to construct seven groups by field of graduation. 4 groups were used (humanities, arts, behavioural and social sciences, journalism and information) to reflect ‘cultural’ capital and 3 groups (business, engineering, computing) for the variable ‘economic’ capital. Our assumption is: a higher number of graduates in the cultural group implies a higher demand for domestic/art house films.

8. Occupational classes

Bourdieu (1991) views the world as a multidimensional space, differentiated into relatively autonomous fields. Within each of these fields, individuals occupy positions determined by the quantities of different types of capital they possess. “Classes are sets of agents who occupy similar positions and who, being placed in similar conditions and submitted to similar

types of conditioning, have every chance of having similar dispositions and interests, and thus of producing similar practices and adopting similar stances” (Bourdieu 1991: 231). Therefore, cultural production and cultural consumption are intimately related aspects of a cultural system (Dimaggio and Useem, 1978). Since exposure to cultural capital is, to a considerable extent, a function of occupational class, cultural capital is also likely to contribute to the class differentiation of arts consumption.

We assume that within each country, the higher the cultural occupational class (defined by the percentage of creative and cultural employment in the overall employment), the higher the consumption of domestic films.

The first step in assessing the occupational classes in the creative and cultural industries is the need to define corresponding sectors and activities. This is no easy task given the divergence of national and international approaches, the problem with the comparability of definitions, statistical frameworks, data and indicators (KEA, 2006). What is striking when investigating the economy of culture is the variety of terminologies used beyond the core art field (“artistic activities in the strict sense”). These include, for example: “cultural industries”, “copyright industries”, “content industries”, “experience economy”, “creative business sector”, “art-centric businesses”, “cultural and communication industries”, “media industries” and “knowledge economy” (KEA, 2006). Although the debate goes far beyond the scope of this study, it should be noted that the methodology we propose remains workable regardless of the scope of “creative and cultural industries”.

This study does not try to summarize or repeat these debates. There is extensive literature providing more detailed accounts of the various terms and debates related to creative and cultural industries (Caves, 2000; Scott, 2000; Hesmondhalgh, 2002; Power, 2002; Power and Scott, 2004; Pratt, 2005; Fleming, 2007; Galloway and Dunlop, 2007; Kolmodin et al., 2008; Nielsen, 2008; Jeffcutt and Pratt, 2009; Mato, 2009; Miller, 2009; Power, 2009). However, even though each term has a separate heritage and legacy, they have much in common. In industrial policy and analysis both these terms share a common concern with industries that have often been marginalized from economic and industrial analysis and policy. In particular, both terms share a focus on industries such as film, art, design, music, etc., that have largely been treated as issues for cultural policy and debate but are now recognized as important economic fields in their own right (Power and Nielsen, 2010). The terms have been used in many ways but are usually thought to signify industries that deal with the following areas of activity: advertising, architecture, broadcasting media, design-fashion, graphic design, interior design, product design, film, the “finer arts” – literary, visual and performance arts, libraries,

museums, heritage, music, photography, print media, object d'art-crafts. Moreover, these industries, rightly or wrongly, are suggested to share something that makes treating them as interlinked or similar meaningful and worthwhile.

For the purposes of this study, we use the following definition of creative and cultural industries: those concerned with the creation and provision of marketable outputs (goods, services and activities) that depend on creative and cultural inputs for their value (Power and Nielsen, 2010). The cultural and creative employment data was gathered from the European Cluster Observatory, the Australian Report Card, WIPO Survey 2003 and 2004, Nzier Report, 2006 Japanese Establishment and Enterprise Census, and KOSIS.

9. Development/Income level

Economic theory would suggest that income-related variables should be present in any demand function (Collins and Hand, 2005; Bohme and Muller, 2009). We assume that consumption of cinema films is correlated with income per capita and differences among selected countries will affect the number of movie-going experiences. Still, and according to the literature, people with a high educational level have, on average, a relatively higher income/development (Lazersfel, 1947; Augedal, 1972). Thus, it is expected that the differences in income per capita (proxy for 'status') between countries will result in distinct audience statuses, and therefore, in distinct types of film consumption.

10. Technological level

Recent technological advances in the film industry, as well as in related industries, have revolutionized the industry's production processes, distribution channels, and consumption trends.

The rise in digital film production with new methods, more creative contents, and the rapidly increasing digitization of cinemas is creating a window of opportunity for international cinema, with centres of innovation in permanent change (Cousins, 2004). Today, we are witnessing a technological revolution, whose result will be the democratization of filmmaking (Cousins, 2004). In this line of thought, it is likely that differences in the countries' technological level will lead to differences in film consumption patterns.

The percentage of a country's GDP allocated to R&D activities is used as a proxy to assess the impact of the film industry's technological level. It is expected that the most technologically developed countries are likely to attract more audiences to its films as filmmaking practices become more innovative, given their high level of technological sophistication.

Table 1: Summary of variables and proxies of the model

	Variable	Description of the indicator/proxy	Proxies	Data source
Dependent variable	Demand for art house vs. mainstream films	American films proxy for mainstream and domestic for art house films	% of domestic films in total films	European Audiovisual Observatory; cineuropa.org; cultural policies.net; Media Salles; Reports by film institutions.
Individual factors	1. Experiential motivation	Choice behaviour as proxy for experiential motivation	Market share in <i>the top ten box office</i> admissions by films' country of origin	European Audiovisual Observatory; Reports by film institutions.
	2. Consumption patterns	The assessment of different patterns of film consumption should rely on both types of supplied and consumed films.	Number of domestic films released Number of available screens for domestic films Average admissions per capita	European Audiovisual Observatory; Reports by film institutions.
	3. Production quality	Quality is assessed by the size of the budget in film production.	Average budget of domestic films	European Audiovisual Observatory; Screen Australia; Reports by films institutions.
Industry factors	4. Distribution concentration	The degree of concentration is a measure that addresses the inequality dimension. The concentration ratio is effective in showing the dominance of the top firms.	Market share of top distributors	European Audiovisual Observatory; Reports by film institutions.
	5. Marketing investments	Share of marketing expenditure in production budget	Marketing expenditure in overall production budget	Reports by film institutions; collected data from distributors for each country.
	6. Education levels	High education as proxy for artistic taste.	% graduates from Tertiary-type A and advanced research programmes in total population	OECD
Cultural-social-structural country factors	7. Field of graduation	Graduation groups reflecting 'cultural' capital and graduation groups for the variable 'economic' capital.	Number of graduates by field of graduation in total graduates	OECD
	8. Occupational class	Creative employment as proxy for occupational class	Creative employment in total employment	Nzier Report; Kosis; WIPO; ECO; JEEC; ARC.
	9. Income	Income	GDP per Capita	OECD
	10. Technological sophistication	Degree of technological development of countries	Ratio of Research and Development (R&D) in GDP	OECD

3.4. Descriptive statistics

About sixty per cent of the (30) countries in our sample present an average ratio of art house (domestic) films to people attending mainstream (U.S.) films above 10 per cent. If the threshold is set at 20%, the percentage rises to 36.7% among countries. This latter group includes countries such as Sweden, Poland, Denmark, United Kingdom, Italy, Czech Republic, Turkey, France, Japan, South Korea, and the United States. Beside the countries mentioned, Hungary, Spain, The Netherlands, Norway, Germany, Finland, and Greece are also place above 10 per cent.⁴

A descriptive analysis of our data (cf. Table 2) indicates that the average cinema attendance per citizen in 2007 was 2.2 times, and that 80% of all the cinema-goers *in the top ten box-office by admissions* went to see a mainstream film. These 80% represent, on average, 33% of the overall market by admissions in the countries of our sample. The average domestic film budget varies from 0.61 million to 22.4 million dollars with a mean of 4.3 million dollars.

On average, the amount spent on marketing by domestic film released represents 13% of its production budget. The distribution is fairly concentrated with the top 3 distributors representing on average a share of 56%, from the lowest in France at 33% to a highest in Portugal at 88%. With regard to the Tertiary-type A level and field of education in the countries selected, on average, 7% of the total population possessed (in the reference year of 2007) a tertiary degree, with 17.8% of those graduates coming from the Business and Administration field; 12.2% from Engineering, Manufacturing and Construction, and less than 1% from the Social and Behavioural Science. The weight of the creative industries in the sample is similar in terms of both employment and gross domestic product, reaching a figure of around 3%. The sample of countries considered is also widely differentiated according to the level of development (measured by the GDP per capita) and technological sophistication (proxied by the R&D/GDP ratio). Indeed, it includes low-income countries such as Turkey, Mexico, Poland, or Hungary, and high-income countries such as the United States, Norway, or Luxembourg. In terms of technological sophistication, our sample includes technological frontier countries (with a R&D/GDP ratio well above 3%), such as Japan, Finland and Sweden, and technological laggards (R&D intensity below 0.5% of the GDP), such as Mexico and the Slovak Republic. On average, the R&D intensity ratio sits at 1.8% of the GDP.

⁴ Countries that present a ratio art-house versus mainstream films below 10% include (by increasing order of the ratio) Luxembourg, Slovak Republic, Austria, New Zealand, Portugal, Canada, Australia, Ireland, Switzerland, Belgium, Mexico, and Iceland.

Table 2: Descriptive Statistics

Groups of Factors	Group of variables	Variables	Minimum	Maximum	Mean	Std. Deviation
Dependent variable	Demand for art house vs. mainstream films	Art house vs. mainstream film ratio above 10%	0.000	1.000	0.600	0.498
		Art house vs. mainstream film ratio above 20%	0.000	1.000	0.367	0.490
Individual factors	Experiential motivation	Market share in top ten box-office admissions by films' country of origin	0.380	1.000	0.803	0.179
		Number of domestic films released	4	470	79	114.301
	Consumption patterns	Number of available screens for domestic films	7155	50461	18826	10502.68
		Average admissions per capita	0.430	4.800	2.206	1.183
Industry factors	Production quality	Average budget of domestic films	0.610	22.400	4.312	4.616
	Distribution concentration	Top distributors' market share	0.330	0.884	0.561	0.144
	Marketing investments	Marketing expenditures in overall production budget	0.010	0.500	0.130	0.128
Social-structural factors	Education level	% graduates from Tertiary-type A and advanced research programmes in total population	0.034	0.138	0.070	0.025
		Arts	0.008	0.080	0.039	0.019
	Type of education - field of graduation (Graduates by field of graduation in total graduates)	Humanities	0.014	0.167	0.082	0.038
		Social and Behavioural Science	0.037	0.151	0.090	0.032
		Journalism/Information	0.004	0.045	0.020	0.010
		Business/Administration	0.091	0.304	0.178	0.052
		Computing	0.011	0.087	0.040	0.017
	Occupational classes	Engineering/Manufacturing/Construction	0.054	0.250	0.122	0.052
		Weight of Creative industries in total (in terms of GDP)	0.006	0.085	0.027	0.017
		Weight of Creative industries in total (in terms of Employment)	0.007	0.110	0.033	0.018
Development/Income level	Gross Domestic Product (GDP) per capita	12993	79793	33444	12940.11	
Technological level	Ratio of Research and Development (R&D) in GDP	0.005	0.036	0.018	0.009	

An analysis of the correlation matrix among the relevant variables (Table 3) shows that the estimates of the Pearson coefficient are positively and significant correlated between our dependent variable (art house/mainstream film ratio at the 10% and 20% thresholds) and the number of domestic films released, average domestic film budget (proxy for domestic film quality) (only for the 20% threshold), and proportion of marketing expenditure in total budget.

Table 3: Correlation matrix

		1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Art house vs. mainstream film ratio (above 10%)	Pearson Correlation	1.000	0.621***	-0.577***	0.361**	0.259	-0.316*	0.219	-0.042	.373**	-0.137	0.133	-0.348*	-0.177	0.138
	Sig. (2-tailed)		0.000	0.001	0.050	0.168	0.089	0.245	0.825	0.042	0.470	0.482	0.059	0.348	0.466
2. Art house vs. mainstream film ratio (above 20%)	Pearson Correlation		1.000	-.540***	.455**	0.221	-0.080	0.323*	-0.236	.473***	0.070	0.265	-0.265	-0.216	0.207
	Sig. (2-tailed)			0.002	0.012	0.241	0.676	0.082	0.208	0.008	0.713	0.157	0.158	0.253	0.271
3. Market share in top ten box-office admissions by films' country of origin	Pearson Correlation			1.000	0.008	-.525***	.474***	0.198	-0.316*	-0.065	0.023	0.153	0.276	.458**	-0.003
	Sig. (2-tailed)				0.964	0.003	0.008	0.295	0.089	0.731	0.902	0.420	0.139	0.011	0.987
4. Number of domestic films released	Pearson Correlation				1.000	0.018	0.225	.778***	-.420**	.664***	-0.191	.531***	-0.192	0.091	.363***
	Sig. (2-tailed)					0.924	0.232	0.000	0.021	0.000	0.311	0.003	0.308	0.632	0.048
5. Number of available screens for domestic films	Pearson Correlation					1.000	-.640***	-0.179	0.210	-0.086	-0.186	-0.245	0.020	-.491***	-0.321*
	Sig. (2-tailed)						0.000	0.343	0.265	0.651	0.324	0.191	0.917	0.006	0.083
6. Average admissions per capita	Pearson Correlation						1.000	.384**	-0.311*	0.279	.393**	.434**	0.052	.415**	0.284
	Sig. (2-tailed)							0.036	0.094	0.135	0.031	0.017	0.785	0.023	0.129
7. Average budget of domestic films	Pearson Correlation							1.000	-0.273	.613***	0.010	.668***	-0.266	0.177	0.226
	Sig. (2-tailed)								0.144	0.000	0.958	0.000	0.155	0.350	0.229
8. Top distributors' market share	Pearson Correlation								1.000	-0.270	-0.013	-.363**	0.010	-.471***	-0.238
	Sig. (2-tailed)									0.149	0.947	0.048	0.957	0.009	0.205
9. Marketing expenditure in overall production budget	Pearson Correlation									1.000	-0.025	.513***	-0.199	0.060	0.339*
	Sig. (2-tailed)										0.896	0.004	0.292	0.753	0.067
10. % graduates from Tertiary- type A and advanced research programmes in total population	Pearson Correlation										1.000	-0.032	-0.128	0.044	-0.042
	Sig. (2-tailed)											0.865	0.501	0.819	0.827
11. Weight of Creative industries in total (in terms of GDP)	Pearson Correlation											1.000	0.128	0.010	0.302
	Sig. (2-tailed)												0.499	0.957	0.105
12. Weight of Creative industries in total (in terms of Employment)	Pearson Correlation												1.000	-0.219	-0.135
	Sig. (2-tailed)													0.246	0.477
13. Gross Domestic Product (GDP) per capita	Pearson Correlation													1.000	.368**
	Sig. (2-tailed)														0.045
14. Ratio of Research and Development (R&D) in GDP	Pearson Correlation														1.000
	Sig. (2-tailed)														

Key: ***(**)[*] significant at 1%(5%)[10%]

Note: The variables referring to education type (field of graduation) were omitted for the sake of space.

This indicates that, on average and in a bivariate perspective, the demand for art house films is positively associated with the supply of domestic films, their quality and marketing investments.

In contrast, and as expected, the demand for art house films is significantly and negatively correlated with the share of U.S. (mainstream) films in the top ten box office admissions. Quite awkwardly, there is some evidence (but only for the 10% threshold) that countries with a large weight of employment in creative industries are those experiencing lower (relative) demand for art house films (as indicated by the Pearson estimate of 0.348 in Table 3).

In order to effectively and rigorously analyze the determinants of the (relative) demand for art house films (proxied by the 10% or 20% threshold variable for the art house vs. mainstream film ratio), a multivariable analysis is required. Aiming to avoid multicollinearity problems, but guaranteeing that a variable proxy is added for each group of factors/determinants of the relative demand for art house films, we decided to remove some variables, which present very high correlation coefficients (above 0.50), from the logistic model presented in Table 4.

4. Determinants of the demand for art house versus mainstream films: results from the estimation of the logistic model

The results of the estimation for the two thresholds considered – above vs. below 10% and above vs. below 20% – are presented in Table 4. The Hosmer and Lemeshow test indicates that the two models estimated represent ‘reality’ well, that is, there is a reasonable goodness of fit.⁵ Moreover, more than 86% of the estimated values of the dependent variable are correctly predicted by the model.

Measuring taste by consumption performance, we found support for the general principle that cinema tastes are likely to diverge into different patterns across-countries. Our results reveal mixed support for H1. Indeed, in the case of the model at the 10% threshold (but not the 20% threshold), the estimates for the coefficients of our individual factor show that the higher the proportion of admissions to U.S. films in the *top ten box office admissions*, and the higher the

⁵ Hosmer and Lemeshow (1989) proposed a statistic that they show, through simulation, is distributed as chi-square when there is no replication in any of the subpopulations. This test is only available for binary response models. The Hosmer and Lemeshow Test table provides a formal test for whether the predicted probabilities for a covariate match the observed probabilities - a large p-value indicates a good match. A small p-value indicates a poor match, which means that alternative ways should be found to describe the relationship between this covariate and the outcome variable. Regarding the logit model, the Hosmer and Lemeshow test as a null hypothesis corroborates the statement that the model represents reality well.

average admissions per capita, when controlled and keeping the other variables constant, the lower the relative demand for art house films.

In terms of industry factors, our predictions for production quality (i.e., H2) are also corroborated, but this time only in the case of the 20% threshold. In other words, when we consider as the dependent variable the dummy variable that assumes the value of 1 when the ratio of art house versus mainstream films is above 20%, there is enough statistical evidence to state that, other factors remaining constant, the larger the domestic production budget, or the higher the domestic film quality, the higher the relative demand for art house films. This finding is consistent with most previous studies which consider that the production budget is an important indicator of a movie's quality (Prag and Casavant, 1994), and is thus a good predictor of movie attendance (Basuroy et al., 2003). Also, the empirical findings of Hennig-Thurau et al. (2006a) sustain the important impact of a film's production quality on consumer word-of-mouth, which is a key determinant of long-run box office success.

H3 is unambiguously proven by our estimations. We found that, regardless of the dependent variable used, marketing investments emerge as a key determinant in the consumption of art house films. In other words, the higher the investments in marketing, on average, the higher the demand for art house films, keeping other variables constant. Thus, there is a high likelihood that the relative demand for art house films be predicted from the amount invested (from the total production budget) in marketing. These results are in line with findings in existing literature. For instance, Prag and Casavant (1994) highlighted the importance of marketing expenditure in determining a film's demand and performance at the box office.

Finally, in what concerns the social-structural factors, the estimation results yielded mixed support of our hypothesis (H4). Education- and occupation-related variables failed to emerge as statistically significant, which means that for the sample of countries considered here we do not possess sufficient evidence, other factors remaining constant, that could distinguish countries according to their relative demand for art house films based on their education and occupation profiles.

Unexpectedly, when we control for other factors likely to influence the relative demand for art house films, the countries' level of development emerges significantly and negatively related with that demand (although only in the case of the 20% threshold). Although contradicting in part the idea of 'status' associated with higher income (or development) levels, such results may be consistent with other findings in the literature. For example, Peterson and Kern (1996)

found that members of the upper-middle class have become less “snobbish” and more “omnivorous” in their tastes in recent years, which means that one of the cultural characteristics of the upper-middle class is “an openness to appreciating everything” (Peterson and Kern, 1996: 904). The omnivore’s cultural repertoire cuts across the aesthetics spectrum as their taste is developed in an open and welcoming direction (Peterson and Kern, 1996).

More in line with the predictions, the results obtained relative to the technological level indicate that, on average and other factors remaining constant, countries with a higher level of technological sophistication tend to have a higher demand for art house films.

Table 4: Determinants of the demand for art house vs. mainstream films – estimation results

			Art house vs. mainstream film ratio above 10%		Art house vs. mainstream film ratio above 20%	
			beta est	p-value	beta est	p-value
Individual	Experiential motivation	Market share in top ten box-office admissions by films’ country of origin	-24.551	0.097	-10.39	0.271
	Consumption patterns	Average admissions per capita	-2.891	0.039	-1.21	0.290
Industry	Production quality	Average budget of domestic films	1.464	0.120	1.09	0.086
	Distribution concentration	Top distributors’ market share	3.005	0.729	-0.54	0.953
	Marketing	Marketing expenditure in overall production budget	50.041	0.045	25.62	0.058
Structural	Field of graduation (Graduates by field of graduation in total graduates)	Arts	-159.140	0.158	-167.83	0.104
	Occupational classes	Weight of Creative industries in total (in terms of GDP)	-59.475	0.454	33.26	0.660
	Development/Income level	Gross Domestic Product (GDP) per capita	-3.319	0.431	-7.27	0.084
	Technological level	Ratio of Research and Development (R&D) in GDP	236.846	0.165	335.63	0.055
Constant			48,614	0.301	75.68	0.090
N			30		30	
Observations	Countries with the domestic/U.S. firm ratio > 20%		18		11	
	Others		12		19	
Goodness of fit	% correctly predicted		86.7		86.7	
	Hosmer and Lemeshow Test (p-value)		1.511 (0.933)		9.290 (0.318)	

5. Conclusions

The present study bridges previous literature on cultural consumption with the economic determinants of demand, by taking into account individual factors, such as experiential motivation and taste, with industry and social-structural factors. We thus contribute to a deeper understanding of the phenomenon of film demand, especially as an art form.

Support was found for the general principle that cinema tastes can diverge into different patterns across countries. Thus, the film patterns constructed here can be regarded as carrying certain elements of social reproduction, which means that some countries are more exclusive in their attitude toward mainstream films, while others look at films as art work.

However, in most modern societies, no art floats free of economic ties and regardless of the motivation to see a movie, all cinema-goers are looking for quality (Holbrook, 1999). Accordingly to our research, the higher quality of domestic films (proxied by the films' average budgets) is positively associated with the relative demand for such films.

Cinema films are experience goods, and this “art” or “entertainment” experience is more marketing-driven than manufactured goods. Thus, if we want larger audiences for art house films, filmmakers have to forge new links with the audience based on storytelling, enabling them to reach beyond the basic definitions of world cinema, art house or foreign language films as blanket genres. Filmmakers, producers and marketers must have an understanding of the different film audiences, must discover how to engage them, and how to position the film appropriately by setting expectations in relation to its genre, style and aesthetics. It is important to connect “the right movie” to “the right moviegoer”.

Steeply rising costs in film production mean that even domestic films that hinge on state subsidies must be able to attract an audience of a certain size to survive (Squire, 2004), and as in most industries, selling a film without marketing is a difficult if not impossible task. Indeed, in our study, marketing investments emerged as a key determinant for the consumption of art house films. This means that larger marketing budgets positively contribute to domestic film performance. Existing disparate evidence shows (e.g., Reinstein and Sneyder, 2005) that strong marketing campaigns are absolutely essential because consumers may seek signs of quality in advance of attending, such as good critical reviews, or other signs contained in advance publicity, marketing, word-of-mouth from others who have already seen the movie, etc.. Therefore, some argue, to achieve that standing, the marketing process should begin as early as possible.

Our findings further suggest that structural factors, namely technological levels, play a significant role in creating stratified film consumption. As argued by Peterson and Berger (1975), cultural market cycles of innovation create an opportunity for competition and creativity when institutional barriers are lifted, and the global motion picture industry faces a revolution in the way films are conceived, produced and distributed. The advent of the digital era affects almost all sectors of the global value chain. The existing literature argues that access to screens for domestic films is a key problem, underlining the importance of forging state policies promoting more rapid screen digitization so as to ensure that there is a space for less commercial productions (i.e., art house films). In this line of reasoning, technological sophistication and relative demand for art house films emerge as intimately related.

Notwithstanding some contributions to the existing literature that the present study has provided – cross-country, quantitative and multivariable analysis of the relative demand for art house films – it does have several limitations and caveats. First, we acknowledge some degree of arbitrariness when setting the threshold reference ratio for the dependent (dummy) variable. However, we try to mitigate this potential pitfall by considering two different thresholds (10% and 20%). Secondly, our framework did not test for the importance of screens by type of film. Although we made every effort to find this information, there is presently a lack of data for eight countries in our sample, which hampered the inclusion of this variable in the multivariate estimation. Thirdly, interesting film industries in countries such as India and Nigeria had to be excluded from this study as it was very difficult to obtain reliable and comprehensive industrial data.

To sum up, all the caveats and limitations pointed out above reinforce the need for additional and comprehensive research regarding the demand for art house versus mainstream films based on data from multiple periods, multiple countries, and multiple ways of operating the key constructs of interest.

Rigorous studies and comparisons of domestic film industries spanning the commercial to the state-subsidized, the small-scale to the large-scale, and the integrated to the disintegrated, are in demand. In order to begin to understand global linkages between people and places, and the emergence of new, global practices and networks that may ultimately change the known patterns of specialization and organization of the film industry, it is necessary to take the growing global diversity of countries within the film industry seriously.

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