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ORIGINAL ARTICLE

Commercial success and artistic recognition of motion picture projects

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Abstract This article introduces a model derived from the relational view of strategy to investigate (1) the impact of track record and financial resources on the commercial success and artistic recognition of cinema projects, and (2) the relationship between the commercial and artistic dimensions of film performance. Structural equation modeling carried out on 2,080 feature films released in the North-American theatrical market from 1988 to 1997 illustrates the mediating role of financial resources as catalysts of commercial and artistic track record resources, and unearths important conclusions relative to the specific dynamics of resource combinations in cinema projects. Results also reveal a novel hierarchy of lead actors, directors, and producers in the explanation of film performance. Last, they confirm the precedence of commercial success in the USA, and the symbolic and institutional status of US cinema as being primarily an industry.

Keywords Relational view · Track record · Financial resources · Structural equation modeling · Artistic recognition · Commercial success · Cinema

1 Introduction

> Like any art form, motion pictures can elicit deep passion. And like oil gushers, motion pictures can create a flood of cash.
>
> (Daniels et al. 1998, p. XXI)

Motion pictures, similar to many cultural projects, are a combination of commercial and artistic elements. The dual definition of cinema as business and art is at the

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source of multiple tensions, which make the determinants of above-average motion picture performance elusive. Such tensions mostly arise as filmmakers struggle to reconcile the economic imperatives of film production and distribution with their artistic vision. They may lead to disputes between producers and directors, who often personify the business and art priorities, respectively.

The "Frankfurt School" (Benjamin 1971; Horkheimer and Adorno 1974) best exemplifies the radical view that the cultural sector, including cinema, should be disconnected from economic laws and has everything to lose in confronting them. The personal values and social norms that rule the production processes of artists also make the application of demand-induced marketing frameworks to their work impossible (Hirschman 1983). Passion influences economic choices and preferences in art (Frey and Eichenberger 1995), and art collectors value aesthetic pleasures derived from their possessions at least as much as their monetary worth (Baumol 1986). Similarly, cinemagoers tend to consider a film as a whole and to favor its subjective rather than objective components (Cooper-Martin 1992). Artistic dimensions should hence be essential to the analysis of above-average motion picture performance, and cinema's inherent business and art elements should be reflected in dual commercial and artistic evaluations of motion picture performance. However, the "flood of cash" alluded to in the introductory quote above habitually submerges the "deep passion", with motion picture performance being customarily assessed in commercial terms only. Similarly, its determinants are frequently identified with the financial clout of producers, investors and distributors, while the artistic facets of film production and consumption are only occasionally conceded (Hadida 2009).

This article introduces a framework derived from the relational view of strategy to explain above-average motion picture performance. It illustrates this general concept with two distinct dimensions aimed at shedding light on the dual nature of cinema as both business and art: commercial success and artistic recognition. Cinema production repeatedly and extensively relies on a few key players, whose career trajectories elicit much attention (Jones and DeFillippi 1996; DeFillippi and Arthur 1998; Zuckerman et al. 2003). Yet, the specific relationships between the track record of these key stakeholders and the success of movie projects remain largely unexplored. The article consequently defines the explanatory factors of commercial success and artistic recognition as the commercial and artistic track record of these central players: namely, a film's producer, director, and lead actors. It also develops the idea that financial resources, in the form of production budgets, serve as catalysts to the involvement of these key players, and act as a mediating factor of their contribution to motion picture performance. Last, it explores the relationships between film commercial success and artistic recognition, and derives conclusions on their precedence and relative importance.

This research contributes to the existing literature in several ways. First, the discussion and testing of the sequence and weight of commercial and artistic attributes and performance criteria is the first of its kind in the specific context of cinema. This study, therefore, opens new and interesting research prospects on the combination of commercial and artistic factors and measures of performance in a cultural sector. Second, the investigation of the mediating role of financial resources

in the relationship between past track record and present performance leads to the development of a novel hierarchy of project-related resources. It paves the way to further research on the internal dynamics of strategic resource combinations, as structural equation results generate important conclusions relative to the internal hierarchy of lead actors, directors, and producers in cinema projects. Last, the testing of the proposed model provides an empirical illustration of the relational view of strategy. Its conclusions may prove useful to cultural managers, business analysts of the film industry, and film professionals, whether they are already active in the North-American film market or trying to tap into it.

The outline of the article is as follows. The next section introduces its positioning, context, and framework. It then discusses methods, and applies the framework to the feature films developed and released from 1988 to 1997, both included, in the North-American theatrical market (USA and Canada, following the Motion Picture Association of America—MPAA—categorization). Analyses and results follow. Last, conclusions, limitations, and suggestions for further research are discussed.

2 Theory and hypotheses

2.1 Theoretical positioning and empirical context

The relational view of strategy (Dyer and Singh 1998) defines its unit of analysis as the network of economic actors involved in a project. Partners in a transaction who are willing to commit specific investments and unique combinations of resources to it create the potential for relational rents, defined as above normal profits that can only be generated through their joint idiosyncratic contributions. These critical resources are typically beyond partner organizations' control, as participants from different organizations commonly get together to pursue objectives beyond the legal limits of their corporate base. Resorting to free agents who keep associating with and dissociating from specific organizations allows the latter to integrate public knowledge, most notably in the form of industry best practices. This process may become a catalyst in the development of their idiosyncratic knowledge base. However, it also increases the risk of its dispersion into the public domain (Matusik and Hill 1998). Resorting to free agents has always been customary in project-based industries. It is now also on the rise in all economic sectors, which may seek inspiration in the pioneering organization of cinema (Jones and DeFillippi 1996).

A project comes to life on its own: it follows its own logic, summons up complementary resources, and leads on to a clear, measurable outcome: i.e., the completion of a product, the delivery of a service, or both. As such, it is a relevant and legitimate object of study (Eisenhardt and Schoonhoven 1996). In the cinema industry, each project is a commercial and artistic endeavor leading to the production of a prototype experience good (the film). It also results in a unique experience for the teams involved in production and for viewers, who can only fully assess the value of a motion picture while they watch it. Film professionals, film critics, and cinemagoers partially compensate for the lack of first-hand information

on any given movie by resorting to alternative experience and credence mechanisms. Among them, the track record of film participants in terms of skills, interpersonal traits, reliability, and past achievements elicits particular investors', experts', and spectators' interest, particularly in the light of uncertainties in the evolution of individual careers in the cinema industry (Faulkner and Anderson 1987).

This research focuses on producers, directors, and lead actors as core participants in a film's production process. By doing so, it purports to unveil a better insight into the key determinants of motion picture performance and their combinations in specific activities (DeFillippi and Arthur 1998), thus providing part of the insider view advocated by Rouse and Daellenbach (2002) in empirical studies. The complexity of the financial set-up of cinema projects is often reflected in lengthy production credits and in their structure as local or international coproductions. Even so, only one production company acts as the business manager and main producer of the movie. This firm (the producer) is customarily the first production company cited in a film's production credits.

The producer is usually involved in the film project from start to finish. After evaluating a movie's business and artistic potential, it takes the initiative in all aspects of the project, and is ultimately responsible for its development, production process, and completion. The producer is at the core of the film's financial, managerial and commercial networks: as such, it supervises all its financial and administrative aspects. It is typically an independent company, sometimes linked to a major distributor through a right of first refusal contract (that is, a contractual call option giving the distributor first look rights over all the producer's projects). In a few instances, it is a division of a major studio, which then acts both as producer and distributor of the movie. The director is the film's artistic maitre d'oeuvre. Directors customarily collaborate with producers on the final outline of the movie, on its staffing, and on its casting. They supervise the artistic process in the production and post-production phases. Lead actors form the third category of key stakeholders. Through their interpretation, they embody and enact the vision of the director.

Theatrical distributors also play an important role. Without them, a movie would never reach a theatrical audience: it would either die on the floor of an editing room or go direct to DVD. During the "golden age" of Hollywood (1930–1949), fully-integrated major studios systematically acted both as producers and distributors. They developed clear and distinctive personalities (Rosten 1941), which were manifest in their unique "house-styles" (Sedgwick 2002). The latter were constructed around specific "star-genre combinations" (Schatz 1997, p. 43): e.g., Bing Cosby in Paramount musicals or James Cagney in Warner Brothers' crime dramas (Gomery 1986). The 1948 Paramount Decrees led major studios to divest from movie theatres. They also cut costs by ceasing to offer long-term employment to talent and technicians. As the studio system disintegrated, the majors began acting as financial backers to independent producers, and became focused on distributing and financing hit movies (Robins 1993). They left behind the star-genre formula and with it, their distinctive on-screen identity. Intense talent and corporate mobility further contributed to major studios becoming mostly interchangeable. Just

similar to other smaller distributors, they now typically intervene much later than producers, directors, and lead actors in a film's value chain by purchasing rights to distribute the movie in specific countries or regions. They are consequently only included within the key stakeholders group as producers when they also undertake this role, and, hence, get directly involved in setting up and negotiating film production budgets and processes.

Directors and lead actors are perfectly mobile across organizations and available on the strategic factor market for free agents. Yet, after they get involved in a project, its producer has to make sure that their mobility becomes temporarily restrained and that they fully commit to its completion. It does so by binding them legally and by sending them signals of its own level of commitment to the venture. Early in a movie production process, the track records of key film participants also tip off potential partners in production, investors, and distributors, whose budget allocation decisions become concomitant to an indication of interest of a specific producer, director, or lead actor. Focusing on these key participants' track records, therefore, sheds light on the issues of decision makers' opportunism and ability to forecast (Williamson 1999). Assuming that their commitment to the project also serves as a catalyst of its commercial success and artistic recognition, its scale should be proportional to the potential that they detect in it early on. As a study of new product development teams substantiates, "products don't become blockbusters […] without the intense, personal involvement of senior management-usually a CEO or division head" (Lynn and Reilly 2002, p. 2).

In the film industry, producers and directors act as CEOs or division heads. Their involvement starts with sunk investments in intellectual capital to secure the copyrights of a creation that is not yet in the public domain (e.g., a screenplay or a popular play, videogame, or book to adapt to screen) or to help the author(s) of an original concept develop it into a screenplay. Producers incur additional sunk costs when hiring teams and equipment. These investments in strategic production factors and in their combinations may lead to commitment via lock-in, and in extreme cases, to escalating situations (Brockner 1992). Even so, producers have to run the risk of large financial losses to achieve above-average performance, for they operate in an industry where revenue distribution is highly skewed and displays asymmetric tails, with most films earning little and most revenue flowing to a few blockbusters (De Vany and Walls 2004; Walls 2005a).

2.2 Model and hypotheses

In line with earlier empirical studies (Henderson and Cockburn 1994; Maijoor and Van Witteloostuijn 1996), the theoretical model illustrated in Fig. 1 explores the link between track record, financial resources, and above-average performance in cinema projects. As it does not anticipate that any of the track record and financial resources might be core rigidities from the outset, all its hypotheses—represented as arrows in Fig. 1—define positive relationships between latent variables, pictured in oval shapes in Fig. 1. This model is original in illustrating the concept of film performance in commercial as well as artistic terms, thus reflecting the dual definition of cinema as business and art (Hirsch 1972; Hirschman and Holbrook 1982).

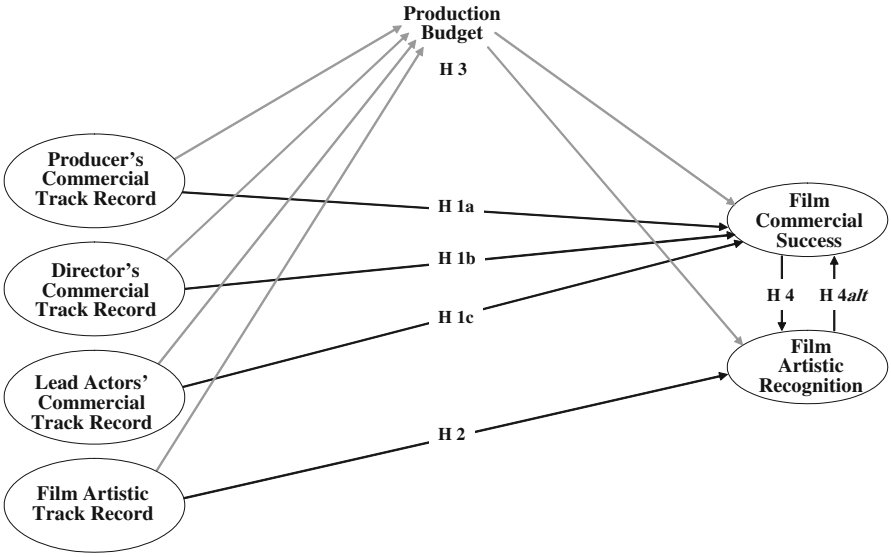

Fig. 1 Model

Track record is hereby defined as the tangible manifestation of the accumulative capability of project participants to induce customer trial (commercial track record) and peer recognition (artistic track record). This definition builds on studies of the economics of superstars (Rosen 1981), the careers of movie actors (Zuckerman et al. 2003), and reputation as a key resource (Hall 1993; Rao 1994), particularly in incomplete information settings (Weigelt and Camerer 1988).

The commercial track record of film producers initially rests on their ability to detect the projects with most potential and subsequently relies on their know-how to guarantee their completion. In time, the accumulation of these two competences allows them to become increasingly proficient and enhances the potential for commercial success of their movies. Similarly, top directors establish over the years a know-how and style that drive their reputation in the business and artistic communities, and secure them a loyal audience. Last, lead actors, through their talent and choice of roles and film projects, are also likely to attract the attention of top producers and directors, and to develop a fan following and a proven commercial track record (Wallace et al. 1993; Albert 1998).

The "Matthew Effect" is defined as the buildup of greater increments of recognition for particular contributions to individuals or teams of significant repute and the denial of such appreciation to those who have not yet made their mark (Merton 1968, p. 58). This effect and the continually reproduced system of inequality that it entails were confirmed for Hollywood directors of cinematography (Faulkner and Anderson 1987, p. 901), and cinema and television writers (Bielby and Bielby 1999). Similarly, Hypothesis 1 assumes a Matthew Effect of commercial track record on commercial success for producers, directors, and lead actors:

Hypothesis 1 (H1) The stronger the commercial track record of its (a) producer; (b) director, and (c) lead actors is, the higher the commercial success of a film is.

The definition of artistic track record as the tangible manifestation of the capability of project participants to be praised for their artistic feats mirrors that of commercial track record. In cinema, being nominated for or winning a prestigious award grants membership to an exclusive network. Film artistic recognition also rests more on the dynamic combination of individual talents than on the latter considered in isolation. The creativity of a director is nothing without actors to channel it, and actors can't feature in a film without a director and a producer to overview its artistic and economic production process, respectively. Contrary to commercial track record, artistic track record is, therefore, defined collectively. Hypothesis 2 accounts for a Matthew Effect of artistic track record on artistic recognition:

Hypothesis 2 (H2) The stronger the artistic track record associated with a film is, the higher its artistic recognition is.

After a producer decides to develop a film project, it forecasts its preliminary budget and uses it to attract talent. An iterative process then starts, whereby budget estimates are adjusted to reflect the audience appeal of potential participants as they become available. Budget estimates may be adjusted upward when stars, whose strong commercial track records allow charging above-average fees, express an interest in a property. These premium fees have inflationary effects on production budgets and marketing and advertising expenses.[1] Yet, they are conceded in anticipation of the likely income created by the commitment of those who are in a position to claim them (Ravid 1999). A final production budget is approved once the producer receives a clear signal that a director and actors with proven commercial and artistic track records will commit to the film. It then turns to its business partners for funding, and to plan the film's release strategy. A producer with a proven commercial track record is more likely to get other influential participants on board. Similarly, a director with a proven commercial track record offers investors and film participants a guarantee that their money, time, and talent will be well spent. The involvement of actors with proven commercial track records also increases a movie's expected revenue. Last, an established artistic track record may signal artistic merit in form and content, and may encourage higher investments. Hypothesis 3 accounts for these effects:

Hypothesis 3 (H3) A film's final production budget positively mediates the relationships between (commercial and artistic) track record and (commercial and artistic) performance.

A high provisional budget also allows producers to get high-profile talent on board. By claiming higher fees, star directors and actors increase the need for extra funding and the film's budget.[2] Factoring in all the steps in this iterative process

[1] "Above the line" talent (the producer, writers, director, and lead actors) typically accounts for over 50% of a film's production cost (Daniels et al. 1998).

[2] By claiming higher fees, star directors and actors manage to appropriate straight off a fixed amount of the higher rent expected of the movie, which they partly use to cover the personnel expenses that they incur by bringing in their own staff with them on movie sets.

would immensely complicate the model in exchange for marginal improvements. It would also be mostly based on speculation, and would detract from the investigation of the actual relationship among cast and crew, production budget, and performance. As a result, H3 only accounts for the last iteration in the sequence by focusing on a movie's final budget, as agreed upon once all decisions have been made. Because of the above-mentioned endogeneity, the budget of a movie both explains and influences the relationship between track record and performance. The model in Fig. 1 consequently factors it in as a mediator rather than as a moderator of this relationship: "Whereas moderator variables specify when certain effects will hold, mediators speak to how or why such effects occur" (Baron and Kenny 1986, p. 1176).

The final hypotheses deal with the link between the two dimensions of above-average film performance: commercial success, and artistic recognition. The introduction of these two metrics contributes to a deeper understanding of the complex concept of performance (Coff 1999), and should, therefore, lead to conclusions that a unique categorization would not permit. However, the dual foundation of cinema as business and art makes it difficult to determine ex-ante whether commercial success breeds artistic recognition or vice versa. Investigating this relationship both ways, with Hypothesis 4 and its alternative Hypothesis 4*alt*, precludes oversimplification:

Hypothesis 4 (H4) The more commercially successful a film is, the higher its artistic recognition is.

Hypothesis 4*alt* (H4*alt*) The higher the artistic recognition of a film is, the more commercially successful it is.

H4 and H4*alt* delineate a non-recursive relationship between commercial success and artistic recognition. They may appear counterintuitive, as several authors have documented frictions between business and art (Holbrook 1999; Caves 2000). Negative correlations between awards and moviegoers' film selection criteria (Holbrook 2005) confirm that the commercial and artistic dimensions of film performance are distinct. However, alternative demonstrations of positive correlations between them (Ginsburgh 2003; Delmestri et al. 2005) illustrate that these two dimensions cannot be considered orthogonal. Simultaneously testing H4 and H4*alt* addresses the often-neglected issue of the relative importance of commercial and artistic priorities in cultural projects (Hirsch 2000). Also, whereas previous studies (e.g., Smith and Smith 1986; Sochay 1994; Nelson et al. 2001) have examined the impact of artistic recognition on commercial success (H4*alt*), Table 1 reveals the lack of research on the influence of commercial success on artistic recognition (H4). The model that this research contributes purports to bridge this gap by offering the first thorough test of the reciprocal interactions between commercial success and artistic recognition in the film industry.

The model is also novel in introducing artistic track record, and in testing its direct (H2) and indirect (H3, mediated by production budget) effects on artistic recognition. By doing so, it sheds light on the dynamics and cumulative nature of artistic success over time. Last, several studies, reported in Table 1, have used

Table 1 Hypotheses, empirical support, and summary of results

Hypotheses	Empirical evidence in the existing cinema industry academic literature	Results
H1a: The stronger the commercial track record of its producer is, the higher the commercial success of a film is	*Some evidence* (De Vany and Walls 2002 and Sorenson and Waguespack 2006 on BO, USA)	***
H1b: The stronger the commercial track record of its director is, the higher the commercial success of a film is	*Contradictory: Strong evidence* (Bagella and Becchetti 1999 on attendance and Delmestri et al. 2005 on BO, Italy); *Some evidence* (Faulkner and Anderson 1987 on rentals, USA; De Vany and Walls 2002 and Hennig-Thureau et al. 2006 on BO, USA; Jansen 2005 on attendance, Germany); *Limited or no evidence* (Sochay 1994 on rentals and Liu 2006 on BO, USA; Elberse and Eliashberg 2003 on BO Opening, USA, France, Germany, Spain, UK; Jansen 2005 on ROI, Germany)	***
H1c: The stronger the commercial track record of its lead actors is, the higher the commercial success of a film is	*Contradictory: Strong evidence* (Sochay 1994 on BO; Elberse and Eliashberg 2003 on BO Opening; Faulkner and Anderson 1987 and Wallace et al. 1993 on rentals, USA); *Some evidence* (Linton and Petrovich 1988 on BO, USA; Neelamegham and Chintagunta 1999 on attendance, USA and international); *Negative evidence* (Ravid 1999 and De Vany and Walls 2004 on ROI; Chang and Ki 2005 on BO, USA); *Limited or no evidence* (Litman 1983 and Smith and Smith 1986 on rentals, USA)	***
H2: The stronger the artistic track record associated with a film is, the higher its artistic recognition is	No evidence	***
H3: A film's final production budget positively mediates the relationships between (commercial and artistic) track record and (commercial and artistic) performance		
Effect of commercial track record (producer) on budget	No evidence	**
Effect of commercial track record (director) on budget	No evidence	***
Effect of commercial track record (lead actors) on budget	*Some evidence* of correlation between bankable actors and budget (Ravid 1999)	***
Effect of film artistic track record on budget	No evidence	**
Effect of budget on film commercial performance	*Contradictory: Strong evidence* (Litman 1983 on rentals, USA; Basuroy et al. 2003 and Chang and Ki 2005 on BO, USA); *Some evidence* (Prag and Casavant 1994; Robins 1993; Ravid 1999; Miller and Shamsie 2001; Liu 2006 on BO, USA; Sedgwick and Pokorny 1998 on BO, USA in upward economic cycle; Bagella and Becchetti 1999 on attendance, Italy); *Negative evidence* (Sedgwick and Pokorny 1998 on BO, USA in downward eco cycle; Ravid 1999 on ROI, USA)	***

Table 1 continued

Hypotheses	Empirical evidence in the existing cinema industry academic literature	Results
Effect of budget on film artistic recognition	No evidence	ns
H4: The more commercially successful a film is, the higher its artistic recognition is	No evidence	***
H4*alt*: The higher the artistic recognition of a film is, the more commercially successful it is	*Contradictory: Strong evidence* (Ginsburgh and Weyers 1999 and Nelson et al. 2001, USA); *Some evidence* (Smith and Smith 1986 and Ginsburgh 2003 on rentals, USA; Sochay 1994 and Ginsburgh 2003 on BO, USA; Delmestri et al. 2005 on BO Total, Italy); *Limited or no evidence* (Hennig-Thureau et al. 2006 on video rentals, USA)	ns

*** Significant with $p < 0.001$ (two-tailed) in hypothesized direction; ** Significant with $p < 0.01$ (two-tailed) in hypothesized direction; *ns* not significant

single-equation analyses to demonstrate that budget and commercial success were correlated, either positively (e.g., Basuroy et al. 2003; Sedgwick and Pokorny 1998 in an upward economic cycle) or negatively (Sedgwick and Pokorny 1998 in a downward economic cycle). Ravid (1999) confirms both this link and the inflationary impact of bankable stars on budget. The analysis of this study goes one step further, by using simultaneous equation modeling to explore the mediating effect of financial resources on commercial success and artistic recognition concurrently. Its use of production budget as a mediating variable and a catalyst of track record resources (H3) implicitly introduces a new hierarchy of strategic resources based on their role as independent or mediating inputs, and on the timing of their involvement in the production process. Table 1 also shows that extant studies of the influence of directors (H1b) and lead actors (H1c) on commercial success have led to contradictory findings.

3 Methods

3.1 Research design, scope, and sample

The model presented in Fig. 1 displays relationships among variables that are best explored using a structural equation modeling methodology. Structural equation models are extensions of multiple regression models. Two insights led to their development. First, interactions among variables in most models often call for methods which account for more complex relationships than the linear explanation of one variable by several others usually achieved through variance or regression analyses. Second, the nature of the relationships among variables may also call for explanations of causality customarily achieved through simultaneous equations or path analyses.

As a consequence, structural equation modeling simultaneously combines two models: a measurement model which deals with the design of valid and reliable manifest indicators of latent constructs, and a structural model which allows for the test of hypotheses describing relationships between these constructs and with other manifest variables not illustrative of latent constructs (Hoyle 1995). In confirmatory research strategies, each of these relationships corresponds to one specific hypothesis in the theoretical model (McCallum 1995). In this research, the general structural model described in Sect. 2.2 and illustrated in Fig. 1 is made of one measurement model linking six latent independent and dependent variables to the manifest variables used to illustrate them, and of one structural model linking four latent independent variables, one manifest mediating variable, and two latent dependent variables.

The statistical test follows the four steps of structural equation modeling (Mulaik and Millsap 2000): (1) data reduction through principal component analysis (PCA); (2) reliability analyses using both Cronbach's α and Joreskog's ρ; (3) substantiation of the convergent and discriminant validity of the statistical models through confirmatory factor analyses (CFA); and (4) testing of the structural model. The nature of the distribution of film theatrical revenue determines the choice of estimation procedure (maximum likelihood) used to fit the model.

Indeed, with a non-negligible likelihood of occurrence of extreme outcomes, a few scholars contend that no accurate predictions of revenue or profit can be made in the film industry (De Vany and Walls 2002; Collins et al. 2002). They, therefore, argue that film success should be modeled in terms of probabilities and stochastic dominance (De Vany and Walls 1996, 1999, 2002; Collins et al. 2002); of value at risk and extreme event analysis (Walls 2005a); of Pareto-Levy stable distribution regression (Walls 2005b) or of Pareto (Collins et al. 2002; De Vany and Walls 1996, 1999, 2002, 2004) and Weibull power laws, with the latter proving more reliable than the former (Walls 2005c, 2006). All these options yield more accurate estimates than least squares regression and trimmed-least squares (Walls 2005b), and are rather more sophisticated than traditional normal and log-normal models. However, their adoption does not seem to radically change the nature and direction of the relationships between explanatory factors of film performance and box-office (B.O.) results. Also, and contrary to least squares parameter estimates, maximum likelihood parameter estimates remain valid and reliable even in instances of non-normal data distribution (Tsai and Ghoshal 1998; McDonald and Ho 2002). In line with this finding and to best account for the distribution of theatrical revenue, the statistical tests detailed below consequently follow a maximum likelihood (ML) estimation procedure.

Tests were performed exclusively on fully informed and standardized variables to facilitate comparisons and increase results accuracy (McDonald and Ho 2002, p. 69). A bootstrapping re-sampling procedure aimed at identifying and correcting anomalies in standard deviations and fit indexes caused by the non-normal distribution of particular variables in the measurement model also complemented them (Arbuckle 1997, pp. 191–193, 523; Byrne 2001, pp. 267–286). Structural equation modeling software AMOS 16.0 was chosen on the basis of its compatibility with SPSS 16.0 (used to perform preliminary descriptive analyses and steps 1 and 2 identified above) and of its advanced bootstrapping options (Arbuckle 1997).

Based on Levitas and Chi (2002), the model uses secondary data sources to test the correspondence between theoretical predictions and empirical observations at the scale of a population: namely, the feature films released in the USA and Canada over a decade. This period starts in 1985 (with a 3-year lag due to variable construction), 1 year before US tax shelters ceased to operate. It ends in 1997, before the major industrial shocks provoked by the proliferation of new digital television channels broadcasting on the US spectrum and of DVDs. In 1996, the Federal Communications Commission gave US broadcasters US$ 70 billion worth of spectrum to broadcast digital alongside analog. The first DVD players also reached the US market in 1997. Digital television channels and DVDs have dramatically altered the revenue streams of cinema and revitalized patterns of home cinema consumption, with DVD sales totaling US$ 16 billion and DVD rentals US$ 7.5 billion in the USA in 2007.[3] The period of study was chosen to precede their effects.

The database created consists of 2,080 films, representing 51% of all films first released in the USA and Canada from January 1988 to December 1997 (Quigley

[3] Source: http://www.variety.com/article/VR1117978576.html?categoryid=20&cs=1&nid=2562. Accessed June 17, 2009.

Publications 1985–1998; www.mpaa.org). The 1,784 US and 296 foreign productions are evenly distributed along the decade and are homogeneous. The confidential nature of production cost data and the prohibitive cost of their acquisition often lead to their explicit exclusion (e.g., Sawhney and Eliashberg 1996). Financial services firm Houlihan, Lokey, Howard & Zukin, Inc. (HLHZ) provided access to all financial data used in the study, including individual film production budgets. All other data sources, quantitative and qualitative, are listed in Table 2.

3.1.1 Dependent variables

BO Total is the first manifest indicator of the latent variable *film commercial success*. It assesses the total domestic B.O. receipts in constant US$ million of a movie throughout its theatrical run (as in Eliashberg and Shugan 1997; Ravid 1999; Zufryden 2000). In the film industry, this choice is comparable to that of an organization's sales volume (as in Capron 1999). As Table 1 illustrates, domestic B.O. results and attendance are two sides of the same coin.

BO Opening, the second manifest indicator of *film commercial success*, is defined as its total domestic B.O. receipts in constant US$ million during its opening weekend (as in Eliashberg and Shugan 1997 and Sawhney and Eliashberg 1996). The opening weekend B.O. results of a movie are strongly correlated to the prints and advertising (P&A) expenses associated with its release. They also account for the immediate effects of word-of-mouth on a film's commercial success and provide an estimate of its blockbuster potential. *BO Opening* is a sub-sample of *BO Total*. Nonetheless, no linear mathematical relationship links the two variables. Using both *BO Total* and *BO Opening* instead of a single manifest construct to illustrate *film commercial success* highlights short (opening weekend) and long-term (entire theatrical run) elements of performance and the complexity of its commercial dimension. Using two manifest variables to illustrate a single latent construct also conforms to the measurement norms of structural equation modeling (McDonald and Ho 2002, p. 67).

Both indicators illustrate *film commercial success* in terms of B.O. results rather than movie rentals or profitability. In doing so, they position this study in the mainstream of motion picture performance research (Hadida 2009). B.O. results provide representative measures of commercial performance in the primary outlet of movie theatres. They also give more accurate estimates of film performance than distributors' and exhibitors' rentals (e.g., De Vany and Walls 2002; Ginsburgh 2003; Wallace et al. 1993), defined as the shares of gross B.O. revenue retained by a film's distributors and exhibitors, respectively. Rentals consequently primarily reflect distributors or exhibitors' negotiating skills in capturing the income generated from ticket sales rather than its actual value.

The choice of domestic B.O. revenue as a performance metric also illustrates the film industry's over-emphasis on revenue rather than profit (Eliashberg et al. 2006). It is worth noting however that substantial B.O. results and film profitability do not always go hand in hand, as distributors, star actors, and directors may capture a significant segment of the revenue generated in movie theatres before producers and financiers use them to recoup their investment (Ravid 1999). As per the "curse of

Table 2 Definitions, measures, and sources of all the variables maintained in the model after principal components analysis (step 1)

Variable	Definition	Measure	Sources
Dependent variable: Commercial performance			
BO Opening	Film domestic box-office, opening weekend	Domestic box-office (B.O.) during the first 3 days of a film's theatrical run (in 000)[a]	Variety
BO Total	Film total domestic B.O.	Film total B.O. throughout its theatrical run (in 000)	HLHZ
Dependent variable: Artistic recognition			
Total Nominations	Total Oscar nominations of the film	Total number of Oscar nominations received by the film across all awards categories in the year following its release.	www.oscars.org
Share of Awards	Success rate of nominations	Ratio (in %) of all Oscar nominations that led to awards	
Mediating variable:			
Production Budget	Total sunk investments in the film	Total film production budget (in 000), excluding investments in prints and advertising.	HLHZ
Independent variable: Commercial track record			
Director's Accrued BO Actors' Accrued BO	Cumulative brand awareness	Gross domestic B.O. (in 000) of all films made by the director and starred in by at least one of the two lead actors, respectively, in the 3 years before the film's release.	HLHZ, Variety, Quigley Entertainment Almanacs (1985–1998), www.imdb.com
Director's Latest BO Actors' Latest BO	Immediate brand awareness	Gross domestic B.O. (in 000) of the previous film of the director and two lead actors, respectively, regardless of its release date.	
Producer's Experience Director's Experience Actors' Experience	Past experience as a working industry professional	Number of films respectively produced, directed, and starred in during the 3 years before the film's release.	
Producer's Specialization	Generic specialization of the producer	Number of films produced in the 3 years preceding the film's release that were of the same genre.	
Producer–Distributor Projects	Quasi-vertical integration of the film producer in distribution	Number of films the producer and domestic distributor both contributed to in the 3 years before the film's release.	

Table 2 continued

Variable	Definition	Measure	Sources
Independent variable: Artistic track record			
Past Nominations	Past Oscar nominations of the film's key participants	Total number of Oscar nominations received by the producer, director, and two lead actors in the 3 years before the release of the film.	Variety, www.imdb.com, www.oscars.org
Past Share of Awards	Past success rate of nominations of the film's key participants	Ratio (in %) of all Oscar nominations received by the producer, director, and two lead actors that led to awards in the 3 years before the release of the film.	
Control variables:			
Year of Release	Year of first commercial release	Annual categorical data (1988–1997)	HLHZ, Variety, Quigley Entertainment Almanacs (1985–1998)
Nationality	Nationality of the film	Two categories: US films and majority (>51%) US coproductions and foreign films and minority (<51%) US coproductions	
Genre	Genre of the film	Nine categories: action/adventure; family/animation; comedy; drama; thriller; war/historical movie; science fiction; documentary; other	
Screen Coverage	Film availability	Number of screens the film was first released on	
Month of Release	Seasonality	Monthly categorical data (1–12)	

[a] All financial data has been converted to constant 1988 US dollars

the superstar": "if a star is paid the expected increase in revenue associated with his or her performance in a movie then the movie will almost always lose money" (Walls 2005b, p. 185; De Vany and Walls 2004).

Peer recognition is the dominant selection system in cinema (Holbrook 1999) and was, therefore, chosen to illustrate *film artistic recognition*. As Holbrook remarks, "scholarly opinion tends to regard the Oscars as 'an *institutionalized* measure of film quality' or a 'legitimate yardstick of film excellence'" (1999, p. 149). Each profession votes for their own, except for the best foreign-language, documentary, and feature film which all voters designate. As in Anand and Watson's (2004) analysis of the institutional structuration of the music industry through the Grammy Awards, the two variables chosen to illustrate the artistic dimension of film performance relate to the institutional peer-based recognition of a film at the annual Academy Awards. *Total Nominations* is the total number of Oscar nominations received by a film. In order to avoid artificially inflating its correlation to *Total Nominations*, *Share of Awards* is the percentage ratio of nominations that led to awards. Previous studies used similar indicators (e.g., Sochay 1994; Holbrook 1999; Nelson et al. 2001), albeit as independent variables.

3.1.2 Mediating variable

In line with previous research listed in Table 1 (Robins 1993; Ravid 1999; Miller and Shamsie 2001), *Budget* is the movie's final production cost in constant US$ million. It excludes investments in P&A on the basis that distributors, not producers, customarily undertake them. As structural equation modeling permits (McDonald and Ho 2002), *Budget* is modeled as a single manifest indicator.

3.1.3 Independent variables

As previously stated, the producer is hereby defined as the film's main production company. The director is the individual (or in rare instances, pair or team) responsible for directing the film. Following Schwab (1999), Schwab and Miner (2001) and Reddy et al. (1998, on Broadway), the lead actors are defined as the two actors first cited in the acting credits. The decision to draw the line at two lead actors instead of one (as in, for instance, Cooper-Martin 1992; Chang and Ki 2005; Ainslie et al. 2005), three (Simonet 1977) or more may not appear straightforward for the following two reasons.

First, identifying the two lead actors may be difficult, in particular in ensemble movies. Opting for the two actors whose names are first listed in the film credits or (in case of alphabetical or order of appearance listings) for the two actors whose names appear most prominently on its posters and in its trailers resolves this dilemma. Second, supporting actors in a specific movie may have similar or better track records than its lead actors. Even so, it is very likely that the publicity around the release of the film will not be centered on these supporting actors, but on the two lead actors themselves. In the absence of systematic information on their identity,

audiences may not even be aware of supporting actors' participation in a movie. Thus, expanding the number of lead actors to three or more is likely to lead to only marginal improvements to the model.

Four distinct components illustrate commercial track record: brand awareness, experience, specialization, and quasi-vertical integration in distribution. Brand awareness is defined as the commercial potential derived from the past commercial successes of key participants in a film project (Kapferer 2001). PCA, the first of the four structural equation modeling steps, led to the exclusion of the producer's brand awareness from the model. The subsequent empirical model estimates the director's and lead actors' cumulative and immediate brand awareness with two manifest constructs. Cumulative brand awareness is assessed as *Director's Accrued BO* and *Actors' Accrued BO* by the accumulated domestic B.O. of all the films of the director and two lead actors, respectively (in constant US$ million), released in the 3 years before a film's release. The choice of a 3-year lag mirrors similar studies (Mintzberg and McHugh 1985; Lampel and Shamsie 2003; Sorenson and Waguespack 2006). It is also coherent with an average time-to-market of 18 months, to which the duration of theatrical exhibition, which ranges from a few days to over a year, is then added. However, the two cumulative brand awareness variables do not account for the alleged "one-film-only" memory span of the industry and do not reflect differences in career cycles of directors and actors. *Director's Latest BO* and *Actors' Latest BO* were created to account for the actors and directors (e.g., Stanley Kubrik) who let more than 3 years elapse between films. They represent the domestic B.O. of the previous film of the director and two lead actors, respectively, regardless of its release date, in constant US$ million. They thus echo the industry belief that "one is only as good as one's last credits" (Faulkner and Anderson 1987; Swami et al. 1999).

Past experience is the second component of commercial track record. In addition to signaling a growing command of film participants' skills, it also increases their exposure within the filmmaking community and reinforces their recognition by general audiences. The strategic players with most experience should improve a film's potential for commercial success whilst limiting economic and financial risks associated with its production. Thus, they should get contracted most for new projects. Previous empirical studies similarly take into account the professional track record of top executives (Eisenhardt and Schoonhoven 1996; Miller and Shamsie 2001) and employees (Pennings et al. 1998), measured as the number of years spent in their position or industry. Reddy et al. (1998) also demonstrate the positive influence of the experience of Broadway actors, writers, and directors on attendance and total B.O. *Producer's Experience* estimates the number of movie projects the producer managed in the 3 years preceding a film's release. Similarly, *Director's Experience* and *Actors' Experience* measure the number of films directed by the director and starred in by at least one of the two lead actors in the 3 years preceding a film's release. All the three variables stood the PCA test.

Specialization is the third component of commercial track record. Well-known brand names reduce the commercial risks associated with new product launches, and increased brand specialization prevents brand owners from sullying by limiting opportunities for unrelated expansion (Aaker 1990). In the same way, actors who

develop strong path dependencies in specific roles are generally more successful than their unfocussed colleagues (Zuckerman et al. 2003). *Producer's Specialization* assesses the number of film projects managed in the previous 3 years that were of the same genre as the film. Similar indicators constructed for directors and lead actors were dropped after PCA.

The last component of commercial track record is the producer's quasi-vertical integration in distribution. *Producer–Distributor Projects* measures the number of films the producer and main domestic distributor jointly contributed to during the 3 years before a film's release. It illustrates a distributor's willingness to commit to a movie on the basis of its creative and production teams. As both teams are to a great extent assembled by the producer, *Producer–Distributor Projects* qualifies as an indicator of its commercial track record. It also illustrates the existence of exclusive rights of first refusal contracts between independent producers and distributors. Similar indicators created for director and lead actors were dropped after PCA.

Film artistic track record closely mirrors *film artistic recognition*. *Past Nominations* estimates the total number of Oscar nominations of a film's producer, director, and two lead actors; and *Past Share of Awards* is the percentage ratio of nominations that led to awards in the 3 years preceding a film's release.

3.1.4 Control variables

Although only reported in Table 2 for brevity, the models also include a film's *Year of Release, Nationality, Genre, Screen Coverage* upon release, and *Month of Release* as controls. Two alternative models using the Cannes Film Festival and the Venice Mostra, respectively, to illustrate *film artistic recognition* and *film artistic track record* are also discussed in Sect. 4.

3.2 Model specification

In line with earlier longitudinal studies of the film industry (Robins 1993; Miller and Shamsie 2001; Nelson et al. 2001) and as already indicated, all financial data were converted to constant 1988 US dollars to compensate for inflation. All variables associated with the two lead actors were also aggregated. Judd and Kenny (1981) and Baron and Kenny (1986) were used to estimate the hypothesized mediation effects. The resulting regression analyses confirmed that all the mediated independent variables were correlated with the two dependent variables and with mediating variable *Budget*, and that *Budget* had an effect on *film commercial success* and *film artistic recognition*.

The initial 21 manifest variables were reduced to 15 after PCA (step one). Table 3 shows the final combinations of manifest indicators. Differences in manifest variables illustrating commercial track record reflect the varied roles that producers, directors, and lead actors undertake on film projects, and the distinct performance indicators they are assessed against. The four factorial axes retained to describe the model's independent variables explain 74.57%, and the two factors retained to illustrate its dependent variables explain 88.69% of its total variance. Reliability analyses form the second step of structural equation modeling (Mulaik and Millsap

Table 3 Main results of principal components (step 1)[a] and reliability (step 2) analyses

Latent variable	Expected combination	Expected sign	Achieved combination	Achieved sign	Coefficient	Communality	Reliability indexes
Commercial track record of the producer	Producer's Accrued BO	+					$\alpha = 0.85$
	Producer's Latest BO	+					$\rho = 0.83$
	Producer's Specialization	+	Producers Specialization	+	0.823	0.685	
	Producer's Past Experience	+	Producer's Past Experience	+	0.922	0.861	
	Producer–Distributor Past Joint Projects	+	Producer–Distributor Past Joint Projects	+	0.885	0.787	
Commercial track record of the director	Director's Accrued BO	+	Director's Accrued BO	+	0.915	0.878	$\alpha = 0.82$
	Director's Latest BO	+	Director's Latest BO	+	0.858	0.775	$\rho = 0.81$
	Director's Specialization	+					
	Director's Past Experience	+	Director's Past Experience	+	0.732	0.576	
	Director–Distributor Past Joint Projects	+					
Commercial track record of the lead actors	Actors' Accrued BO	+	Actors' Accrued BO	+	0.860	0.819	$\alpha = 0.80$
	Actors' Latest BO	+	Actors' Latest BO	+	0.870	0.779	$\rho = 0.77$
	Actors' Specialization	+					
	Actors' Past Experience	+	Actors' Past Experience	+	0.735	0.572	
	Actors–Distributor Past Joint Projects	+					
Artistic track record of the film	Past Nominations	+	Past Nominations	+	0.855	0.773	$\alpha = 0.67$
	Past Awards	+	Past Awards	+	0.874	0.778	$\rho = 0.76$
Film commercial success	BO Opening	+	BO Opening	+	0.963	0.928	$\alpha = 0.91$
	BO Total	+	BO Total	+	0.947	0.924	$\rho = 0.92$
Film artistic recognition	Total Nominations	+	Total Nominations	+	0.917	0.848	$\alpha = 0.82$
	Share of Awards	+	Share of Awards	+	0.919	0.846	$\rho = 0.83$

[a] $n = 2{,}080$, Principal Components Analysis results computed after Varimax rotation

Table 4 Key descriptive statistics and correlations among items, main model and full sample[a]

		Mean	S.D.	Min.	Max.	1	2	3	4	5	6	7	8
1	Producer's Experience	3.1297	4.903	0	48	1							
2	Producer's Specialization	0.7559	1.462	0	13	0.656**	1						
3	Producer–Distributor Past Projects	1.5178	3.750	0	40	0.778**	0.55**	1					
4	Director's Accrued BO	23469.82	52578.12	0	571114.93	0.117**	0.102**	0.087**	1				
5	Director's Latest BO	17779.65	37638.66	0	435958.05	0.13**	0.115**	0.091**	0.797**	1			
6	Director's Experience	0.7576	0.895	0	5	0.094**	0.084**	0.045*	0.584**	0.428**	1		
7	Actors' Accrued BO	98031.50	139123.67	0	1033456.13	0.106**	0.045*	0.083**	0.4**	0.369**	0.292**	1	
8	Actors' Latest BO	36572.00	56515.27	0	452663.19	0.084**	0.029*	0.084**	0.303**	0.299**	0.202**	0.742**	1
9	Actors' Experience	2.995	2.734	0	14	0.106**	0.05*	0.075**	0.239**	0.222**	0.289**	0.531**	0.454**
10	Past Share of Awards	0.17%	37.34%	0%	100%	0.039*	0.033†	0.032†	0.137**	0.117**	0.136**	0.215**	0.17**
11	Past Nominations	0.3425	0.711	0	6	0.143**	0.091**	0.088**	0.18**	0.159**	0.22**	0.263**	0.173**
12	Budget	11155.47	9502.336	4.64	99891.55	0.122**	0.086**	0.105**	0.49**	0.49**	0.348**	0.59**	0.455**
13	BO Total	25817.23	42632.018	2.17	435958.055	0.159**	0.162**	0.141**	0.438**	0.426**	0.298**	0.493**	0.419**
14	BO Opening	4948.28	7876.688	31.12	106405.510	0.138**	0.123**	0.127**	0.403**	0.401**	0.232**	0.461**	0.407**
15	Total Nominations	0.3762	1.2797	0	13	−0.03†	−0.021 (ns)	−0.028 (ns)	0.097**	0.077**	0.082**	0.073**	0.047*
16	Share of Awards	2.38%	13.04%	0%	100%	−0.059**	−0.025 (ns)	−0.033†	0.049*	0.059**	0.022 (ns)	0.031†	0.015 (ns)

Table 4 continued

		Mean	S.D.	Min.	Max.	9	10	11	12	13	14	15	16
1	Producer's Experience	3.1297	4.903	0	48								
2	Producer's Specialization	0.7559	1.462	0	13								
3	Producer–Distributor Past Projects	1.5178	3.750	0	40								
4	Director's Accrued BO	23469.82	52578.12	0	571114.93								
5	Director's Latest BO	17779.65	37638.66	0	435958.05								
6	Director's Experience	0.7576	0.895	0	5								
7	Actors' Accrued BO	98031.50	139123.67	0	1033456.13								
8	Actors' Latest BO	36572.00	56515.27	0	452663.19								
9	Actors' Experience	2.995	2.734	0	14	1							
10	Past Share of Awards	0.17%	37.34%	0%	100%	0.146**	1						
11	Past Nominations	0.3425	0.711	0	6	0.223**	0.55**	1					
12	Budget	11155.47	9502.336	4.64	99891.55	0.38**	0.182**	0.24**	1				
13	BO Total	25817.23	42632.018	2.17	435958.055	0.271**	0.145**	0.144**	0.67**	1			
14	BO Opening	4948.28	7876.688	31.12	106405.510	0.225**	0.085**	0.076**	0.649**	0.832**	1		
15	Total Nominations	0.3762	1.2797	0	13	0.045*	0.169**	0.273**	0.161**	0.23**	0.048*	1	
16	Share of Awards	2.38%	13.04%	0%	100%	−0.006 (ns)	0.096**	0.158**	0.088**	0.177**	0.026 (ns)	0.695**	1

[a] $n = 2{,}080$. Correlations where computed by the SPSS program using the measurement model

Sig. (1-tailed): † $p < .10$; * $p < .05$; ** $p < .01$; *ns* non-significant

2000). As reported in Table 3, Cronbach's α and Joreskog's ρ are all above the recommended thresholds of 0.60 and 0.70 (Churchill 1991), confirming thus the internal validity of the constructs. Last, Mulaik and Millsap's (2000) third step (CFA) corroborated the convergent and divergent validity of the model.[4] Table 4 presents key descriptive statistics before variable standardization, and shows the correlation matrix of all manifest variables in the model.

4 Analyses and results

Table 5 displays the detailed results of the model specification process carried out with Amos 16.0, and Fig. 2 the standardized coefficients of the main structural model. As shown in both, all the parameters not constrained to zero are statistically significant ($p < .001$ and $p < .01$) and the fit indexes (GFI, AGFI, and CFI) are all above 0.9, indicating strong evidence of practical significance. Also, the RMR and RMSEA are below the thresholds of 0.05 and 0.06, respectively, as recommended by Byrne (2001) and Hu and Bentler (1999). Last, all the signs of the parameters were accurately hypothesized. Whereas no hypothesis is significantly rejected, H4*alt* is statistically non-significant. It consequently appears as a dotted line in Fig. 2, and was constrained to zero in the preliminary steps of model specification.

The rest of this section first exposes the interactions between commercial and artistic dimensions of performance. It then discusses results confirming the mediating role of production budget in assessing film performance, and reveals the novel dynamics of key film participants that they bring to light. Last, it reviews the results of four alternative multigroup analyses and three complementary control analyses.

4.1 Analyses and results of the main model

The non-recursive link between *film commercial success* and *film artistic recognition* formed by hypotheses H4 and H4*alt* proves inconclusive. H4 (the more commercially successful a film is, the higher its artistic recognition is) is significant (0.150, $p < .001$),[5] whereas H4*alt* (the higher the artistic recognition of a film is, the more commercially successful it is) is not. The release of movies prior to their Oscar nominations partially explains this result. It does not reflect, however, the longer theatrical runs and re-releases of nominated films after the Oscars are bestowed, which the model takes into account. The R^2 of 0.101 associated with *film artistic recognition* is also significantly weaker than those of *Budget* ($R^2 = 0.463$) and *film commercial success* ($R^2 = 0.552$). These findings mirror US filmgoers' and film professionals' perception of cinema as predominantly an industry, in which artistic recognition follows and corroborates commercial success.

Budget has a strong and positive direct effect on *film commercial success* (0.551, $p < .001$). Yet, its influence on *film artistic recognition*, albeit positive, is not

[4] Details of these procedures are available from the author upon request.

[5] All parameters mentioned here and in the rest of the article are standardized.

Table 5 Results of structural equation modeling[a]

Measurement model	
Regression coefficient, latent variable—manifest variable[b]	
"Producer's Specialization"	0.908*** (0.710)
"Producer's Past Experience"	0.925*** (0.879)
"Producer–Distributor Past Joint Projects"	1 (0.765)
"Director's Accrued BO"	1 (0.967)
"Director's Latest BO"	0.846*** (0.823)
"Director's Past Experience"	0.565*** (0.594)
"Actors' Accrued BO"	1 (0.952)
"Actors' Latest BO"	0.809*** (0.778)
"Actors' Past Experience"	0.509*** (0.559)
"Past Awards"	0.559*** (0.550)
"Past Nominations"	1 (1)
"BO Total"	1 (0.945)
"BO Opening"	0.929*** (0.881)
"Total Nominations"	1 (1)
"Share of Awards"	0.716*** (0.696)
Covariances (correlations) between independent variables	
Commercial track record of producer–commercial track record of director	0.134*** (0.155)
Commercial track record of producer–commercial track record of lead actors	0.110*** (0.133)
Commercial track record of producer–film artistic track record	0.130*** (0.153)
Commercial track record of director–commercial track record of lead actors	0.474*** (0.438)
Commercial track record of director–film artistic track record	0.212*** (0.191)
Commercial track record of lead actors–film artistic track record	0.288*** (0.271)
Error terms: $e_{23\ \text{(Director's Past Experience)}} - e_{33\ \text{(Actors' Past Experience)}}$	0.111*** (0.178)
Structural model: direct effects[b]	
H1a: Commercial track record of producer → Film commercial success	0.102*** (0.085)
H1b: Commercial track record of director → Film commercial success	0.115*** (0.126)
H1c: Commercial track record of lead actors → Film commercial success	0.135*** (0.141)
H2: Film artistic track record → Film artistic recognition	0.248*** (0.251)
H4: Film commercial success → Film artistic recognition	0.159*** (0.150)
H4*alt*: Film artistic recognition → Film commercial success	Constrained to zero
Structural model: indirect effects (H3)	
Commercial track record of producer → Production Budget	0.066** (0.053)
Commercial track record of director → Production Budget	0.283*** (0.297)
Commercial track record of lead actors → Production Budget	0.464*** (0.467)
Film artistic track record → Production Budget	0.048** (0.049)
Production Budget → Film commercial success	0.529*** (0.551)
Production Budget → Film artistic recognition	Constrained to zero

Table 5 continued

Square multiple correlations (R^2)	
Budget	0.463
Film commercial success	0.552
Film artistic recognition	0.101
Fit indexes	
χ^2	664.09
Degrees of freedom and number of parameters	90 and 46
RMR and RMSEA	0.041 and 0.055
GFI and AGFI	0.962 and 0.943
CFI	0.965
P test for close fit	0.012

[a] $n = 2{,}080$. Sig. (2-tailed): ** $p < .01$; *** $p < .001$

[b] Items in parentheses are standardized values

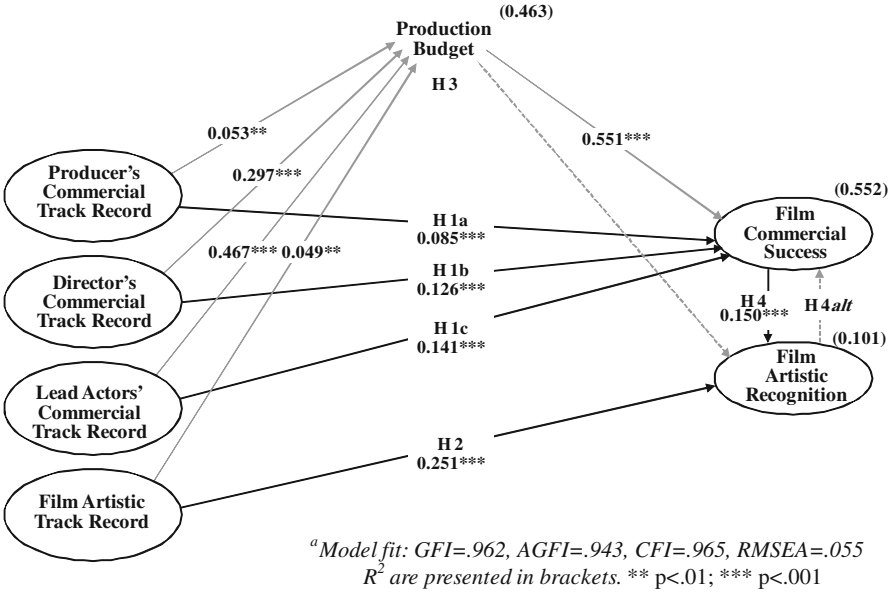

Fig. 2 Standardized results, main model (1988–1997; $n = 2{,}080$)

significant. This illustrates that the most expensive movies do not necessarily get nominations and awards. All hypotheses relative to the commercial track record of film directors and lead actors are validated and 0.1% significant. These two latent variables also share a 43.8% correlation, which logically implies that the careers of

directors and actors are intertwined. Moreover, direct and indirect effects of *lead actors' commercial track record* on *film commercial success* are by far the highest of all the four independent latent variables on *film commercial success*. As a consequence, so are the total effects of *lead actors' commercial track record*, which amount to 0.398. The total effects of *director's commercial track record* and *producer's commercial track record* follow with values of 0.290 and 0.114, respectively. Indirect effects of lead actors' and director's commercial track record on *film commercial success* are also higher than their direct effects. In other words, the combination of a small-budget movie with a director or a lead actor with a strong commercial track record sends weak signals to US audiences.

This may be due to US spectators' perception of a high degree of specialization among blockbuster actors and directors, confirming thus the conclusions of Zuckerman et al. (2003), and to the rebuff of blockbuster actors and directors when they venture out of their regular roles and budgets. As smaller budget films receive less publicity and are released on fewer screens, audiences may simply not be aware of a star actor's or director's involvement in such projects. They may also perceive them as "pet-projects," and consequently shun them. These explanations are not mutually exclusive. The results they build on further illustrate the mediating role of film budget. In line with Brush and Chaganti's (1998) demonstration that the amount of available resources is less crucial than the quality of their combination, they confirm that whereas track record resources are at the core of a project's success, they may become core rigidities when associated with insufficient financial resources.

Producer's commercial track record has a direct and statistically significant impact, although weak, on *film commercial success* (H1a: 0.085, $p < .001$). Yet, its link to *budget* is only significant at the 1% level (0.053, $p < .01$). This result shows that the final budget of a movie is far more dependent on the creative teams that its producer is able to attach to it than on this producer's own commercial track record. Table 5 also shows that all covariances and correlations of *producer's commercial track record* to the other independent latent constructs in the model are positive and 0.1% significant. These findings further confirm the key role of the producer as a behind-the-scenes resources assembler and coordinator.

Last, the strong direct effect of *film artistic track record* on *film artistic recognition* (H2: 0.251, $p < .001$) confirms the existence of a strong path dependence of nominations and awards, and gives further evidence of a Matthew Effect. *Film artistic track record* has nevertheless a weaker effect on *Budget* (0.049, $p < .01$). Indeed, the fees of Oscar nominees and winners may not be systematically higher than those of their peers, whereas those of blockbuster actors, directors, and producers tend to skyrocket from one film to the next (Daniels et al. 1998).

4.2 Analyses and results of the multigroup and control models

Four multigroup analyses and three control models supplement these conclusions. The χ^2 statistics, CFI and RMSEA values of the four multigroup analyses confirmed that the hypothesized models fitted well across groups. Tests for the invariance of factorial measurement and structure across groups were then performed by placing

constraints on particular parameters. Based on Byrne (2001, p. 192), the invariance of all factor loadings (that is, all the elements in the factor loading matrix) was tested for first, followed, in case of findings of non-invariance at this level, with a test for the invariance of all factor loadings comprising all loadings relative to one particular factor. Providing evidence of non-invariance at the subscale level, the last test was for the invariance of each factor loading, related to each factor individually.

A first multigroup chronological analysis was carried out (as in Smith and Smith 1986) after checking for any significant correlation among key participants across periods. It shows that the mediating role of *Budget* grew stronger over time, as the lead actors with the best commercial track record got increasingly cast in big budget movies over the 1988–1997 decade. Film budgets also rose in line with their fees and the revenue anticipated from casting them. The growing and significant positive coefficient associated with H3 reveals that these expectations increased from 1988 to 1997: by 1997, the more expensive movies were also the more commercially successful. This conclusion reinforces the cycle of specialization of lead actors in blockbusters and supports Zuckerman et al. (2003) on typecasting. It also reflects the escalation in average production costs of MPAA members, from $17.5 million in 1986 to $53.4 million in 1997. By 1997, US cinema had clearly become a blockbuster industry. This tendency persisted over the next decade, with mean production costs increasing to US$ 70.8 million in 2007,[6] and reflects the growth in ancillary revenue from foreign theatrical and DVD markets. Conversely, the impact of *film artistic track record* on *film artistic recognition* (H2) and of *film commercial success* on *film artistic recognition* (H4) declined quite substantially over the decade under study. The model also explains only 6.3% of the variance of this construct post-1994, against 15.9% from 1988 to 1990 and 13.9% from 1991 to 1993. These concomitant phenomena may be linked to a renewal of creative forces in the 10 years under study.

A second multigroup analysis was performed on film nationality (also used in Holbrook 1999 as an independent variable). 1,784 US productions and majority coproductions (that is, international coproductions with more than 51% of the budget coming from US producers and investors) form the first group (US films), and the remaining 296 movies the second one (foreign films). Foreign films, which represent between 8 and 12% of the total population of films distributed in the USA and Canada from 1988 to 1997, account for 16.6% of the theoretical population, and are therefore slightly over-represented.[7] Still, their analysis exposes some of the preferences and attitudes of US moviegoers.

Not surprisingly, the correlation path between *film artistic track record* and *film artistic recognition* (H2) is weaker for US films than for foreign films (0.187, $p < .001$ vs. 0.321, $p < .001$) in the US domestic market. Even though foreign films may be nominated and subsequently win in all US Academy Awards categories plus one (the bespoke "best film in a foreign language" category), they typically receive less nominations than local films, with at most 1–2 foreign films competing in a

[6] Source: http://www.mpaa.org/researchStatistics.asp. Accessed June 18, 2009.

[7] Note, however, that these movies only grossed an average of 1.8% of total theatrical revenue over these 10 years, with a low of 1.1% in 1995 and a peak of 3% in 1997 (Tessier et al. 1999).

given category against 3–4 local productions. Yet, creative talent renewal seems to be slower in the foreign sub-sample. Thus, most of the foreign films exported to the USA feature well-established and regularly nominated producers, directors, and actors. Thanks to the Matthew Effect, these participants go on being nominated and winning Oscars. The correlation between *film artistic track record* and *Budget* is also stronger for foreign films (0.121, $p < .01$ vs. 0.065, $p < .01$ for US films). This result is partly due to the lower production budgets of foreign films, compared to their US counterparts. It may also reflect the particular consideration that foreign producers and investors give to the artistic track record of film participants, particularly in countries where public grants and subsidies are used to fund movies on the basis of artistic merit.

Most foreign films are short listed for exportation to the USA following commercial success and artistic recognition in their own domestic markets. As they are fewer in numbers and often among the most expensive films produced in their home countries, *Budget* is also less discriminant for them than for their US counterparts. The commercial success of foreign movies in the USA remains mostly dependent on the commercial track record of their two lead actors (H1c), who are used by US moviegoers as indicators of their appeal. Presumably, lead actors of foreign films are more visible to US filmgoers than their directors and producers. As US audiences predictably know less overseas than local artists, the total effects of *lead actors' commercial track record* on *film commercial success* are, therefore, higher for foreign than for US films (0.567, $p < .001$ vs. 0.371, $p < .001$), while H1a and H1b prove non-significant for foreign films. Last, while *film commercial success* positively impacts *film artistic recognition* (H4) for both US and foreign films (0.328, $p < .001$ vs. 0.064, $p < .001$), the effect of the latter on the former (H4*alt*) still proves non-significant. Thus, US film audiences seem to display a consistent behavior, regardless of film nationality: they base their cinema ticket purchases primarily on the identity of a film's lead actors, and their theatrical consumption does not seem to be significantly influenced by Oscar nominations and awards.

The third and fourth multigroup analyses were also performed on film nationality, but replacing the Oscars as indicators of artistic track record and recognition with awards from the two oldest and most established film festivals. With very few exceptions, the films included in the official selections of the Cannes Film Festival and the Venice Mostra have their world premieres at these festivals—which explains the absence of overlaps between them and justifies their separate treatment as independent expressions of film artistic track record and recognition in two multigroup analyses. H4 (the more commercially successful a film is, the higher its artistic recognition is), which this rule makes irrelevant, was also removed from the two analyses.

Cannes Past and *Venice Past* illustrate *film artistic track record* as the total number of Cannes and Venice awards (respectively) received by a film's director, producer and lead actors in the 3 years preceding a film's release. Similarly, the total number of awards received by a movie at the Cannes Film Festival (*Cannes Total*) and Venice Mostra (*Venice Total*), respectively, assess *film artistic recognition*. All the differences in χ^2 between the unconstrained and successive constrained models

proved statistically significant at the $p < .001$ level, demonstrating thus the existence of non-invariance between groups (Byrne 2001).

The results of the third and fourth multigroup analyses reveal that while there is a weak Matthew Effect of Cannes awards for US domestic films (H2: 0.064, $p < 0.01$), this effect becomes non-significant for foreign films. It is also non-significant regardless of film nationality when using Venice awards. The links between *film artistic recognition* and *film commercial success* (H4*alt*) and between *film artistic track record*, *Budget* and *film artistic recognition* are also non-significant when using Cannes Film Festival and Venice Mostra awards as indicators of film artistic track record and recognition. These results remain valid with a lag of 10 and 20 years between past and present awards.

They point to the fact that previous Cannes and Venice award winners may not readily associate themselves with big budget productions, and may use the momentum created by their awards to contribute to smaller budget art films. The latter also seem to gain more recognition in Cannes and Venice than at the Oscars. The absence of a clear Matthew Effect of past and present awards reveals differences in the movie selection and voting processes at the Oscars, Cannes Film Festival, and Venice Mostra. Thus, the Venice regulations explicitly stipulate that: "Some of the most important works of the year, and in particular those by directors already established in past editions of the Festival, will be presented in the non-competing section."[8] No such rule exists for the Oscar and Cannes. Last, the consistent behavior of US film audiences toward awards is further confirmed by the non-significance of Hypothesis H4*alt*, regardless of film nationality and festivals.

Three control variables were independently introduced into the model after checking that they did not substantially modify its structure. The first was the *Genre* of the film (as in Sawhney and Eliashberg 1996 and Collins et al. 2002). There is no consensus in the existing literature on the definition of what constitutes a movie genre. As a result, the number of mutually exclusive genres used in similar analyses range from six (Jansen 2005) or seven (Chang and Ki 2005) to 27 (Mezias and Mezias 2000) and a whopping 77 (Perretti and Negro 2007).[9] In the present study and following Lee (2006), nine distinct categories typify the eight most popular film genres, as listed in "Variety" and "Quigley Entertainment Almanacs": action/adventure; family/animation; comedy (including dramatic comedy and musical); drama; thriller; war/historic movie; science fiction and horror; documentary and essays; plus a ninth, miscellaneous category (other genres). Sources were carefully checked against each other to insure consistency in the genre taxonomy. Ultimately, *Genre* proved non-significant.

The second control variable was the *Screen Coverage* of the film, defined as the number of screens the film was initially released on in the US domestic market (as in Neelamegham and Chintagunta 1999). Distributors, who have a contractual obligation to engage in "reasonable efforts" to market the film (Cones 1997), customarily determine its screen coverage. Not surprisingly and in line with

[8] Source: http://www.labiennale.org/en/cinema/festival/regulations/. Accessed July 2, 2009.

[9] These last two studies use the highly detailed American Film Institute genre classification, and consider emerging as well as disappearing genres in their longitudinal analyses of genre innovations.

Milgrom and Roberts's (1986) conclusions on product reputation, the more track record resources and the higher the budget associated with a film, the more initial screen coverage it gets. Also, the more screens a film is initially released on, the more likely it is to generate B.O. revenue. This validates the common industry practice of "blitz distribution," which consists of simultaneously releasing a potential blockbuster on a maximum number of screens (De Vany and Walls 1996).

Based on Krider and Weinberg (1998), the third control variable was the film's *Month of Release* (also used as an independent monthly categorical variable in Wallace et al. 1993 and De Vany and Walls 1997; whereas Ravid 1999; Zufryden 2000; and Nelson et al. 2001 substitute it for a seasonality index). Results confirm the seasonality of the US theatrical market and illustrate the industry practice of selecting a film's release date according to its budget and B.O. potential. The positive and significant correlation between *Month of Release* and *film artistic recognition* (0.099, $p < .001$) also substantiates that the later a film is released in the year, the more likely it is to be nominated for an Oscar in January and to win a few weeks later. To a large extent, this has become a self-fulfilling prophecy, with late releases or second releases of films with the highest Oscar potential now being a common Hollywood practice.

5 Discussion and conclusion

This article investigated several sources of commercial success and artistic recognition of motion pictures based on the artistic and commercial track records of four key stakeholders in a film's production process: its producer, director, and two lead actors. A structural equation model articulated five hypotheses exploring the relationships between track record resources, financial resources, and performance in the context of cinema projects. It was subsequently tested on a sample of 2,080 feature films released in the USA and Canada from 1988 to 1997. Four multigroup and three control analyses complemented the results of this first test. The subsequent three interconnected sets of conclusions are discussed below in the context of US cinema, of other film industries, and of project-based cultural industries in general.

The first one confirms the mediating role of film production budget in the assessment of film commercial success. Opting for the film project as a unit of analysis positions this research at the core of the relational view of strategy (Dyer and Singh 1998) and accurately reflects the project-based nature of cinema. It also allows for a novel and precise operationalization of financial resources in each project as a mediating variable and a catalyst of the influences of commercial and artistic track record on film performance. In line with the relational view, this research shows that the resource combinations associated with a movie project are at the source of its success. However, and increasingly so in the US film industry in the decade under study, these same resource combinations run the risk of turning into rigidities and of impeding performance when they are not coupled with adequate financial investments. When high commercial track records are not coupled with high budgets, moviegoers tend to opt out.

These conclusions constitute an important theoretical contribution. They substantiate that strategic resources are neither all equal in importance nor activated simultaneously in a film project, and corroborate the existence of a novel hierarchy of core and mediating resources. Core commercial and artistic track record resources secure the implication of a flow of financial resources that is necessary to bring forth a film project and set its production dynamics in motion. In cinema, just as in other project-based cultural industries such as performing arts or recorded music, track record resources have little worth per se. Most of their value is co-created through their mutual interactions and through their association with financial resources.

The second set of conclusions of particular importance directly relates to this co-creation process and to the respective roles of the key participants in a film project in its internal dynamics and completion. In all empirical models, the prevalence of the direct and indirect (mediated by film budget) coefficients associated with H1c (the stronger the commercial track record of its lead actors is, the higher the commercial success of a film is) places lead actors at the forefront of the US cinema industry. They constitute the main incentive for financiers to invest in a movie upstream, and for US moviegoers to buy a cinema ticket. Results also confirm the key role of producers as behind-the-scenes resources assemblers and coordinators. Moreover, the use of budget as a mediating variable of film commercial performance casts new light on the relationship between these two constructs and on the commercial track record of lead actors and directors. Estimating whether lead actors' and director's past commercial success, which constitutes a crucial dimension of their commercial track record, actually leads to the commercial success of their latest film or merely to an increase in their acting and directing fees may be problematic. This research did not aim at identifying a saturation threshold. It confirms, however, the existence of a positive and significant impact of the commercial track record of a film's lead actors and directors on its commercial success.

The above confirmation opens a new and interesting line of research into the actual hierarchy of participants in cinema and other cultural projects worldwide. Other findings point to stronger effects of film directors rather than actors on commercial success in several European countries (e.g., Bagella and Becchetti 1999 and Delmestri et al. 2005 in Italy; Jansen 2005 in Germany; Hadida 2003 in France). These results confirm the leading role of the director in European cinema (Svejenova 2005), and echo the unique position of directors in these three European countries as legitimate "*auteurs*," a status initially introduced in the French law on authors' rights. In France in particular, directors, whose prestige rests on talent and merit rather than on nobility and wealth, are at the core of the post-revolution cultural elite (Heinich 2005). In contrast, under the US copyright law, directors do not retain moral rights over their movies and are sometimes merely seen as salaried technicians.

In direct line with these observations, the third set of conclusions opens new perspectives on the institutional value system of US cinema. In order to account for the dual definition of cinema as both industry and art, the concept of performance unfolds in the model into two distinct dimensions. Taking them both into

consideration leads to conclusions that a unique categorization of performance would not have permitted (Coff 1999). US cinema is a blockbuster industry characterized over the decade under study by a sharp increase in film costs and revenue. In this context, the dual definition of performance as commercial success and artistic recognition has an important bearing on the depiction of the dominant value system of local professionals and audiences. In particular, strong significant links between budget, commercial performance and artistic recognition in all models confirm that overall, the most expensive films are also those which generate the highest B.O. revenue and get the highest artistic recognition. Associated with the non-significance of H4*alt* (the higher the artistic recognition of a film is, the more commercially successful it is), this result points to a value system dominated by economic rationales.

US cinema, therefore, promotes and values forms of artistic and financial risk-taking that are altogether limited, as budget increases usually go hand in hand with higher B.O. revenue and artistic recognition. The non-significance of H4*alt* for US and foreign films alike and when using Academy Awards, Cannes Film Festival, and Venice Mostra indicators of artistic track record and recognition further indicates that US moviegoers do not typically opt for a film on the basis of its artistic recognition. It consequently reinforces shared perspectives on US cinema as primarily an industry. It also further corroborates the conclusion that although non-expert audiences share the norm of what experts consider "good" (Boor 1992; Holbrook 2005), they may be drawn to "bad" films because they find them more enjoyable, exciting or accessible (Holbrook 2005). US general audiences may thus seek distraction more than cinematic ambition in their theatrical movie consumption.

Interestingly, preliminary results in France over the same decade validate both H4 (the more commercially successful a film is, the higher its artistic recognition is) and H4*alt* (the higher the artistic recognition of a film is, the more commercially successful it is) when using the French Academy Awards (Césars) as indicators of artistic track record and recognition, confirming thus the non-recursive link between *film commercial success* and *film artistic recognition*. In both countries, the commercial and artistic dimensions of performance are complementary. Their dual analysis uncovers consistency in US and French film finance (mostly private vs. partly public), perception of cinema (primarily industry vs. principally art) and determinants of spectators' consumption (lead actors vs. directors).

More than a "cultural exception" (Farchy 1999), there may indeed be a "cultural coherence" between the availability of public subsidies and loans aimed at nurturing and protecting the local film industry, local cultural managers' decision criteria in allocating these subsidies, local film professionals' perception of cinema as industry, art, or both, and local spectators' viewing incentives. In France and other European countries, this cultural coherence results in a wide diversity of films being produced and distributed and in complex systems of subsidies. Similarly, the US perspective of cinema primarily as industry, Hollywood's defense of free market production and US spectators' motives for engaging in film consumption are coherent. More than cultural exceptions, existing legal frameworks, industrial structures, and consumption patterns may actually induce strong cultural coherence

in film finance, production, consumption, and artistic appraisal across countries. This statement begs for systematic international comparisons of local determinants of performance both in cinema and in other project-based cultural industries.

Also and as noted in Sect. 3, the revenue streams of cinema changed radically after 1997 in the USA with the opening of the television spectrum to digital channels, the advent of DVD, video-on-demand and more recently, legal and illegal online downloads. While both US domestic and international B.O. revenue increased over the past 12 years from US$ 6.24 billion in 1997 to US$ 9.8 billion in 2008 and from US$ 5.853 billion in 1997 to US$18.3 billion in 2008, respectively,[10] it now only represents 25–35% of total earnings per film. Yet, the determinants of theatrical consumption, in an industry increasingly characterized by rising costs and revenue, have not changed radically over the past 12 years. The official competition at the Oscars, in Cannes, and in Venice is also still open to theatrical films only. The conclusions of this research on the relative importance of lead actors, directors, and producers, and on the mediating role of financial resources in the explanation of film theatrical and artistic performance in the USA, are, therefore, expected to hold true in the current era.

However, existing research has already shown that movie consumption is more spontaneous on television compared to video in Australia (Garlin and McGuiggan 2002) and on the cheaper video (VHS and DVD) rental channel, where customers also pay less attention to critics' reviews and Oscars, in the USA (Hennig-Thureau et al. 2006). In line with this extant line of study, more systematic comparative analyses of consumer responses to track record and financial resources across distribution channels may lead industry professionals and cultural managers to new insights into film consumption and film finance.

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References

Aaker, D. A. (1990). Brand extensions: The good, the bad, and the ugly. *Sloan Management Review, 31*(4), 47–56.

Ainslie, A., Dreze, X., & Zufryden, F. S. (2005). Modeling movie life cycles and market share. *Marketing Science, 24*(3), 508–517.

Albert, S. (1998). Movie stars and the distribution of financially successful films in the motion picture industry. *Journal of Cultural Economics, 22*(4), 249–270.

Anand, N., & Watson, M. R. (2004). Tournament rituals in the evolution of fields: The case of the Grammy Awards. *Academy of Management Journal, 47*(1), 59–80.

Arbuckle, J. S. (1997). *AMOS users' guide, Version 3.6*. Chicago, IL: Smallwaters Corporation.

Bagella, M., & Becchetti, L. (1999). The determinants of motion picture box office performance: Evidence from movies produced in Italy. *Journal of Cultural Economics, 23*(4), 237–256.

Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic and statistical considerations. *Journal of Personality and Social Psychology, 51*, 1173–1182.

[10] Source: http://www.mpaa.org/researchStatistics.asp. Accessed June 29, 2009.

Basuroy, S., Chatterjee, S., & Ravid, S. A. (2003). How critical are critical reviews? The box office effects of film critics, star power, and budgets. *Journal of Marketing, 67*, 103–117.

Baumol, W. J. (1986). Unnatural value: Or art investment as floating crap game. *AEA Papers and Proceedings, 76*(2), 10–14.

Benjamin, W. (1971). *L'Oeuvre d'Art a l'Ere de sa Reproductibilité Technique: Essais 2*. Paris: Denoel (1st ed. 1940).

Bielby, W. T., & Bielby, D. D. (1999). Organizational mediation of project-based labor markets: Talent agencies and the careers of screenwriters. *American Sociological Review, 64*(1), 64–85.

Boor, M. (1992). Relationships among ratings of motion pictures by viewers and six professional movie critics. *Psychological Reports, 70*, 1011–1021.

Brockner, J. (1992). The escalation of commitment to a failing course of action: Toward theoretical progress. *Academy of Management Review, 17*(1), 39–61.

Brush, C. G., & Chaganti, R. (1998). Businesses without glamour? An analysis of resources on performance by size and age in small service and retail firms. *Journal of Business Venturing, 14*, 233–257.

Byrne, B. M. (2001). *Structural equation modeling with AMOS: Basic concepts, applications, and programming*. Multivariate Applications Series. Mahwah, NJ: Lawrence Erlbaum Associates Publishers.

Capron, L. (1999). The long-term performance of horizontal acquisitions. *Strategic Management Journal, 20*(11), 987–1018.

Caves, R. E. (2000). *Creative industries: Contracts between art and commerce*. Cambridge, MA: Harvard University Press.

Chang, B.-H., & Ki, E.-J. (2005). Devising a practical model for predicting theatrical movie success: Focusing on the experience good property. *Journal of Media Economics, 18*(4), 247–269.

Churchill, G. A. (1991). *Marketing research, methodological foundations* (5th ed.). New York: Dryden.

Coff, R. W. (1999). When competitive advantage doesn't lead to performance: The resource-based view and stakeholder bargaining power. *Organization Science, 10*(2), 119–133.

Collins, A., Hand, C., & Snell, M. C. (2002). What makes a blockbuster? Economic analysis of film success in the United Kingdom. *Managerial and Decision Economics, 23*(6), 343–354.

Cones, J. W. (1997). *The feature film distribution deal*. Carbondale, IL: Southern Illinois University Press.

Cooper-Martin, E. (1992). Consumers and movies: Information sources for experiential products. *Advances in Consumer Research, 19*(1), 756–761.

Daniels, B., Leedy, D., & Sills, S. D. (1998). *Movie money: Understanding Hollywood's (creative) accounting practices*. Beverly Hills: Silman-James Press.

De Vany, A., & Walls, W. D. (1996). Bose–Einstein dynamics and adaptive contracting in the motion picture industry. *The Economic Journal, 106*(November), 1493–1514.

De Vany, A., & Walls, W. D. (1997). The market for motion pictures: Rank, revenue, and survival. *Economic Inquiry, 35*(October), 783–797.

De Vany, A., & Walls, W. D. (1999). Uncertainty in the movie industry: Does star power reduce the terror of the box office? *Journal of Cultural Economics, 23*(4), 285–318.

De Vany, A., & Walls, W. D. (2002). Does Hollywood make too many R-rated movies? Risk, stochastic dominance, and the illusion of expectation. *Journal of Business, 75*(3), 425–451.

De Vany, A., & Walls, W. D. (2004). Motion picture profit, the stable paretian hypothesis, and the curse of the superstar. *Journal of Economic Dynamics and Control, 28*(6), 1035–1057.

DeFillippi, R. J., & Arthur, M. B. (1998). Paradox in project-based enterprise: The case of film making. *California Management Review, 40*(2), 125–139.

Delmestri, G., Montanari, F., & Usai, A. (2005). Reputation and strength of ties in predicting commercial success and artistic merit of independents in the Italian feature film industry. *Journal of Management Studies, 42*(5), 975–1002.

Dyer, J. H., & Singh, H. (1998). The relational view: Cooperative strategy and sources of interorganizational competitive advantage. *Academy of Management Review, 23*(4), 660–679.

Eisenhardt, K. M., & Schoonhoven, C. B. (1996). Resource-based view of strategic alliance formation: Strategic and social effects in entrepreneurial firms. *Organization Science, 7*(2), 136–150.

Elberse, A., & Eliashberg, J. (2003). Demand and supply dynamics of sequentially released products in international markets: The case of motion pictures. *Marketing Science, 22*(3), 329–354.

Eliashberg, J., Elberse, A., & Leenders, M. A. A. M. (2006). The motion picture industry: Critical issues in practice, current research, and new research directions. *Marketing Science, 25*(6), 638–661.

Eliashberg, J., & Shugan, S. M. (1997). Film critics: Influencers or predictors? *Journal of Marketing, 61*(2), 68–78.

Farchy, J. (1999). *La Fin de l'Exception Culturelle?* Paris: CNRS Editions.

Faulkner, R. R., & Anderson, A. B. (1987). Short term projects and emergent careers: Evidence from Hollywood. *American Journal of Sociology, 92*, 879–909.

Frey, B. S., & Eichenberger, R. (1995). On the rate of return in the art market: Survey and evaluation. *European Economic Review, 39*, 528–537.

Garlin, F. V., & McGuiggan, R. L. (2002). Sex, spies and celluloid: Movie content preference, choice, and involvement. *Psychology & Marketing, 19*(5), 427–445.

Ginsburgh, V. (2003). Awards, success and aesthetic quality in arts. *Journal of Economic Perspectives, 17*(2), 99–112.

Ginsburgh, V., & Weyers, S. (1999). On the perceived quality of movies. *Journal of Cultural Economics, 23*(4), 269–283.

Gomery, D. (1986). *The Hollywood studio system*. London: BFI-McMillan.

Hadida, A. L. (2003). *Strategic assets, institutional factors and performance: An application of the resource based view and of new institutional economics to cinema projects in France and the United States (1988–1997)*. Unpublished Doctoral Dissertation, HEC: Jouy en Josas.

Hadida, A. L. (2009). Motion picture performance: A review and research agenda. *International Journal of Management Reviews, 11*(3), 297–335.

Hall, R. (1993). A framework linking intangible resources and capabilities to sustainable competitive advantage. *Strategic Management Journal, 14*, 607–618.

Heinich, N. (2005). *L'Elite Artiste: Excellence et Singularité en Régime Démocratique*. Paris: Gallimard.

Henderson, R., & Cockburn, I. (1994). Measuring competence? Exploring firm effects in pharmaceutical research. *Strategic Management Journal, 15*, 63–84.

Hennig-Thureau, T., Houston, M. B., & Walsh, G. (2006). The differing roles of success drivers across sequential channels: An application to the motion picture industry. *Journal of the Academy of Marketing Science, 34*(4), 559–575.

Hirsch, P. M. (1972). Processing fads and fashions: An organization-set analysis of cultural industry systems. *American Journal of Sociology, 77*, 639–659.

Hirsch, P. M. (2000). Cultural industries revisited. *Organization Science, 11*(3), 356–361.

Hirschman, E. C. (1983). Aesthetics, ideologies and the limits of the marketing concept. *Journal of Marketing, 47*, 45–55.

Hirschman, E. C., & Holbrook, M. B. (1982). Hedonic consumption: Emerging concepts, methods and propositions. *Journal of Marketing, 46*, 92–101.

Holbrook, M. B. (1999). Popular appeal versus expert judgments of motion pictures. *Journal of Consumer Research, 26*, 144–155.

Holbrook, M. B. (2005). The role of ordinary evaluations in the market for popular culture: Do consumers have "good taste"? *Marketing Letters, 16*(2), 75–86.

Horkheimer, M., & Adorno, T. (1974). *La Production Industrielle de Biens Culturels: Dialectique de la Raison*. Paris: Gallimard. (1st ed. 1944).

Hoyle, R. H. (1995). The structural equation modeling approach: Basic concepts and fundamental issues. In R. H. Hoyle (Ed.), *Structural equation modeling: Concepts, issues, and applications* (pp. 1–15). Thousand Oaks: Sage Publications.

Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling, 6*, 1–55.

Jansen, C. (2005). The performance of German motion pictures, profits and subsidies: Some empirical evidence. *Journal of Cultural Economics, 29*, 191–212.

Jones, C., & DeFillippi, R. J. (1996). Back to the future in film: Combining industry and self-knowledge to meet the career challenges of the 21st century. *Academy of Management Executive, 10*(4), 89–103.

Judd, C. M., & Kenny, D. A. (1981). Process analysis: Estimating mediation in treatment evaluations. *Evaluation Review, 5*, 602–619.

Kapferer, J.-N. (2001). *Re inventing the brand: Can top brands survive the new market realities?*. London: Kogan Page.

Krider, R. E., & Weinberg, C. B. (1998). Competitive dynamics and the introduction of new products: The motion picture timing game. *Journal of Marketing Research, 35*(1), 1–15.

Lampel, J., & Shamsie, J. (2003). Capabilities in motion: New organizational forms and the reshaping of the Hollywood movie industry. *Journal of Management Studies, 40*(8), 2189–2210.

Lee, F. L. F. (2006). Cultural discount and cross-culture predictability: Examining the box-office performance of American movies in Hong Kong. *Journal of Media Economics, 19*(4), 259–278.
Levitas, E., & Chi, T. (2002). Rethinking Rouse and Daellenbach's rethinking: Isolating vs. testing for sources of sustainable competitive advantage. *Strategic Management Journal, 23*(10), 957–962.
Linton, J. M., & Petrovich, J. A. (1988). The application of the consumer information acquisition approach to movie selection: An exploratory study. In B. A. Austin (Ed.), *Current research in film: Audiences, economics and law* (pp. 24–45). Norwood, NJ: Ablex Publishing Co.
Litman, B. R. (1983). Predicting success of theatrical movies: An empirical study. *Journal of Popular Culture, 16*, 156–175.
Liu, Y. (2006). Word of mouth for movies: Its dynamics and impact on box office revenue. *Journal of Marketing, 70*, 74–89.
Lynn, G., & Reilly, R. (2002). How to build a blockbuster. *Harvard Business Review, 80*(10), 18–20.
Maijoor, S., & Van Witteloostuijn, A. (1996). An empirical test of the resource-based theory: Strategic regulation in the Dutch audit industry. *Strategic Management Journal, 17*(7), 549–569.
Matusik, S. F., & Hill, C. W. L. (1998). The utilization of contingent work, knowledge creation, and competitive advantage. *Academy of Management Review, 23*(4), 680–697.
McCallum, R. C. (1995). Model specification: Procedures, strategies, and related issues. In R. H. Hoyle (Ed.), *Structural equation modeling: Concepts, issues, and applications* (pp. 16–35). Thousand Oaks: Sage Publications.
McDonald, R. P., & Ho, M.-H. R. (2002). Principles and practice in reporting structural equation analyses. *Psychological Methods, 7*(1), 64–82.
Merton, R. K. (1968). The Matthew effect in science. *Science, 159*(3810), 56–63.
Mezias, J. M., & Mezias, S. J. (2000). Resource partitioning, the founding of specialist firms, and innovation: The American feature film industry, 1912–1929. *Organization Science, 11*(3), 306–322.
Milgrom, P., & Roberts, J. (1986). Price and advertising signals of product quality. *Journal of Political Economy, 94*, 796–821.
Miller, D., & Shamsie, J. (2001). Learning across the life cycle: Experimentation and performance among the Hollywood studio heads. *Strategic Management Journal, 22*(8), 725–745.
Mintzberg, H., & McHugh, A. (1985). Strategy formation in an adhocracy. *Administrative Science Quarterly, 30*, 160–197.
Mulaik, S. A., & Millsap, R. E. (2000). Doing the four-step right. *Structural Equation Modeling, 7*(1), 36–73.
Neelamegham, R., & Chintagunta, P. (1999). A Bayesian model to forecast new product performance in domestic and international markets. *Marketing Science, 18*(2), 115–136.
Nelson, R. A., Donihue, M. R., Waldman, D. M., & Wheaton, C. (2001). What's an Oscar worth? *Economic Inquiry, 39*(1), 1–16.
Pennings, J. M., Lee, K., & Van Witteloostuijn, A. (1998). Human capital, social capital, and firm dissolution. *Academy of Management Journal, 41*(4), 425–440.
Perretti, F., & Negro, G. (2007). Mixing genres and matching people: A study in innovation and team composition in Hollywood. *Journal of Organizational Behavior, 28*(5), 563–586.
Prag, J., & Casavant, J. (1994). An empirical study of the determinants of revenues and marketing expenditures in the motion picture industry. *Journal of Cultural Economics, 18*, 217–235.
Quigley Publications. (1985–1998). International Motion Picture Almanac. New York: Quigley Publications.
Rao, H. (1994). The social construction of reputation: Certification contests, legitimation, and the survival of organizations in the American Automobile Industry: 1895–1912. *Strategic Management Journal, 15*, 29–44.
Ravid, S. A. (1999). Information, blockbusters, and stars: A study of the film industry. *Journal of Business, 72*(4), 463–492.
Reddy, S. K., Swaminathan, V., & Motley, C. M. (1998). Exploring the determinants of Broadway show success. *Journal of Marketing Research, 35*, 370–383.
Robins, J. A. (1993). Organization as strategy: Restructuring production in the film industry. *Strategic Management Journal, 14*, 103–118.
Rosen, S. (1981). The economics of superstars. *American Economic Review, 71*(5), 845–858.
Rosten, L. C. (1941). *Hollywood: The movie colony, the movie makers*. New York, NY: Harcourt, Brace and Co. Inc.
Rouse, M. J., & Daellenbach, U. S. (2002). More thinking on research methods for the resource-based perspective. *Strategic Management Journal, 23*(10), 963–967.

Sawhney, M. S., & Eliashberg, J. (1996). A parsimonious model for forecasting gross box-office revenues of motion pictures. *Marketing Science, 15*(2), 113–131.
Schatz, T. (1997). *Boom and bust: American cinema in the 1940s*. Berkeley, CA: University of California Press.
Schwab, A. (1999). *Management practices in short-term network organizations: The performance impact of the shadow of the future and psychological contracts in the US Movie Industry, 1931–1940*. Unpublished Dissertation, University of Wisconsin, Madison.
Schwab, A., & Miner, A. S. (2001). *Organizational learning and short-term collaboration: Patterns in the US Movie Industry, 1930–1940*. Paper presented at the Annual Meeting of the Academy of Management, Washington, DC.
Sedgwick, J. (2002). Product differentiation at the movies: Hollywood, 1946 to 1965. *Journal of Economic History, 62*(3), 676–705.
Sedgwick, J., & Pokorny, M. (1998). The risk environment of film making: Warner Bros in the inter-war years. *Explorations in Economic History, 35*(2), 196–220.
Simonet, T. (1977). *Regression analysis of prior experience of key production personnel as predictors of revenues from high grossing motion pictures in American release*. Unpublished Doctoral Dissertation, Temple University, Philadelphia.
Smith, S. P., & Smith, V. K. (1986). Successful movies: A preliminary empirical analysis. *Applied Economics, 18*, 501–507.
Sochay, S. (1994). Predicting performance of motion pictures. *Journal of Media Economics, 7*(4), 1–20.
Sorenson, O., & Waguespack, D. (2006). Social structure and exchange: Self-confirming dynamics in Hollywood. *Administrative Science Quarterly, 51*, 560–589.
Svejenova, S. (2005). 'The path with the heart': Creating the authentic career. *Journal of Management Studies, 42*(5), 947–974.
Swami, S., Eliashberg, J., & Weinberg, C. B. (1999). SilverScreener: A modeling approach to movie screens management. *Marketing Science, 18*(3), 352–372.
Tessier, M., et al. (1999). *CNC Info no. 272: Bilan 1999*. Paris: Presses du CNC.
Tsai, W., & Ghoshal, S. (1998). Social capital and value creation: The role of intrafirm networks. *Academy of Management Journal, 41*(4), 464–476.
Wallace, W. T., Siegerman, A., & Holbrook, M. B. (1993). The role of actors and actresses in the success of films: How much is a movie star worth? *Journal of Cultural Economics, 17*, 1–27.
Walls, W. D. (2005a). Modelling heavy tails and skewness in film returns. *Applied Financial Economics, 15*, 1181–1188.
Walls, W. D. (2005b). Modeling movie success when 'nobody knows anything': Conditional stable-distribution analysis of film returns. *Journal of Cultural Economics, 29*, 177–190.
Walls, W. D. (2005c). Demand stochastics, supply adaptation, and the distribution of film earnings. *Applied Economic Letters, 12*, 619–623.
Walls, W. D. (2006). Using extreme value theory to improve management decision-making with an application to the Chinese cinema in Hong Kong. *International Journal of Management, 23*(1), 3–10.
Weigelt, K., & Camerer, C. (1988). Reputation and corporate strategy: A review of recent theory and applications. *Strategic Management Journal, 9*, 443–454.
Williamson, O. E. (1999). Strategy research: Governance and competence perspectives. *Strategic Management Journal, 20*(12), 1087–1108.
Zuckerman, E. W., Kim, T.-Y., Ukanwa, K., & Von Rittmann, J. (2003). Robust identities or non-entities? Typecasting in the feature-film labor market. *American Journal of Sociology, 108*(5), 1018–1074.
Zufryden, F. S. (2000). New film website promotion and box-office performance. *Journal of Advertising Research, 40*(1), 55–64.