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Reputation Resources, Commitment and Performance of Film Projects in the USA and Canada (1988-1997)*

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Abstract

This paper introduces a framework derived from the resource-based view to investigate the impact of reputation resources and commitment on commercial and artistic performance of film projects. Structural models are tested on 2080 films first released in American theatres from 1988 to 1997. Results demonstrate the mediating role of financial commitment in assessing film performance and in transforming static resources into dynamic assets. They unearth a novel hierarchy and dynamics of primary resources and irreversible commitment and of key players in a film project: Actors first, then directors and producers in a coordinating role. Third, they confirm industrial rather than artistic dominant traits of American cinema.

Keywords

Resource-based view, irreversible commitment, artistic and commercial reputation, American cinema.

INTRODUCTION

Cinema has always generated interest. However, the complexity, uniqueness and paradoxically, secrecy of this economic activity often discourage attempts at exploring it in detail. In particular, they have made it extremely difficult to define the concept of film performance and to identify its determinants. The former is often restricted to its commercial dimension, whereas the latter are frequently assimilated, according to the socio-cultural context of their observation, to the ethereal "magic" of the production process and viewing experience or to the financial clout of some producers and distributors. This paper brings propositions derived from the hedonic consumption model (Hirschman & Holbrook, 1982) into a resource-based framework (Barney, 1991) to investigate issues of commercial performance and artistic recognition of feature films. It also supports the idea that the resource-based view should be applied to hybrid organizational forms wherever it is appropriate and offers an empirical illustration of the relational view of strategy (Dyer & Singh, 1998). The film project, from first synopsis to screen release, has its own logic, summons up complementary resources and leads on to a clear product: the material realization of a feature film. As such, this economic construct is a relevant and legitimate unit of analysis in the context of the present study.

This paper explores the determinants of performance of films developed and released from 1988 to 1997 inclusive on the American theatrical market, defined as both the United States of America and Canada, two countries where films are usually released simultaneously (MPAA, 2003). More specifically, it focuses on exploring the relative impact of commercial and artistic reputations of key players on commercial success and artistic recognition. It also investigates the role of irreversible commitment as a mediating factor of these relationships. Ultimately, it delves into the connection between commercial success and artistic recognition.

This research contributes to the literature in several distinct ways. First, it develops a taxonomy of commercial and artistic reputation and explores for the first time from a theoretical and empirical perspective the relationships between commercial and artistic dimensions of film success. Second, the investigation of the mediating role of irreversible funds commitment in the evaluation of film commercial success leads to the development of a novel hierarchy of strategic resource. Third, the paper also explores the precedence or artistic or commercial performance criteria. The results of the structural equation modeling carried out in the course of the study generate important conclusions relative to the specific dynamics of strategic assets development in the film project and to the internal hierarchy of leading actors, directors and producers in its realization. The present study therefore initiates some new and interesting direction of research on the combination of novel symbolic artistic dimensions with more traditional commercial constructs and measures of performance in any symbol-intensive economic sector and on the internal dynamics and hierarchies of strategic resource combinations and transformations. Last, it will also prove useful to business analysts of the film industry and to film professionals either already active in the American domestic market or trying to tap into it.

THEORY AND HYPOTHESES

Theoretical Positioning

The main stream of research this paper builds on is the resource-based view (RBV). Penrose (1959) offered pioneering definitions of the firm as a "bundle of resources" and an "organizational framework" aimed at linking them together. Wernerfelt (1984) further explored the perspective she introduced and coined the term "resource-based view" to label it. Several subsequent papers considerably extended the concept of "resource" (Barney, 1991; Grant, 1991; Amit & Schoemaker, 1993; Teece, Pisano & Shuen, 1997), while others acknowledged the risk associated with their possible transformation into core rigidities (Leonard-Barton, 1992; Montgomery, 1995). Following Grant (1991) and Amit and Schoemaker (1993), this paper defines a resource as an input into the production process, a capability as a dynamic combination of several resources and strategic assets as the resources and capabilities that are the sources of above-average performance. As Godfrey and Hill (1995) and Levitas and Chi (2002) suggest, it tests the correspondence between RBV predictions and empirical observations at the scale of a whole population. The conceptual difficulties the RBV still faces translate into empirical challenges (Collis, 1994; Montgomery, 1995). The relational view of strategy (Dyer & Singh, 1998) specifically addresses that of the choice of its relevant unit of analysis.

Dyer and Singh (1998) propose that a firm's critical resources can increasingly become rooted outside of its organizational frontiers in inter-firm resources. The unit of analysis of their "relational perspective" is therefore the relationship between two or several organizations. Whenever partners in a transaction are willing to commit specific investments and unique combinations of resources to it, they create the potential for productivity gains in their value chain and for relational rents, i.e. above normal profits that can only be generated through the joint idiosyncratic contributions of partners in a transaction (Dyer & Singh, 1998). Although the relational view of strategy differs from the traditional RBV in the definition of its unit of analysis as the network of economic actors involved in a project and of the sources of rents as being beyond any individual firm's control, it is more a natural extension of the RBV than a novel perspective altogether. Indeed, its roots can be traced to Barney and Hansen (1994), who also define the firm's relationship with its exchange partners as their unit of analysis and the firm's network of partners as the locus of creation and appropriation of competitive advantages. In a project, several constituents often established in different organizations get together to pursue objectives that they set in common beyond the legal frontiers of their corporate base. As an autonomous economic construct set up with its own logic, a project mobilizes complementary resources and capabilities and its outcomes are very often clearly identifiable and measurable. These characteristics wholly justify the choice of the project as a relevant economic unit of analysis in the fields of technology management (Goodman & Abernathy, 1978), institutional economy (Tsai & Ghoshal, 1998) and the RBV (Eisenhardt & Schoonhoven, 1996).

Cinema is a project-based industry, where each film is a prototype as well as a commercial and artistic endeavor. At least in the primary segment of movie theatres, a film is a one-off purchase and a unique

experience not only for its consumers, but also for the teams involved in its production and distribution. A focus on the film rather than on the studio permits to single out those strategic assets unambiguously valued by the audience, and hence susceptible of being shown ex post as key determinants of film performance. The study of its specific production processes may also unveil a better insight into its strategic assets and the way they are combined in specific activities (De Filippi and Arthur, 1998), providing thus part of the insider view advocated by Rouse and Daellenbach (1999, 2002) in RBV empirical studies.

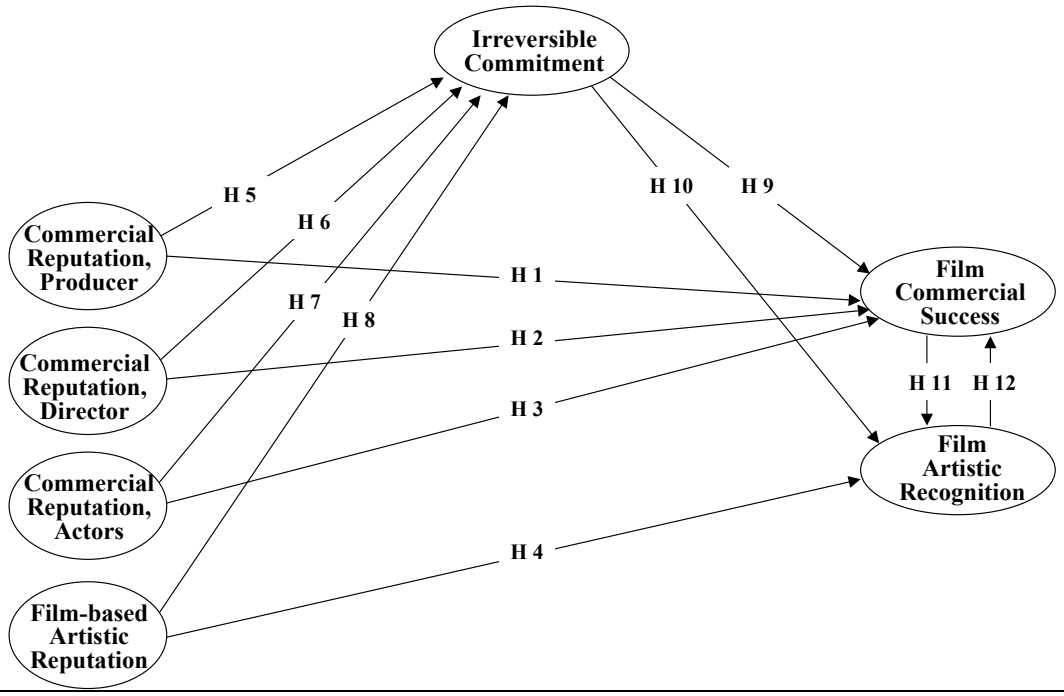
Matusik and Hill (1998) highlight that the use of free agents, i.e. of resources that keep associating with and dissociating from the organization, has an important impact on its knowledge stock. This is true above all in dynamic environments where organizational borders are increasingly blurred and firms have to be particularly flexible. Resorting to temporary workers allow the organization to integrate public knowledge, for instance in the form of industry "best practices", and can become a catalyst in the development of its idiosyncratic knowledge base. Yet, it increases the risk of dispersion of this knowledge into the public domain. Making use of free agents has always been common practice in entertainment businesses such as sports and cinema. Poppo and Weigelt (1999) illustrate it with the example of free-lance baseball players who switch teams from one sports season to the next. Jones and De Filippi (1996) note that the number of free agents who opt for boundaryless careers and therefore build their professional networks at the scale of their industry as a whole is on the rise in all economic sectors. They propose that industries that have been hit by this new phenomenon seek inspiration in the pioneering organization of cinema in order to better deal with its implications. The uncertainty linked to the evolution of individual careers emphasizes the significance economic actors associate with the reputation of their potential partners in terms of talent, interpersonal traits, cost control and commercial success of their past ventures. This claim partially challenges the uncertain imitability of strategic assets as it is defined by the traditional RBV (Barney, 1991), for this property relies on their imperfect mobility. However, the immobility of assets is at best contingent upon the nature of the organization that controls them (Anand & Singh, 1997). Through the introduction of the concept of firm-addressable assets, Sanchez, Heene and Thomas (1996) further extend this line of reasoning. Just as the dynamic capability view of strategy (Teece et al., 1997: 527-528), their "competence-based competition" defines the process as its relevant unit of analysis. Every time human agents work in project-based microstructures rather than in traditional firms, they become perfectly mobile from one organization to the next and hence available on the strategic factor market for free agents.

Theoretical Model and Hypotheses

As Voss and Voss (2000: 78) remark, "single-industry studies are warranted - even preferred - when the internal validity of the study is more important than the generalizability of the results". Following Collis (1991), Carr (1993), Henderson and Cockburn (1994) and Maijoor and Van Witteloostuijn (1996), this paper offers a set of hypotheses developed around a new typology of strategic assets specifically tailored to the film industry and advocates the richness of measurements obtained through the empirical study of a single industry (Rouse and Daellenbach, 1999, 2002). The theoretical model introduced in this paper aims at

investigating the determinants of performance of feature films developed and released on the American theatrical market in the decade between 1988 and 1997. In line with earlier empirical works by Henderson and Cockburn (1994), Yeoh and Roth (1999), Maijoor and Van Witteloostuijn (1996) and Brush and Artz (1999), the theoretical model described in figure 1 explores the link between reputation-related strategic assets, irreversible commitment and the achievement of above-average performance. As it does not anticipate that any of the strategic assets and irreversible commitment might be core rigidities from the outset, all its hypotheses -represented as arrows in figure 1- define positive relationships between latent variables, pictured in oval shapes in figure 1.

FIGURE 1
Theoretical Model predicting
Film Commercial Success and Artistic Recognition



This theoretical model is original in illustrating the concept of film performance both in commercial and artistic terms. This two-fold characterization comes from the dual definition of cinema as both an industry and an art and of the film as a semiotic good. Hirschman and Holbrook (1982: 92) described the concept of hedonic consumption as: "those facets of consumer behavior that relate to the multisensory, fantasy and emotive aspects of product usage experience". As such, hedonic consumption relates to "semiotic goods", which are primarily conceived as subjective signs and symbols rather than objective entities (Panofsky, 1940). The concepts of hedonic consumption and of semiotic goods are thus particularly relevant to the study of entertainment products and films. As they are all positively designed to generate strong reactions, the decision to purchase and consume them depends on the potential customer's anticipation of the emotions that they may engender. The process of hedonic consumption consequently requires intellectual efforts and implies dynamic interactions and value co-creations between the product or service and its consumer.

Besides, consumers' emotional and imaginative responses to semiotic goods are strongly reliant on a complex set of cultural differences, most notably epitomized in an individual's ethnicity, religion, nationality, core beliefs and values (Hirschman and Holbrook, 1982). Several studies in the field of cultural marketing (for instance, Unger & Kernan, 1983; Havlena & Holbrook, 1986; Holbrook, 1993; Holbrook & Schindler, 1989) illustrate the concept of hedonic consumption. To my knowledge, no research so far has linked it to the RBV. Yet, the ability of some products and services to generate emotional and intellectual reactions is intangible, rare, valuable and difficult to imitate and substitute. Following Barney (1991: 105-106), it can hence be defined as a strategic asset susceptible of leading their producers and distributors to the achievement of above-average performance. The definition of cinema as both an art and an industry and of films as both semiotic and commercial products are well acknowledged in the theoretical and managerial literatures. Conversely, the empirical literature, most notably in marketing, economics and strategy, hardly takes into account the symbolic and artistic dimensions of film performance. The theoretical model contributed by this research purports to bridge this gap between the existing theoretical and empirical contributions by offering one of the first frameworks to implement both commercial and artistic dimensions of performance in the film industry.

As a typical experience good, the value of a film can only be fully assessed by its spectators after they have seen it. Film professionals and moviegoers partially compensate for the lack of first-hand information on the film by resorting to alternative experience and credence mechanisms. Most of them relate to the reputation of the main collaborators in the film project. Reputation has often been identified as one of the firm's key strategic assets (Weigelt & Camerer, 1988; Hall, 1993; Rao, 1994; Barney & Hansen, 1994). Be it at the firm, at the project or at the individual level of analysis, reputation is particularly important in an incomplete information environment (Kreps & Wilson, 1982; Weigelt & Camerer, 1988). The definition of commercial reputation builds on previous works by Rosen (1981), MacDonald (1988), Adler (1985), Hamlen (1991), Chung and Cox (1994), Albert (1998), Sedgwick (1999) and Cox and Kleiman (2000) on the economics of Superstars. Of all categories of participants involved in the film production and commercialization processes, commercial reputation is characterized as the tangible manifestation of the capability of three of them to attract audiences into the theatres and to generate important revenues.

First, the producer, hereby defined as the executive producer of the movie and the first producer quoted in its credits, is the project leader of the film, taking the initiative for the film project and ultimately responsible for its management and completion. The producer is at the core of the film's financial, managerial, artistic and commercial network. After he greenlights it, he sets up its budget and supervises all its financial and administrative aspects. The commercial reputation of the producer initially rests on his flair to detect the film projects with most potential and subsequently relies on his know-how to guarantee their completion. In time, asset stock accumulation of these two competences (Dierickx & Cool, 1989) allows the producer to become increasingly proficient, and enhances the potential for commercial success of his projects. Hence,

Hypothesis 1: The stronger the commercial reputation of the producer, the higher the film commercial success.

The director is the second key participant in the film project. Whereas the producer is the business manager of the film project, the director can be defined as its artistic project leader. They often collaborate on the film final script, staffing and casting and co-supervise the film production and post-production phases. When the director is renowned, the film producer and distributor also resort to him to promote the film before its release. Indeed, the most reputable directors establish over the years a style and know-how that secures them a loyal audience. The model therefore hypothesizes that:

Hypothesis 2: The stronger the commercial reputation of the director, the higher the film commercial success.

Third and last, leading actors are also likely to develop a strong commercial reputation both with the audience at large and with regular financial and commercial partners in the production process. Earlier studies on attendance have revealed their paramount influence on a film's commercial success (Simonet, 1977; Kindem, 1982; Wallace, Siegerman & Holbrook, 1993; Albert, 1998). Accordingly;

Hypothesis 3: The stronger the commercial reputation of the leading actors, the higher the film commercial success.

The fourth dimension of reputation is artistic. Unlike commercial reputation, it is defined at the film level of analysis rather than at its individual participants'. Indeed, the artistic recognition of a film rests more on the dynamic combination of their individual talents than on the latter considered in isolation. The exceptional creativity of a director is nothing without actors to channel it, and star performers cannot feature in a movie without a director and a producer to overview its creative and economic production process respectively. Assuming the cumulative nature of artistic recognition:

Hypothesis 4: The stronger the artistic reputation associated with the film, the higher its artistic recognition.

All four hypotheses linking reputation to film performance postulate the existence of a strong path dependence of its commercial and artistic dimensions. Reputation is defined in the research framework as a cumulative process of asset mass efficiencies (Dierickx & Cool, 1989). All four hypotheses also rely on the active role played by key stakeholders in the configuration, management and commercial and artistic performance of the film project. They are the physical and moral entities involved in its funding, production, organization, distribution and exhibition. Be they primarily responding to artistic or economic imperatives, their commitment to the film project is the actual catalyst of the commercial success and artistic recognition of the finished movie. Its scale should therefore be proportional to the potential that they are able to detect in

the project on paper. As a recent study of 700 new product development teams across various manufacturing industries in the USA substantiates: “Products don’t become blockbusters […] without the intense, personal involvement of senior management -usually a CEO or division head” (Lynn and Reilly, 2002: 2).

Ghemawat (1991) defines commitment as the tendency of organizations to persevere with their respective strategies over time. Irreversible commitment is associated to the film project mainly in its development and production phase, during which the producer and to a lesser extend the director are responsible for its daily management and long term planning. Later, even the most constraining decisions relating to Prints and Advertisements (P&A) investments, release dates and film exposure can be modified with relatively short notice. They therefore represent commitments that are easier to reverse and customarily undertaken by the film distributor. As cinema screen supply often exceeds demand, they also rely on an existing pool of easy to reallocate resources. The nature, timing and decision-makers of these marketing resource-allocation processes consequently differentiate them from irreversible commitments. Given its nature as a capital and labor-intensive industry, cinema does not lack examples of costly to reverse commitments. “Titanic” (1997) has been one of the most publicized. The trade paper “Hollywood Reporter” estimates this film’s final cost between $450 and 500 million, with $200 million in P&A. In spite of the uncertainty of the project’s outcomes, Fox and Paramount top executives had to take this risk to make sure that American moviegoers knew the film release date. “Titanic” was first released in December 1997, more than six months behind schedule. In January 2001, the film had already grossed more than $600 million in the United States and more than $1.7 billion worldwide in movie theatres only (MPAA, 2003). Had both studios decided to shut down production when director James Cameron first went over budget, they would never have recouped their investment, let alone made it profitable.

This example illustrates that investments in certain kinds of strategic factors may lead to commitment via lock-in (Arthur, 1989). Yet, they are sunk costs that the film producer and other financial stakeholders may never recoup: there is always a risk that irreversible commitments lead to escalating situations (Ross & Staw, 1986; Brockner, 1992). The film project managers and stakeholders nevertheless have to run the risk of large financial losses associated with an irreversible commitment in order to achieve above-average performance (Ghemawat & Del Sol, 1998: 32). The paper therefore argues that the combinations of strategic resources associated in the film project need to be locked in by the irreversible commitment of its key stakeholders. Without it, their influence on film performance would be at best non-existent and at worst, negative. The factors that call for irreversible commitment in the film project are typically rare, valuable and almost impossible to imitate or substitute: they are strategic assets (Barney, 1991). This paper defines irreversible commitment primarily as the financial resources committed to the film project by the producer and some of his closest business partners: among them co-producers, distributors, exhibitors and video and DVD editors. It also comprises of long hours of work put in by all participants during its production process that are by definition sunk once they are bequeathed. Under the assumption that they are “intendedly rational” (Williamson, 1997), the producer, the distributor and the other key stakeholders in the film project receive

signals that help them assess the ex ante value they can associate with this venture. They condition the nature and extend of their irreversible commitment accordingly. Reputation is one of them (Ghemawat, 1991), and is relatively easy to assess ex-ante. Producers therefore regularly use commercial and artistic reputations to set up the film budget and completion planning which form the basis of their negotiations with potential business partners. Once the producer and the director reach an agreement on the film's staffing and casting, the producer contacts its business partners to raise money and to anticipate the film's release conditions. At this point, they all decide upon their irreversible commitment to the film project. By determining the importance of the irreversible commitment engaged in the film project as a function of the commercial and artistic reputations associated with it, the following hypotheses implicitly introduce a new hierarchy of strategic assets that goes beyond the traditional distinction between resources, capabilities, routines and core competences.

Indeed, the theoretical framework distinguishes between primary resources, defined here as commercial and artistic reputation, and irreversible commitment. The latter typically gets attached to the project once its managers receive a clear signal that the former are already dedicated to it. This process is not always sequential, as scheduling constraints may lead to the replacement of the director and/or one or several actors before the start or even in the course of principal photography. Irreversible commitment in the film project is usually decided after at the very least an indication of interest of the producer, director and leading actors in the project. It touches on issues of decision makers' opportunism and ability to forecast that the RBV has failed to take into account thus far (Williamson, 1999). In a superstar economy such as the film industry (Rosen, 1981; Adler, 1985; MacDonald, 1988), a strong commercial reputation allows the producers, directors and leading actors who benefit from it to charge above-average rates for their services. These premium fees are conceded in anticipation of the expected rent that their involvement is likely to create. They are hence partially justified by hypotheses 1, 2 and 3, which predict a positive relationship between their commercial reputation and film commercial success. As the cost of "above the line" talent, i.e. the producer's, writers', director's and leading actors' fees, typically constitute over 50% of a film's budget (Daniels, Leedy and Sills, 1998), they have inflationary effects on financial irreversible commitment. A producer with a high commercial reputation is also more likely to persuade potential partners and investors to commit to the film project than one with no comparable track record. Hence,

Hypothesis 5: The stronger the commercial reputation of the producer, the higher the irreversible commitment in the film.

Likewise, a director with a high commercial reputation placates potential investors and collaborators and offers them the guarantee that their money and time will be well spent. The type of projects he gets associated with and his skills both to get influential actors involved and to make the most of their talent on screen are also highly valued. They consequently justify a higher commitment in the film project:

Hypothesis 6: The stronger the commercial reputation of the director, the higher the irreversible commitment in the film.

Last, the involvement of "bankable" stars, i.e. of leading actors with a high commercial reputation, increases the movie's expected revenues. It also increases the number of individuals involved in the project, as stars usually bring in several personal assistants, ranging from personal trainers to lawyers, with them. Last, it inflates the film's negative costs, as the acting fees of those artists increase with their commercial clout. By claiming higher fees, actors manage to secure their appropriation of a fixed amount of the higher rent expected of the movie. The producer's business partners therefore also engage a greater irreversible commitment in the film in order to pay those stars at their market value in anticipation of the higher returns that this specific investment should generate.

Hypothesis 7: The stronger the commercial reputation of the leading actors, the higher the irreversible commitment in the film.

Similarly, the artistic reputation associated with the film can also be perceived as a warranty of quality, encouraging thus a higher irreversible commitment in the project. Accordingly,

Hypothesis 8: The stronger the artistic reputation associated with the film, the higher the irreversible commitment in the film.

The implication of a higher irreversible commitment in the project will guarantee that of better resources, as it secures the payment of higher salaries to key participants as well as certify their dedication to the film project. Through their mediation by irreversible commitment, the static primary reputation resources become truly dynamic and keep evolving from one film to the next. Ultimately, irreversible commitment, just as commercial and artistic reputation, has to be publicized to send signals to the potential moviegoers to help them assess the ex-ante value they can associate with the film. Its identification by potential moviegoers is key to determining the film's commercial success. More specifically, the "negative costs" of the original master copy of the movie are used to determine the subsequent P&A investments aimed at increasing the film's publicity and ease of access. Evidently, the more advertised and screened the film is, the more likely it is to be seen. Given that P&As and screen coverage, hereby defined as the number of screens the film is first released on, are highly correlated to irreversible commitment in the film project,

Hypothesis 9: The higher the irreversible commitment in the film, the more commercially successful it is.

A high irreversible commitment in a film project may also trigger aggressive promotional campaigns not only to get the moviegoers to see it, but also to get it promoted to institutional decision makers involved in

major competitions and festivals. Assuming moreover that there is also a plausible favorable bias of the producer and his business partners and that they are not misled in their perceptions,

Hypothesis 10: The higher the irreversible commitment in the film, the stronger its artistic recognition.

The last two hypotheses of the theoretical model deal with the correspondence between commercial and artistic performance. Indeed, the dual definition of cinema as an art and an industry makes it extremely difficult to determine ex-ante whether commercial success breeds artistic recognition or vice-versa. An easy way out would involve arguing that cinema has always been primarily an industry in the USA and that consequently, only direct and unilateral effects of commercial success on artistic recognition should be hypothesized. This would however oversimplify the issues at stake and minimize the impact of the novel introduction of an artistic component to the concept of film performance.

Hypothesis 11: The more commercially successful the film, the higher its artistic recognition.
Hypothesis 12: The higher the artistic recognition of the film, the more commercially successful it is.

Hypotheses 11 and 12 may seem counterintuitive, as several authors have documented a friction between artists and businessmen in the film industry (MacDonald, 1957; Holbrook, 1999). Associating hypotheses 11 and 12 and offering thus to reconcile commercial success with artistic recognition is therefore voluntarily challenging. With the use of the concept of irreversible commitment as a catalyst of other strategic resources and a mediating variable, it is one of the major originalities of the proposed framework.

METHODS

Research Design

Along the lines of Rouse and Daellenbach's (1999, 2002) and Levitas and Chi's (2002) suggestions, the present research uses secondary data sources. Its sample of 2080 films covers more than half of the population of 2751 films released for the first time on the American domestic theatrical market from 1988 to 1997 (Quigley, 1986-1998; MPAA, 2003). The "best performers only" selection bias identified by Montgomery (1995) and Rouse and Daellenbach (1999, 2002) is therefore avoided. As Godfrey and Hill (1995: 530) recommend, this analysis is focused on establishing the different resource provisions of a sample of projects undertaken in the same industry and on assessing them at the scale of whole populations. It does so alongside Hall's (1993) core dimension of reputation relative to the long-term performance differentials of the projects they are allocated to. Its statistical test follows Churchill's (1991) four-step research paradigm: items generation, items purification through exploratory factor analyses, test of the structural relations between latent factors through confirmatory factor analyses and test of the hypotheses. It also abides by the four steps of structural equation modeling (Mulaik & Millsap, 2000). The first three successively involve data reduction through exploratory factor analysis, not unlike Churchill's second step, reliability analyses and substantiation of the convergent and discriminant validity of the statistical models through confirmatory

factor analyses, just like Churchill's third step. Likewise, the fourth and last step is the actual test of the structural hypotheses.

A structural component analysis methodology has been preferred mainly on the grounds that it allows the researcher to simultaneously deal with the design of reliable and valid manifest indicators of latent constructs as well as the test of hypotheses describing relationships between these constructs (Hoyle, 1995; McCallum, 1995; Byrne, 2001). In order to increase the precision of our results and to take full advantage of AMOS 4.0 advanced bootstrapping facility, we have chosen to perform statistical tests exclusively on fully informed data. Following Tsai and Ghoshal (1998), all the structural analyses also apply the 'Maximum Likelihood' (ML) estimation procedure, for several studies clearly show that parameters estimates following the ML procedure remain reliable and valid even in instances of non-normal distribution of the data (see McDonald & Ho, 2002 for a review). Even so, bootstrapping has been used to re-sample the data and therefore better account for the non-normality of their distribution (Arbucke, 1997: 191-193, 523; Byrne, 2001: 267-286).

Manifest Variables Retained to Illustrate the Latent Independent Variables

The commercial reputation of the producer, the director and the leading actors of the film are articulated in the measurement model in four distinct components: brand awareness, experience, specialization and quasi-vertical integration in distribution. Brand awareness has been extensively explored in marketing (Silk & Urban, 1978; Berthon, Hulbert & Pitt, 1997; Kapferer, 2001). Busson (in Evrard, Busson et al., 1993: 27-28) defines the "Signature Effect" as the commercial potential that can be derived from the reputation of the film director and leading actors. The star system is therefore an immediate outcome of the signature effect. In order to gain in clarity and precision in the identification of the resources at the core of a film's performance, we have chosen to distinguish between the signature effect of the director and of the two leading actors of the movie. The framework estimates the brand awareness or signature effect of the director and leading actors of the film through two manifest constructs. The first one is the cumulated gross box-office of all their movies released in the three years before the film's release date. COMDIR3 thus accounts for the gross box-office revenues of all the films directed by the director and COMSTAR3 for the gross box-office revenues of all the films in which at least one of the two leading actors starred over the past three years.

The choice of a time-span of three years is coherent with the duration of the film primary life cycle in domestic theatres. Indeed, the average time-to-market of a movie in Hollywood is eighteen months, to which the duration of screen exhibition, which can range from a few days to a full year, is then added. Three year is also the interval chosen by Mintzberg and McHugh (1985) and Jones and Hesterly (1995) in similar studies. It does not reflect however differences in career cycles of producers, directors and actors. Thus, influential director Stanley Kubrik, whose last three films 'The Shining' (1980), 'Full Metal Jacket' (1987) and 'Eyes Wide Shut' (1999) were respectively released with a seven and a twelve-year interval, is by definition excluded from the COMDIR3 three-year estimates. We therefore complement this manifest indicator as well as COMSTAR3 with COMDIR_P and COMSTA_P, which respectively account for the gross box-office of

the penultimate film of the director and of the two leading actors, regardless of its release date. Simonet (1977) similarly assesses the reputation of the main participants in a film project as the gross box-office revenues of their previous movies. Litman (1983), Prag and Cassavant (1994), Sochay (1994) and Swami, Eliashberg and Weinberg (1999) also take into account the market power of star actors in their models. Last, Angelmar and Pras (1984) define the leading actors' and director's "pull power" at the intermediary level of the film's foreign domestic distributors. Other criteria used to estimate star market power rely on the annual publication of rankings of Hollywood most influential players as Weekly Variety's Power Index (Sawhney & Eliashberg, 1996; De Vany & Walls, 1996; Neelamegham & Chintagunta, 1999) and Hollywood Reporter's Star Power Index (Zufryden, 2000). These rankings have however been discarded from the present study, mainly due to their limitation to 100 stars only and to the lack of transparency of the methodologies used to set them up.

The second component of the commercial reputation of the producer, director and leading actors of the film is their past experience. In addition to signaling a growing command of their skills, it also increases their public exposure, reinforces their recognition by general audiences and ultimately strengthens their commercial reputation. In the beer and café industry, Thomas (1995) demonstrated that the firm with the best-known brand was most able to introduce new products in line with the evolutions of demand. Extrapolating this conclusion to the film industry leads to hypothesize that the strategic players whose commercial reputations are the highest are those who get contacted most for new projects. Presumably, their brand images allow them to increase the film's potential for commercial success while limiting the economic and financial risks associated with its production. Several RBV empirical works also take into account the professional track record of top executives (Eisenhardt & Schoonhoven, 1996; Miller and Shamsie, 2001), employees (Pennings, Lee & Van Witteloostuijn, 1998) and shareholders (Brush and Chaganti, 1998) estimated according to the number of years spent in their position or industry. Chen (1996) and Mowery, Oxley and Silverman (1996) analyze the R&D experience of partners within strategic alliances. Markides and Williamson (1996) also measure the experience of production processes of several American manufacturing companies as a function of their percentage of made-to-order products. In the context of Broadway shows, Reddy, Swaminathan and Motley (1998) demonstrate the positive influence of the past experience of actors, authors and directors on attendance and total box-office. In the film industry, Simonet (1977) defines the experience of the producer, director, scriptwriter and three leading actors according to the number of films they contributed to in the past and confirms the influence of leading actors' past experience on movie rentals. NB_PROD3 hereby estimates the number of film projects the producer led as first producer quoted in the credits in the three years before the film's release. In the same way, NB_DIR3 and NB_STAR3 measure the number of films directed by the director and starred in by at least one of the two leading actors in the three years preceding the film's release.

Specialization is the third component of commercial reputation. Following Akerlof (1970), Aaker (1990) recognizes the importance of well-known brand names in reducing the commercial risks associated with the

launch of new products. He nevertheless insists on the need to use a brand with parsimony to avoid tarnishing it. Increased specialization also limits opportunities for further expansion (Court, Leiter & Loch, 1999: 108). This is also true of movie stars, who develop strong path dependencies, most notably in specific roles and film genres, and may consequently hamper their diversification attempts. SPEPROD3 assesses the generic specialization of the producer through the percentage of films managed in the three years before a film's release that were of the same genre as the latter. Similar indicators were constructed for the director and leading actors of the movie, but were dropped following the preliminary exploratory factor analyses. SPEPROD3 is expressed in percentage in order not to make it a sub-category of NB_PROD3, as this would have the effect of artificially increasing the correlations between them. Defining generic specialization as a manifest indicator of commercial reputation echoes Penrose's (1960) attempts to identify the Hercules Powder Company's domains of specialization. However, to our knowledge, no similar definition or measure of generic specialization currently exists in the empirical literature on the film industry.

The fourth and last component of the commercial reputation dimension is the quasi-vertical integration in distribution of the film producer. It is defined as the number of past collaborations of this key participant with the distributor most involved in the film project both in terms of P&A and geographic coverage. T_PDist3 therefore estimates the number of joint projects, in the three years before a film's release, between its producer and its distributor. T_PDist3 rarely illustrates real collaborations, but rather the distributor's willingness to invest in the movie on the basis of the creative and production teams associated with it. As they are both to a great extend assembled by the film's producer, T_PDist3 qualifies as an indicator of its commercial reputation.

Artistic reputation depends on the esthetic evaluation of outward appearance and message. These nevertheless do not apply to the film itself, but rather to the movies that the producer, director and leading actors have worked on in the past. As detailed in the first section of the paper, film-based artistic reputation is hereby introduced as a single latent construct illustrated by two manifest variables. Using two manifest variables only to illustrate a single latent construct conforms to the measurement norms of structural equation modeling. Indeed, McDonald and Ho (2002: 67) remark that a prerequisite for a measurement model to be identified is that each independent latent variable be linked to at least two pure indicators, i.e. two manifest variables that are indicators of one single latent variable only. In the case of film-based artistic reputation, the first of them is the past artistic recognition of the main participants in the film project. It is defined as the legitimate institutional or peer assessment of their past artistic performance and assessed as a function of the total number of nominations and awards obtained in the past by the producer, director and two leading actors of the movie in one emblematic and highly influential event. Namely, the annual Academy Awards Ceremony. Every year since 1929, 5607 industry professional who have explicitly requested to become Academy of Motion Picture Arts and Sciences (AMPAS) members vote in twenty-four categories and in two rounds (nominations in January, awards in March) for films first released on the American domestic market during the previous calendar year. Each profession votes for their own, except for the best foreign-language

film, documentary feature and film of the year which all AMPAS members are asked to designate regardless of their line of business. Therefore, as Holbrook (1999: 149) remarks: "it appears reasonable to take the annual Academy Awards as a formalized expression of industry opinion regarding the reputation for excellence that a film enjoys within the relevant cultural field. Thus, despite various possible distortions and biases in the awards process, scholarly opinion tends to regard the Oscars as 'an *institutionalized* measure of film quality' or a 'legitimate yardstick of film excellence'". The "possible distortions and biases" mentioned by Holbrook (1999) are hard to avoid, even though they are increasingly monitored (AMPAS, 2002). They take the form of print advertising, promotional items and lobbying organized by the studios in order to get their films in the Oscar race.

STOCKNOM3 estimates the total number of Oscar nominations received during the three years before the release of the movie by its producer in the feature film, documentary and foreign-language film categories, by its director in the directing category and by its two leading actors in the acting and supporting role categories. OCE_TR3 is the transformation rate of those nominations in actual awards over the same time period. Here again, it is a percentage ratio rather than the actual number of awards received by those participants in order to avoid artificially inflating its correlation to STOCKNOM3. Previous empirical studies have used similar indicators (Simonet, 1977; Litman, 1983; Smith & Smith, 1986; Dodds & Holbrook, 1988; Prag & Cassavant, 1994; Sochay, 1994; Miller & Shamsie, 1996; Holbrook, 1999; Ravid, 1999; Nelson et al., 2001). Several authors also rely on critical reviews as predictive variables of film commercial success (Austin, 1984; Litman, 1983; Mahajan et al., 1984; Hirschman & Pieros, 1985; Litman & Kohl, 1989; Wyatt & Badger, 1990; Wallace et al., 1993; Sochay, 1994; Sawhney & Eliashberg, 1996; Eliashberg & Shugan, 1997; Ravid, 1999; Zufryden, 2000). However their results are often conflicting. Defining film reviews as independent variables, i.e. at the same level of analysis as other variables of the film's creative sphere, also seems inappropriate, for they largely depend on the latter and should therefore at best be mediating or dependent variables. Last, they tend to be global and to fail to differentiate between the different contributors of the movie. It is also difficult to objectively select between the most influential critics. Accordingly, their reviews are not taken into consideration in the present study.

Manifest Variables Retained to Illustrate the Mediating and Dependent Variables

Of all the irrecoverable commitments previously defined, the production budget is by far the most tangible, measurable and obvious. It also signals the mobilization and combination of free-lance talent resources. It is only after the contracts of those independent participants are signed and the budget is locked in that production can really be set in motion and that the film starts to exist. As Sedgwick and Pokorny (1998: 202) note in the context of their study of Warner Bros.' production strategy, "Annual production budgets are the relevant costs when examining issues concerned with strategy formulation. They can be interpreted as reflecting ex ante decisions about the scale of annual film production". Just like Miller and Shamsie (1996, 2001) they aggregate production budgets at the level of analysis of the film production company. Their remark nevertheless remains relevant at the film level of analysis. Following Litman (1983), Blumenthal

(1988), Robins (1993), Prag and Cassavant (1994), Zufryden (2000) and Ravid (1999), we hereby define the manifest variable BUDGET as the total production cost of the film, excluding all investments in P&A. BUDGET being the single manifest variable illustrating the concept of irreversible commitment, it is equated to it in the statistical test of the model (McDonald & Ho, 2002).

Domestic box-office figures are often used to assess the commercial performance of the film itself (Simonet, 1977; Kindem, 1982; Litman, 1983; Hirschman & Pieros, 1985; Linton & Petrovich, 1988; Dodds & Holbrook, 1988; Litman & Kohl, 1989; Wyatt & Badger, 1990; Prag & Cassavant, 1994; Sochay, 1994; Sawhney & Eliashberg, 1996; Eliashberg & Shugan, 1997; Ravid, 1999; Zufryden, 2000) or of its distributors (Robins, 1993; Miller & Shamsie, 1996; Sedgwick & Pokorny, 1998). Other authors measure film commercial performance with domestic attendance (Austin, 1984; Mahajan et al., 1984; Litman & Kohl, 1989; Zufryden, 1996; De Vany & Walls, 1996, 1997; Neelamegham & Chintagunta, 1999). Box-office results and attendance are clearly the two sides of the same coin. FILM1, the first manifest indicator of latent variable "film commercial success", estimates the total domestic box-office of the movie throughout its theatrical run. In the film industry, this choice is comparable to that of the organization's sales volume made by Powell (1996), Mosakowski (1997) and Capron (1999). A few studies also take into account in their definition of their dependent performance variable the film's total box-office per week (De Vany & Walls, 1996, 1997; Walls, 1998; Zufryden, 2000) and movie theatre (Nelson et al., 2001). Others focus on the film's total box-office during its first weekend (Eliashberg & Shugan, 1997) or three weeks (Sawhney & Eliashberg, 1996) of release. The former is most certainly influenced by the initial P&A associated to the release. Even so, it gives a relatively independent account of the immediate effects of word-of-mouth on a film's commercial success and an interesting estimate of its blockbuster potential. The second manifest indicator of a film's commercial success is consequently defined as its total domestic box-office during its first weekend of release (WEGROSS1). By definition, WEGROSS1 is a sub-sample of FILM1. Yet, both variables are not linked by a linear mathematical relationship. Using both FILM1 and WEGROSS1 and not, as in most previous studies, a single manifest construct to illustrate "film commercial success" allows accounting for the short and long term components of performance. It also illustrates the complexity of the commercial dimension of performance.

Artistic recognition could be estimated through the film's popularity with general audiences. This would however duplicate the commercial success indicators and would signal an implicit correlation between both constructs that still remains to be tested. Another possible assessment of the film's artistic recognition could be its insertion in rankings of "best" or "favorite" movies and its symbolic inclusion in the worldwide film heritage. In 1998, the American Film Association contacted 1500 American film professionals and offered them to select, within a list of 400 films, the best American movies produced between 1896 and 1996 (AFI, 2002). Among the films that made it to the top 100, only eight were released after 1988 and could be included in our empirical study. Also, for the same reasons as those mentioned in the definition of the manifest variables illustrating artistic reputation, critics' reviews are not taken into account in the empirical

characterization of film artistic recognition. The latter closely mirrors the former and is defined as institutional recognition of the film by selected peer and professional groups. NOMTOT is hence the total number of Academy Awards nominations received by the film in the year following its release in all 24 categories. OCETRANS is the transformation rate, in percentage, of these nominations into actual Oscars.

Control variables

The year of release, nationality, genre, screen coverage and month of release of the film are used as control variables to complement analyses of the core model.

Sample, Data Collection and Statistical Methods

The database created in the course of the present research program encompasses 2965 movies first released in the USA and Canada between 1986 and 1997 included. They account for 73% of the total population of films releases over this twelve-year period (Quigley, 1986-1998; MPAA, 2003). Among them, 2751 were released between 1988 and 1997. They represent 67% of the total releases over this decade. Among the 2751 films first released from 1988 to 1997, 51% (2080) have no missing data.

Financial details on film production and P&A expenses are typically highly confidential. Several authors, including Sawhney and Eliashberg (1996), state explicitly that they have excluded them from their analysis because of the prohibitive cost of their acquisition. Also, financial information passed on to trade papers is not always accurate, as the studios often use it to direct their competitors' watch. All financial data used in the study were collected from the Los Angeles investment banking services firm Houlihan, Lokey, Howard and Zukin (HLHZ), whose competence in film finance and enthusiasm for the research permitted a close collaboration with the author. Other secondary sources were explored to gather most of the qualitative information needed, in particular on the past work experience of the main participants in the film projects and on their Academy Awards and nominations over the years. They include leading trade papers "Variety" and "Hollywood Reporter", yearly "Quigley Entertainment Almanacs" and the IMDB and AMPAS websites. The methodology followed for cross-checking all qualitative data was to randomly select 20 % of the whole film database and to check if the names of the director, leading actors, production and distribution company as well as the genre of the movie mentioned in the trade papers, Quigley almanacs and websites were the same as those listed in the core HLHZ database. Whenever this information was not available in the latter, data triangulation was secured amongst those supplementary data sources only.

ANALYSIS AND RESULTS

Following the example of earlier longitudinal studies (Robins, 1993; Miller and Shamsie, 2001; Nelson et al., 2001), all financial data were converted to constant 1988 dollars in order to account for inflation. Also, all variables associated with the leading actors of the film were aggregated to avoid duplication. FILM1, NB_DIR3, NB_STAR3, OCE_TR3 and OCETRANS, five variables with highly skewed distributions, had their values replaced by their Naperian logarithm. Last, all manifest variables were standardized in order to

facilitate their comparison and the interpretation of the structural equation results (McDonald & Ho, 2002: 69). I subsequently used Judd and Kenny's (1981) and Baron and Kenny's (1986) criteria to estimate the hypothesized mediation effects in the model. Those further preliminary tests were carried out in the form of regression analyses. They confirmed that all mediated independent variables were correlated with the two dependent variables and with mediating variable BUDGET, and that the latter also had an effect on both commercial success and artistic recognition.

Twenty-three manifest variables were first generated from exploratory interviews and literature reviews. They were cutback to nineteen after principal component analyses. The consecutive tests of the convergent and divergent validity of the model using confirmatory factor analyses led to the exclusion of a further three. All remaining sixteen variables have been introduced in the Methods section of this paper. The reliability of those constructs was examined using both Cronbach's Alpha and Joreskog's Rho. Table 1 presents the results of those reliability analyses and of the final principal components analysis[1]. The first four factorial axes retained to describe the four independent variables of the theoretical model explain 75.30% of its total variance, whereas the two factors retained to illustrate its dependent variables explain 88.66% of it. The internal validity of the six constructs is also confirmed by their Cronbach's Alphas and Joreskog's Rho. They all are above the respective thresholds of 0.60 and 0.70 usually recommended (Churchill, 1991).

TABLE 1
Main Results of the Final Principal Components [a] and Reliability Analyses

Latent Variables	Expected Combination	Expected Sign	Achieved Combination	Achieved Sign	Coefficient	Communality	Reliability indexes
Commercial Reputation of the Producer	COMPROD3	+					α = 0.85
	COMPRO_P	+					ρ = 0.83
	SPEPROD3	+	SPEPROD3	+	0.823	0.685	
	NB_PROD3	+	NB_PROD3	+	0.922	0.861	
	T_PDist3	+	T_PDist3	+	0.885	0.787	
Commercial Reputation of the Director	COMDIR3	+	COMDIR3	+	0.915	0.878	α = 0.82
	COMDIR_P	+	COMDIR_P	+	0.858	0.775	ρ = 0.81
	SPEDIR3	+					
	L_NBDIR3	+	L_NBDIR3	+	0.732	0.576	
	T_DDist3	+					
Commercial Reputation of the Leading Actors	COMSTAR3	+	COMSTAR3	+	0.860	0.819	α = 0.80
	COMSTAR_P	+	COMSTAR_P	+	0.870	0.779	ρ = 0.77
	SPESTAR3	+					
	L_NBSTA3	+	L_NBSTA3	+	0.735	0.572	
	T_ADist3	+					
Artistic Reputation of the Film	STOKNOM3	+	STOKNOM3	+	0.855	0.773	α = 0.67
	L_OCETR3	+	L_OCETR3	+	0.874	0.778	ρ = 0.76
	STKCANF3	+					
Film Commercial Success	L_FILM1	+	L_FILM1	+	0.947	0.924	α = 0.91
	WEGROSS1	+	WEGROSS1	+	0.963	0.928	ρ = 0.92
Film Artistic Recognition	NOMTOT	+	NOMTOT	+	0.917	0.848	α = 0.82
	L_OCETRA	+	L_OCETRA	+	0.919	0.846	ρ = 0.83
	CANFTOT	+					

[a] n = 2080, Principal Components Analysis results computed after Varimax Rotation.

[1] Details of all analyses reviewed in the paper are available from the author on request.

The general empirical test of the theoretical model introduced above and pictured in figure 1 were carried out on the total sample of 2080 films released in the United-States and Canada from 1988 to 1997 without missing data. This theoretical population is evenly distributed along the ten years under study and extremely homogeneous: among those 2080 films, 1784 are American and 296 foreign. To the noticeable exception of H5, H10 and H12, all hypotheses in the theoretical model were validated. Table 2 exhibits the correlation matrix of all manifest variables in the model[2].

[2] All of these variables being standardized, table 2 does not list their means and standard deviations.

TABLE 2
Correlations among the Items using Full Sample [b]

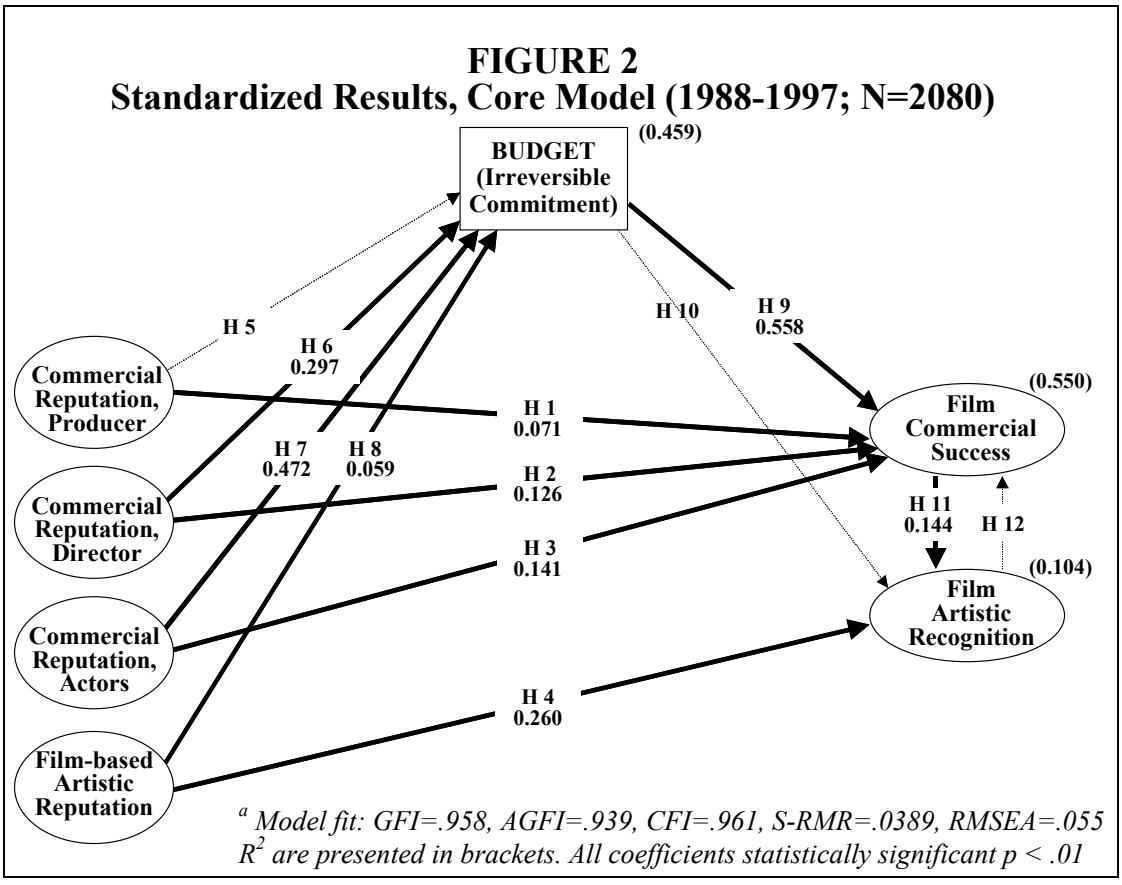
Correlation	NB_PROD3	SPEPROD3	T_PDIST3	COMDIR3	COMDIR_P	L_NBDIR3	COMSTAR3	COMSTA_P	L_NBSTA3	L_OCETR3	STOKNOM3	BUDGET	L_FILM1	WEGROSS1	NOMTOT
NB_PROD3	1														
SPEPROD3	0.656**	1													
T_PDIST3	0.778**	0.55**	1												
COMDIR3	0.117**	0.102**	0.087**	1											
COMDIR_P	0.13**	0.115**	0.091**	0.797**	1										
L_NBDIR3	0.094**	0.084**	0.045*	0.584**	0.428**	1									
COMSTAR3	0.106**	0.045*	0.083**	0.4**	0.369**	0.292**	1								
COMSTA_P	0.084**	0.029*	0.084**	0.303**	0.299**	0.202**	0.742**	1							
L_NBSTA3	0.106**	0.05*	0.075**	0.239**	0.222**	0.289**	0.531**	0.454**	1						
L_OCETR3	0.039*	0.033†	0.032†	0.137**	0.117**	0.136**	0.215**	0.17**	0.146**	1					
STOKNOM3	0.143**	0.091**	0.088**	0.18**	0.159**	0.22**	0.263**	0.173**	0.223**	0.55**	1				
BUDGET	0.122**	0.086**	0.105**	0.49**	0.49**	0.348**	0.59**	0.455**	0.38**	0.182**	0.24**	1			
L_FILM1	0.159**	0.162**	0.141**	0.438**	0.426**	0.298**	0.493**	0.419**	0.271**	0.145**	0.144**	0.67**	1		
WEGROSS1	0.138**	0.123**	0.127**	0.403**	0.401**	0.232**	0.461**	0.407**	0.225**	0.085**	0.076**	0.649**	0.832**	1	
NOMTOT	-0.03†	-0.021 (n.s.)	-0.028 (n.s.)	0.097**	0.077**	0.082**	0.073**	0.047*	0.045*	0.169**	0.273**	0.161**	0.23**	0.048*	1
L_OCETRA	-0.059**	-0.025 (n.s.)	-0.033†	0.049*	0.059**	0.022 (n.s.)	0.031†	0.015 (n.s.)	-0.006 (n.s.)	0.096**	0.158**	0.088**	0.177**	0.026 (n.s.)	0.695**

[b] n = 2080. Correlations where computed by the SPSS program using the measurement model.

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

Figure 2 displays the standardized coefficients of the core structural model and table 3 shows the detailed results of the model specification process. As shown in both of them, all the model parameters that have not been constrained to zero are statistically significant ($p<.01$) and all the relative fit indexes are above 0.94, indicating strong evidence of practical significance. Also, the RMR and RMSEA are below the thresholds of 0.05 and 0.06 respectively recommended by Byrne (2001) and Hu and Bentler (1999). Last, all the signs of the model parameters were accurately hypothesized. A ML bootstrapping procedure run on 500 random samples also confirm that on large enough samples, the results of ML procedures stay stable even if data distributions are significantly skewed (Browne, 1984; Muthen & Kaplan, 1985, 1992; Browne & Shapiro, 1988; Anderson, 1989; Amemiya & Anderson, 1990; Chou et al., 1991 and Satorra & Bentler, 1994). Whereas no hypothesis is significantly rejected, three are statistically non-significant. H5, H10 and H12 consequently appear in dotted lines in figure 2 and were successively constrained to zero in the preliminary steps of model specification.

FIGURE 2
Standardized Results, Core Model (1988-1997; N=2080)



Results of the structural analyses are examined in order of importance of their contribution to the RBV and to the understanding of the American film industry. Accordingly, those confirming the mediating role of irreversible commitment in assessing film performance are first explored, and the novel hierarchy and dynamics of key players in a film project that they bring to light are revealed. The interactions between the commercial and artistic dimensions of performance are then exposed. Results of complementary multigroup and alternative control analyses are last reviewed.

TABLE 3: Results of Structural Equation Modeling [c]

MEASUREMENT MODEL	
Regression Coefficient, Latent Variable - Manifest Variable [d]	
SPEPROD3	0.714** (0.679)
NB_PROD3	1 (0.960)
T_PDIST3	0.874** (0.809)
COMDIR3	1 (0.974)
COMDIR_P	0.834** (0.817)
L_NBDIR3	0.561** (0.594)
COMSTAR3	1 (0.951)
COMSTA_P	0.810** (0.779)
L_NBSTA3	0.510** (0.559)
L_OCETR3	0.601** (0.570)
STOKNOM3	1 (0.965)
L_FILM1	1 (0.944)
WEGROSS1	0.932** (0.882)
NOMTOT	1 (1)
L_OCETRA	0.716** (0.696)
Covariances (correlations) between independent variables	
Commercial reputation of producer - commercial reputation of director	0.137** (0.130)
Commercial reputation of producer - commercial reputation of leading actors	0.118** (0.118)
Commercial reputation of producer - film-based artistic reputation	0.143** (0.144)
Commercial reputation of director - commercial reputation of leading actors	0.473** (0.434)
Commercial reputation of director - film-based artistic reputation	0.213** (0.197)
Commercial reputation leading actors - film-based artistic reputation	0.290** (0.283)
Error terms: $e_{33\ (L\_NBDIR3)}$-$e_{43\ (L\_NBSTAR3)}$	0.111** (0.177)
STRUCTURAL MODEL [d]	
H1: Commercial reputation producer → Film commercial success	0.070** (0.071)
H2: Commercial reputation director → Film commercial success	0.114** (0.126)
H3: Commercial reputation leading actors → Film commercial success	0.135** (0.141)
H4: Film-based artistic reputation → Film artistic recognition	0.266** (0.260)
H5: Commercial reputation producer → Irreversible commitment	Constrained to zero
H6: Commercial reputation director → Irreversible commitment	0.281** (0.297)
H7: Commercial reputation leading actors → Irreversible commitment	0.469** (0.472)
H8: Film-based artistic reputation → Irreversible commitment	0.059** (0.059)
H9: Irreversible commitment → Film commercial success	0.535** (0.558)
H10: Irreversible commitment → Film artistic recognition	Constrained to zero
H11: Film commercial success → Film artistic recognition	0.153** (0.144)
H12: Film artistic recognition → Film commercial success	Constrained to zero
SQUARE MULTIPLE CORRELATIONS (R^2)	
Budget	0.459
Film commercial success	0.550
Film artistic recognition	0.104
FIT INDEXES	
X^2	833.501
Degrees of Freedom	116
Number of parameters	52
RMR	0.042
S-RMR	0.0389
GFI	0.958
AGFI	0.939
NFI	0.955
RFI	0.940
IFI	0.961
TLI	0.948
CFI	0.961
RMSEA	0.055
- lower bound	0.051
- upper bound	0.058
P test for close fit	0.015

[c] n = 2080.

[d] Items in parentheses are standardized values.

† p<.10; * p<.05; ** p<.01

Irreversible financial commitment has a strong and positive direct effect on film commercial success (H9: 0.558, p<.01)[3]. However, its influence on artistic recognition, albeit positive, is non-significant. This result illustrates that the most expensive movies are not repeatedly those with the highest artistic recognition at the Oscars. All hypotheses relative to the commercial reputation of the film director and leading actors are illustrated in the model and 1% significant. These two latent variables also share a 43.4% correlation. This result logically implies that the careers of star directors and actors are intertwined, at least over the three-year periods under scrutiny from 1986 to 1997. Direct and indirect effects of the commercial reputation of the two leading actors on film commercial success are also by far the highest of all four independent latent variables in the model. As a consequence, so are the total effects of the commercial reputation of the two leading actors, which amount to 0.404. The total effect of the commercial reputation of the director and the producer follow with values of 0.292 and 0.087 respectively.

Indirect effects of leading actors' and director's commercial reputation on film commercial success are also higher than their direct effects. In other words, a small-budget movie featuring or directed by a star with a high commercial reputation sends weak signals to the American audience. This may be due to the latter's perception of a high degree of specialization amongst blockbuster actors and directors. American moviegoers therefore fail to follow them when they get out of their regular roles and budgets. They might also perceive such films as pet-projects and consequently shun them. As smaller budget films also receive less publicity and are released on fewer screens, they may simply not be aware of a star actor's or director's involvement in such projects. Evidently, these three explanations are not mutually exclusive. The results they build on further illustrate the mediating role of irreversible commitment. They also confirm that whereas resources combinations in a project are at the core of its success, they may become core rigidities when no irreversible commitment is attached to them. This conclusion is in line with Brush and Chaganti's (1998) demonstration that individual as well as collective human and organizational resources are core determinants of performance and that the amount of available resources is less crucial than the quality of their combination relative to industry opportunities and corporate goals.

The commercial reputation of the producer has a direct and statistically significant impact on the film's commercial success (H1: 0.071, p<.01)[4]. Yet, its link to irreversible commitment proves non-significant (H5). Table 3 also shows that all covariances and correlations of this variable to the other independent latent constructs in the model are positive and 1% significant. These results confirm the key role of the producer as a behind the scenes talent and resources assembler and coordinator. However, the relatively weak standardized coefficient attached to H1 demonstrates that the producer's identity tends to remain unbeknownst to the film's audience. In the same way, the irreversible commitment in the movie is far more dependent on the artistic, managerial and technical teams that the producer is able to put together in the film

[3] Total effects are calculated by multiplying indirect effects and adding direct effects to this product.
[4] All statistically significant parametres are mentioned here and in the rest of the paper as standardized values.

project than on his brand name and commercial reputation. This partially explains the non-significance of H5.

Film-based artistic reputation has the highest direct effect on its artistic recognition (H4: 0.260, p<.01). This result confirms the existence of a strong path dependence of nominations and awards. Artistic reputation has nonetheless a much lesser effect on irreversible commitment (H8: 0.059, p<.01). Indeed, the fees of Academy Award 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). Moreover, the non-recursive link between film commercial success and artistic recognition formed by hypotheses H11 and H12 proves inconclusive. H11, according to which the more commercially successful the film, the higher its artistic recognition, is significant (0.144, p<.01), whereas H12, which states that the higher the artistic recognition of the film, the more commercially successful, isn't. This last result confirms the status of American cinema as first and foremost an industry, in which artistic recognition is not independent from commercial success but significantly follows and corroborates it. It is also reflective of the chronological sequence of initial theatrical release, then Oscar nomination and eventually Academy Award. Last, the R^2 of 0.104 associated with "film artistic recognition" is significantly weaker than those of "irreversible commitment" (R^2=0.459) and "film commercial success" (R^2=0.550). This is yet another manifestation of American filmgoers' and entertainment professionals' institutional assessment of cinema as predominantly an industry.

Two multigroup analyses and three alternative models introducing specific control variables were used to supplement these general conclusions. A first multigroup chronological analysis carried out yearly (as in Smith & Smith, 1986) and by triennials shows in particular that the mediating role of irreversible financial commitment appears to get stronger over time. This indicates that the leading actors with the highest commercial reputation are increasingly cast in big budget movies over the 1988-1997 decade. Film budgets also rise in line with their fees and revenues anticipated by producers from casting them. The growing and significant positive coefficient associated with H9 reveals that these expectations increased from 1988 to 1997: at the end of the 1990's, the more expensive the films, the more commercially successful they become. This last conclusion reinforces the cycle of specialization of leading actors in blockbusters. It also reflects the escalation in average negative costs of MPAA member companies, from $17.5 million in 1986 to $53.4 million in 1997 (MPAA, 2003). By 1997, American cinema has clearly become a blockbuster economy. This tendency has been confirmed in the past five years, with average negative costs increasing to $58.8 in 2002 (MPAA, 2003). Conversely, the impacts of film-based artistic reputation on film artistic recognition (H4) and of film commercial success on film artistic recognition (H11) decline quite substantially over the ten years under study. Thus, the model explains only 6.3% of the variance of this latter construct (R^2) after 1994, against 15.9% between 1988 and 1990 and 13.9% between 1991 and 1993. These concomitant phenomena can be attributed to a renewal of creative forces over the decade.

A second multigroup analysis based on the nationality (also used by Holbrook, 1999, as an independent variable) of the total theoretical population complements the first. Non-American films account for 14% of it and are therefore slightly over-represented. Yet, their analysis exposes some of the preferences and attitudes of American moviegoers. The correlation path between film-based artistic reputation and film artistic recognition (H4) is weaker for American films than for the whole theoretical population (0.187 versus 0.260, $p<.01$) and for foreign films (0.187 versus 0.321, $p<.01$). Not surprisingly, the path dependence of nominations and awards is thus stronger for foreign films on the American domestic market than it is for local productions. Indeed, creative talent renewal is slower in the foreign sub-sample, as most of the films that get exported to the United-States feature well established and regularly nominated producers, directors and actors. AMPAS members therefore tend to regularly cast their votes on familiar names. Besides, the commercial success of those movies remains mostly dependent on the commercial reputation of their two leading actors (H3), who are used by American moviegoers as indicators of their overall appeal. As the latter predictably know less overseas than local artists, the total effects of the commercial reputation of the leading actors on film commercial success are higher for foreign (0.567, $p<.01$) than for American films (0.371, $p<.01$). Most of those movies have been short-listed for exportation to the United-States on the basis of their commercial success and artistic recognition in their own domestic markets. As they are fewer in numbers and often amongst the most expensive films produced in their home countries, "irreversible commitment" is less discriminant for them than for their American counterparts.

Analyses of the effects of supplementary control variables were also carried out by directly introducing them into the theoretical model after checking that it did not substantially modify its structure. Three control variables were independently introduced in the structural model. The first is the genre of the film (as in Sawhney & Eliashberg, 1996; whereas Austin, 1984; Litman, 1983; Linton & Petrovich, 1988; Litman & Kohl, 1989; Holbrook, 1993, 1999; Eliashberg & Sawhney, 1994; Sochay, 1994; Prag & Cassavant, 1994; De Vany & Walls, 1996; Zufryden, 1996, 2000; Eliashberg & Shugan, 1997; Neelamegham & Chintagunta, 1999; Swami et al., 1999 define it as an independent variable) and did not prove statistically significant. The second is the number of screens the film was first released on (as in Sochay, 1994 and Neelamegham & Chintagunta, 1999; whereas Zufryden, 1996, 2000; De Vany & Walls, 1996, 1997 and Nelson et al., 2001 use this indicator weekly and Eliashberg & Shugan, 1997 and Zufryden, 2000 consider it only at the peak of the film's theatrical run). Following Krider and Weinberg (1998), the third control variable is the film's month of release (also in Austin, 1984; Litman, 1983; Litman & Kohl, 1989; Wallace et al., 1993; Sochay, 1994 and De Vany & Walls, 1997; who use it as an independent variable and Ravid, 1999; Zufryden, 2000 and Nelson et al., 2001; who substitute it for a seasonality index).

Not surprisingly, the introduction of screen coverage as a control variable confirms that the more reputation resources and irreversible commitment are associated to the film, the more initial screen coverage it gets. This result supports those of studies of product reputation (Klein & Leffler, 1981; Milgrom & Roberts, 1986). It also corroborates that the more screens the film is released on, the more likely it is to generate box-

office revenues. It consequently validates the common industry practice of blitz distribution, which consists of simultaneously releasing a potential blockbuster on a maximum number of screens (De Vany & Walls, 1996). In particular when preliminary test-screenings have not been fully satisfactory, blitz distribution turns the film release into a full-scale promotional event, allowing its producers and distributors to cash in on their investments before negative word-of-mouth and reviews gradually sap its box-office intakes. Last, the introduction of the film's month of release as a control variable confirms the important seasonality of the American theatrical market and illustrates the industry practice of selecting a film's release date according to its budget and box-office potential. The positive and significant correlation between a film's release month and artistic recognition (0.099, $p<.01$) also substantiates that the later the film is released in the year, the more likely it is to be nominated for an Academy Award in January and ultimately to win it.

DISCUSSION AND CONCLUSION

The research investigated several sources of film commercial success and artistic recognition based on the artistic and commercial reputations of four key stakeholders: the producer, director and two leading actors. Twelve hypotheses exploring for the first time the relationships between reputation resources, irreversible commitment and performance were articulated in a structural equation model, which was then tested on an exhaustive sample of 2080 films released in the United States and Canada from 1988 to 1997. The results of this first test were complemented by two further multigroup analyses and three control analyses. They lead to three main sets of conclusions.

The first set of conclusions of particular importance confirms the mediating role of irreversible commitment 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 most recent theoretical developments of the resource-based and relational views of strategy (Dyer & Singh, 1998) and accurately reflects the project-based nature of film production. Last, it allows for a novel and precise operationalization of irreversible commitment in each film project as a mediating variable and a catalyst of the influences of commercial and artistic reputation resources on its performance. This constitutes an important and original theoretical contribution. Resource combinations associated with a film project are at the source of its success. However and increasingly so in the course of the decade under study, they run the risk of turning into core rigidities and impede the latter if they are not coupled with some form of irreversible commitment. Indeed, moviegoers do not perceive the reputation resources involved in the film project in the same way when they are associated to an irreversible commitment, and tend to opt out whenever high commercial reputations are not coupled with high budgets. These conclusions corroborate the existence of the novel hierarchy of strategic assets suggested in the first part of this paper. Primary commercial and artistic reputation resources secure the implication of a flow of irreversible commitment that is mostly financial and necessary to bring forth the film project and set its production dynamics in motion. It also reveals that reputation resources have no worth per se. Their value is co-created through their interactions and combinations and through their association with irreversible commitment. In the long run, all those interactions trigger the conversion of those static resources into

dynamic capabilities. Besides, resources are not all equal in importance or activated simultaneously in the project.

This leads directly to the second set of conclusions of the research. They relate to the internal dynamics of the film project and to the respective roles of the leading actors, producer and director in its realization. The prevalence of the coefficients associated with H3 (the stronger the commercial reputation of the leading actors, the higher the film commercial success) and H7 (the stronger the commercial reputation of the leading actors, the higher the irreversible commitment in the film) in all models places star performers at the forefront of the Hollywood film business. Regardless of a film's nationality, leading actors constitute the main incentive for American moviegoers to see it and for film financiers to invest in it. The latter rely on their familiarity with the former to assess ex-ante the appeal of film projects, and accordingly decide to invest in them upstream. Moreover, the use of irreversible commitment as a mediating variable of film commercial performance casts new light on the relationship between those two constructs and the commercial reputation of the two leading actors. Estimating whether the commercial success of the past films of the leading actors, which constitutes one of the factors illustrating their commercial reputation, actually leads to the commercial success of their latest film or merely to an increase in their acting fees can be problematic. This research did not aim at identifying a saturation threshold. It confirms however the existence of a positive, direct and significant impact of the commercial reputation of a film's leading actors on its commercial success.

The third and last major set of conclusions this paper draws on relates to hedonic consumption and to the institutional value system of American cinema. In order to account for the dual definition of cinema as both an art and an industry, the concept of performance hereby developed is two-fold. Its first dimension, commercial success, is a classical assessment of short-term and total box-office results. The second one is innovative and estimates the peer-based, institutional recognition of the movie at the Academy Awards. Although these ceremonies arguably signal political and institutional networks at least as much as they reflect artistic achievements, this second dimension of artistic recognition is used in the model as a proxy of artistic performance. Taking two dimensions into consideration considerably enriches the concept of performance by allowing for part of its complexity (Coff, 1999), especially in a sector characterized by ubiquitous hedonic and symbolic components. It also leads to conclusions that a unique categorization of performance would not have permitted, and that have important bearings on the depiction of the dominant value system of American film professionals and audiences. In particular, the non-significance of H10 (the higher the irreversible commitment in the film, the stronger its artistic recognition) reveals that even in a blockbuster economy characterized over the ten years under study by a sharp increase in film costs and revenues, film budget has no direct significant influence on artistic recognition. Yet this conclusion is fairly misleading, for the indirect impact of a film's irreversible commitment on its artistic recognition mediated by its commercial success stays high in all estimated models. Associated with the non-significance of H12 (the higher the artistic recognition of the film, the more commercially successful it is), these results point out to a

value system that is clearly dominated by economic rationales. Thus, the strong significance of H9 (the higher the irreversible commitment in the film, the more commercially successful it is) and H11 (the more commercially successful the film, the higher its artistic recognition) in all models confirm that the most expensive films are also those which generate the highest box-office revenues, and that the films with the highest box-office revenues also get the highest artistic recognition. American 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 box-office revenues and artistic recognition. The non-significance of H12 further indicates that American moviegoers will not typically opt for a film on the basis of its artistic recognition. It consequently reinforces shared perspectives on the symbolic and institutional status of American cinema as primarily an industry.

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