The Differing Roles of Success Drivers Across Sequential Channels: An Application to the Motion Picture Industry

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In several product categories, it is typical to release products sequentially to different markets and customer segments. Conventional knowledge holds that the roles of various product success drivers do not differ significantly across these sequential channels of distribution. The authors examine sequential distribution channels within the motion picture industry and develop a model that proposes that such differences exist between a primary (short- and long-term theatrical box office) and a sequential (video rental) channel. The authors test their model with a sample of 331 motion pictures released in theaters and on video during 1999-2001 using partial least squares. Results reveal differences in the impact of success factors across channels. For example, cultural familiarity enhances box office success but relates negatively to video rental success, and distribution intensity and date of release enhance box office outcomes but have no impact on rental revenues.

Keywords: *sequential distribution channels; partial least squares; motion picture success; cognitive categorization; information economics*

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Sequential distribution, a phenomenon that occurs across media and consumer product channels, refers to a firm's products becoming more extensively available to the market over time (Lehmann and Weinberg 2000). Specifically, a product is initially distributed through a restricted set of channels, often tightly controlled by the firm. Over time, distribution through an array of channels makes the product accessible to a wider range of customers. For example, the PowerBar energy bar was introduced in 1997 and sold to endurance athletes through specialized athletic stores. However, by early 2003, nonathletes made up more than 50 percent of PowerBar sales, and availability had expanded into mass retail channels, including discounters (Horovitz 2003).

The motion picture industry relies heavily on sequential distribution; a film debuts in domestic theaters and is later released to wider-reaching domestic channels (e.g., rental stores, cable/satellite TV, network TV) and international markets. In sum, these secondary markets combine to generate higher revenues than the domestic box office. In the United States in 2004, VHS/DVD rental revenues alone were $8.1 billion (Magiera 2004), nearly matching the $9.4 billion from the theater box office during the same period (Boxofficemojo.com 2005).

We argue that the importance of specific success drivers differs across motion picture channels. We examine the relative roles of movie characteristics, postfilming activity by film studios and distributors, and external factors in driving three sequential financial outcomes:

opening-weekend box office revenues, long-term box office revenues, and revenues earned in the rental channel. We begin by providing an overview of prior research on sequential distribution and motion picture success. Next, we draw from information economics (Nelson 1970) and apply insights from cognitive categorization theory (Mandler 1982) to hypothesize differences in the patterns of influence (i.e., box office vs. video success). Using a sample of 331 motion pictures released in the United States from 1999 to 2001, we test the hypotheses and then conclude with implications for practice and additional research.

LITERATURE REVIEW

Sequential Distribution

Diffusion research tends to assume that the number of channels through which a product is distributed needs to rise concomitantly as the degree of diffusion increases (Rogers 1983). However, this literature does not examine sequential channel management or performance drivers and instead focuses on characterizing the pattern and rate of adoption of new products across potential adopters. Media products, in contrast, tend to be released in stages and at different price points to different channels. For example, books are frequently released in hardcover, then in trade paperback, then in mass paperback, and the paperbacks are sold at lower prices. Similarly, video games are often released again after a certain period under a new label (e.g., Platinum series) with a modified cover design and a lower retail price.

By releasing products sequentially through a series of channels, media companies achieve price discrimination and create a sequence of revenue streams. Revenues expand for two reasons. First, media companies tap consumer segments that are reluctant to buy from the primary channel (e.g., visit movie theaters). Second, sequential distribution offers consumers the opportunity to consume a product repeatedly (e.g., rent a movie they saw and liked in the theater). Only two extant studies address sequential distribution explicitly, and neither examines the differing impact of success factors across sequential channels within a domestic market. Lehmann and Weinberg (2000) focused on the optimal time to launch a movie into a second channel. From a nonrandom sample of 35 movies, the authors estimate exponential sales curves for both theater attendance and video rentals and demonstrate how sales parameters from the first channel can predict sales in the second. Generally, their results suggest that movies should be released to video sooner than current practice does. Elberse and Eliashberg (2003) addressed a motion picture's domestic and then foreign market launch, analyzing the interdependencies across and within markets, especially the impact of the time lag between releases. They note that intra- and international sequential distribution differs, in that channel competition is usually limited between countries because of high product transfer costs.

Motion Picture Success

The extant literature on box office success suggests the importance of (1) movie characteristics, (2) postfilming studio actions, and (3) external factors. Movie characteristics discussed in the literature include the attractiveness of the movie's personnel, including its stars (De Vany and Walls 1999), directors, and producers (Hennig-Thurau, Walsh, and Wruck 2001). Another important factor is the movie's cultural familiarity, or the extent to which a movie draws on widely known themes, as in sequels, remakes, or interpretations of TV series or other elements of popular culture (Sawhney and Eliashberg 1996). Other traits that may influence box office success include the rating given by the Motion Picture Association of America (MPAA); (Prag and Casavant 1994), country of origin, and genre (Litman 1983). After production, studios engage in communicative and distributive postfilming activities. Prior research suggests the importance of advertising (Faber and O'Guinn 1984), the number of screens on which a movie is shown (Swami, Eliashberg, and Weinberg 1999), and the timing of release (Krider and Weinberg 1998). Finally, external factors, over which studios have little influence, also exist, including critics' reviews (e.g., Eliashberg and Shugan 1997), awards (Prag and Casavant 1994), and moviegoers' perceptions of a film's quality (Neelamegham and Chintagunta 1999).

Only limited evidence pertains to success in the rental channel. Industry norms suggest that rental revenues depend on theater success, genre, and star power (Childs 1992). Ravid (1999) found that budget, rating, and sequel are the only variables related to "video revenues" (it is unclear whether this finding refers to sales or rental revenues or both). Prosser (2002) found that opening week box office revenues, advertising, number of theater screens, and genre all influence rental revenues. However, her findings are based on a simple correlation analyses of a small convenience sample, and she does not examine robustness within a multivariate framework. Neither study analyzes the factors' relative impacts on theatrical versus video success.

THEORETICAL FRAMEWORK

The Critical Role of Consumer Risk

> I only pay 4 bucks for a bad movie like *XXX: State of the Union* rather than shelling out 20 bucks for it when it came out (consumer reflecting on rental vs. theater visit; Puig 2005:D1).

Although the theater versus home consumption contexts differ in many ways that imply risks for consumers

(e.g., performance risk of display quality, physical risks of parking, social risks from crowds; Kaplan, Szybillo, and Jacoby 1974), we focus on financial consequences. Specifically, the monetary risk perceived by consumers is lower in the rental market than for theater decisions, because renting a video is less expensive.[1]

Perceived risk plays a key role in consumer decision making because of its impact on consumer information search and evaluation processes (Conchar, Zinkhan, Peters, and Olavarrieta 2004), such that greater risk leads to more extensive search and evaluations of alternatives prior to entering the purchase setting (Ratchford and Andreasen 1974). Extant studies imply that, with higher risk, consumers gather more information, rely more on word of mouth, and expend more interpretation effort (Bettman 1973; Campbell and Goodstein 2001). In addition, as consequences increase, consumers make deliberate choices rather than assuming a satisfactory alternative can be found (Campbell and Goodstein 2001). ACNielsen (2001) reported that more than 90 percent of moviegoers choose which film to see before they get to the theater, whereas Weinberg (2003) found that less than 50 percent have a specific title in mind when they enter a video rental store. Information economics and cognitive categorization theories both shed light on how differences in financial consequences may influence a consumer's information usage.[2]

Differences Across Channels: Information Economics and Cognitive Categorization

Information economics suggests that information asymmetries exist in markets in which sellers know more about their products' quality than buyers do. Buyers seek to attenuate the risk of adverse selection by acquiring information that signals the product's "true" quality (Basuroy, Desai, and Talukdar 2006). When consumption risks are high and cannot be ascertained prior to purchase, information signals increase in importance (Kirmani and Rao 2000). In lower-risk contexts, information economics suggests that consumers will engage in less processing effort and narrow their choice set using easily available search traits, namely, those characteristics of a product that can be fully evaluated prior to purchase (Nelson 1970). In contrast, complex or difficult-to-access information that requires intensive search and interpretative efforts will play a smaller role in low-risk decisions. Consequently, in our context, information economics implies that search traits will be more important in video rental versus theater decisions, in general.

Moreover, the amount and structure of available information differs when a movie is released in theaters and on video. For the video release, it is effortful for the consumer to retrieve information (e.g., complete movie reviews) that was published months ago (though short excerpts from positive reviews are often printed on rental covers). Furthermore, quality information is available from sources such as word of mouth and media coverage of awards. Still, the sheer volume of titles available in the rental store suggests that consumers may use search qualities as screening criteria to reduce their consideration set to a reasonable size.

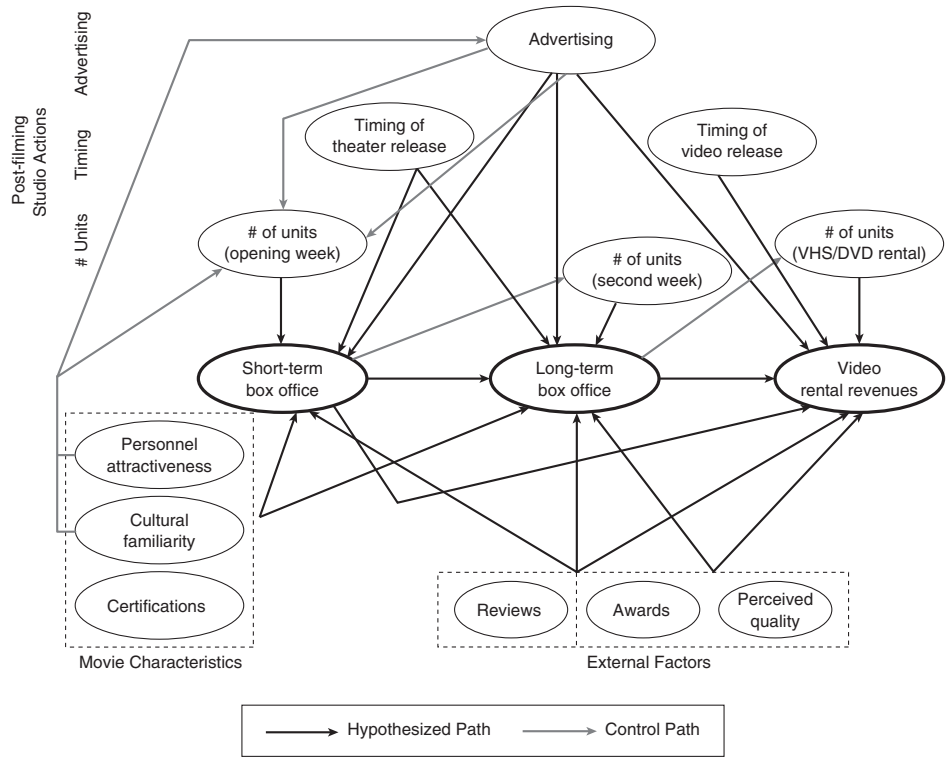
The presence of potential negative consequences (i.e., risk) bounds the predictions of information economics. Cognitive categorization theory (Cohen and Basu 1987) suggests that as consumers gain experience, they impose order on their world by creating cognitive categories of products that are subsequently used to define new products. For example, a consumer uses cues from a movie poster to judge whether the film is a western, a Kevin Costner movie, or part of the *Star Trek* franchise. Consumers prefer products that require moderate levels of cognitive effort to categorize and consider products that defy current categorizations as too risky; however, a product that offers no uniqueness relative to current categories is considered uninteresting (Mandler 1982). Thus, in lower-risk situations such as video rental, the information provided by a product's search traits could lower the novelty of a movie, causing the product to become less preferred. However, recent findings also suggest that as customers encounter higher levels of decision risk (as with theater visits), they may prefer more familiar options, relying on search traits as a risk-reducing strategy (Campbell and Goodstein 2001). Thus, the level of financial risk must be taken into account when considering search traits that aid cognitive categorization by providing information about the product's novelty.

AN INTEGRATIVE MODEL OF MOTION PICTURE SUCCESS

We argue that joint factors relate to a movie's success in both theaters and video stores (see Figure 1) but that the differing consumption contexts lead to varying levels of importance for these factors, which accounts for the differences in a movie's success in different contexts.

Our model distinguishes among three dimensions of motion picture success: short-term theatrical box office (STBO), long-term box office (LTBO), and video rental revenues (VRR). We define STBO as the revenues generated by a movie during its opening theatrical weekend and LTBO as the theatrical box office revenues attained during the period after the opening weekend. Unlike Lehmann and Weinberg (2000), who operationalized video success as sales to video stores, we measure VRR as the revenues generated by a movie through its rentals, which enables us to maintain consistency between our outcome measures across channels. Specifically, the box office and video rental revenues each capture the total

FIGURE 1
Motion Picture Success in Theaters and on Video



movie-specific revenues that accrue to the entire channel instead of only tapping studio income.[3]

Drawing from the literature, STBO, LTBO, and VRR should be influenced by movie characteristics (personnel attractiveness, cultural familiarity, and MPAA ratings), postfilming studio actions (advertising, timing of release, and number of units provided), and external factors (movie reviews, awards, and consumers' quality perceptions). To account for potential endogeneity, we include paths from factors that might proxy a studio's expectations for a movie (personnel attractiveness and cultural familiarity) to both advertising and the number of screens on which the movie opened (Elberse and Eliashberg 2003). Furthermore, because advertising decisions precede opening screen allocations, we include a path to capture this likely influence.

Movie Characteristics That Drive Theatrical Box Office and Video Rental Revenues

Personnel attractiveness. Consistent with information economics, just as a brand name can stand for a consistent bundle of quality traits, the participation of a particular actor, director, or producer in a film may indicate that the film fulfils a certain standard, influencing its attractiveness and reducing consumer uncertainty (Levin, Levin, and Heath 1997). Consumers likely engage in categorization because they have integrated previous information into coherent expectations regarding familiar personnel (e.g., a movie by director Michael Bay is likely to be an explosion-laced action film). Using personnel as a categorization and decision heuristic reduces their cognitive effort. Because renting has less financial risk than theater going, personnel attractiveness, as an easily digested peripheral cue, may play a greater role in a film's video success than its theatrical success. In a more risky movie theater context, we expect consumers to gather and consider more information. However, Campbell and Goodstein's (2001) results imply that in higher risk theater contexts, consumers supplement traditional risk-reducing methods (i.e., more extensive information search and consideration) with search traits that allow a movie to be more easily and clearly categorized, such as a familiar actor. For a low-risk rental decision, a film's moderate incongruity may be attractive because the consumer may seek novelty. Overall, because personnel attractiveness reduces decision risk by making a movie "familiar" to the audience, its impact should be stronger for box office decisions and results.

Cultural familiarity. Many films are based on familiar concepts, either because of prior films (e.g., sequels/

remakes) or other media (e.g., based on comics or television). Similar to personnel attractiveness, a movie's cultural familiarity helps the consumer cognitively categorize the movie, which is useful in both high- and low-risk contexts. It also reduces uncertainty, a critical factor as financial consequences increase. Thus, we expect that a movie's degree of cultural familiarity has a stronger impact on its box office success than on VRR.

Restrictiveness of rating. The MPAA's movie ratings, which are assigned to motion pictures in the United States "to offer to parents some advance information" (Valenti 2001), reflect a film's content and can therefore be considered a movie characteristic, especially because, before assigning a final rating, the MPAA interacts with the studio and allows modifications. These ratings provide information about a movie's language, graphic violence, or sexual content and should therefore be important, yet they do not provide information regarding category-based novelty. Thus, perceived risk should not alter the relative impact of ratings on success, and we consider ratings a simple cue that should be more influential for VRR.

Hypothesis 1: A movie's characteristics will influence box office and video rental outcomes differently. Specifically,

(a) the movie's personnel attractiveness will relate to short-term box office and long-term box office more strongly than to video rental revenues,
(b) the movie's level of cultural familiarity will relate to short-term box office and long-term box office more strongly than to video rental revenues, and
(c) the movie's rating restrictiveness will relate to video rental more strongly than to short-term box office and long-term box office revenues.

Postfilming Studio Actions That Drive Theatrical Box Office and Video Rental Revenues

Movie advertising. Movie advertising informs potential customers about a movie's content and allows them to experience parts of the film, signaling its overall quality (Faber and O'Guinn 1984). Specifically, the intensity of advertising spending can signal the studio's belief in the quality of the movie (or lack thereof) (Conchar, Crask, and Zinkhan 2005), although for the signal to be credible, consumers must perceive that a studio would not incur the upfront costs of advertising unless the product was of high enough quality that those investments could be recouped (Basuroy et al. 2006). To understand its differing impact across channels, we must consider that approximately 80 percent of a movie's advertising budget is spent during the 2 weeks prior to its theatrical release (Donahue 1987). Although early advertisements may be salient to the consumer for a time, their impact likely is lower when a movie is released on video (4 to 7 months later) because cognitive retrieval of the information becomes more difficult over time ("advertising decay," Lehmann and Weinberg 2000).

Timing. Some release dates are more advantageous for a film's box office success (Krider and Weinberg 1998). Empirical evidence is lacking for rental success (Childs 1992), but most video releases lack the "buzz" of a theatrical opening. Thus, we expect that timing is less important for rental than for theatrical results, particularly STBO.

Number of units. Finally, information economics implies that the number of units of a film made available at the time of release into a channel (i.e., theater screens or VHS/DVD copies) will influence financial outcomes (Swami, Eliashberg, and Weinberg 1999). In addition to a "gatekeeping" (e.g., shelf space) effect, the number of units released influences the attention the film receives from the media and therefore can stimulate a promotional buzz (Ravid 1999). We argue that this buzz will decrease in the weeks after launch, because new movies are made available and attract the media focus. In addition, market efficiency suggests that distributors and exhibitors will be able to match supply with the level of demand for a film in the weeks after its release (Swami, Eliashberg, and Weinberg 1999), so that the gatekeeper effect of the number of units will be marginalized. Consequently, the impact of units will be strongest on STBO. Although the effect of buzz will be limited for both LTBO and VRR, entering a new market segment requires a rematching of demand and supply, with a limited gatekeeper effect for video copies, so the impact of units should be next strongest for VRR and weakest on LTBO.

Hypothesis 2: A movie's postfilming studio actions will influence box office and video rental outcomes differently. Specifically,

(a) the level of theatrical advertising will relate more strongly to short-term box office than to long-term box office and to long-term box office more strongly than to video rental revenues,
(b) the timing of release will relate more strongly to short-term box office than to long-term box office and to long-term box office more strongly than to video rental revenues, and
(c) the number of units released will relate more strongly to short-term box office than to video rental and to video rental more strongly than to long-term box office revenues.

External Factors That Drive Theatrical Box Office and Video Rental Revenues

Movie reviews. Reviews provide potential viewers with information about a film's content and overall quality

(Eliashberg and Shugan 1997). However, mixed evidence pertains to whether reviews influence consumers' decisions or merely forecast a movie's success (Basuroy, Chatterjee, and Ravid 2003; Eliashberg and Shugan 1997). With regard to their impact on film success, movie reviews are usually publicized as a movie opens theatrically, which means full review information is easily available to theatergoers and that their impact may be greatest for STBO. Moreover, complex review information should be more important for customers in a higher risk environment (i.e., theater); categorization theory supports this claim because reviews reduce the surprise element of a film. Moreover, video distributors often feature excerpts from reviews on rental display boxes, and this point-of-purchase reminder serves as a peripheral cue in the lower-involvement setting. Therefore, reviews should be more influential for rental decisions than for LTBO, when reviews are harder to access.

Quality perceptions. Consumers' quality perceptions represent subjective evaluations based on a consumption experience with the film relative to their internal standards of excellence (Rust and Oliver 1994). A positive ex post assessment aids long-term success through repeat viewings and word of mouth (Faber and O'Guinn 1984). Thus, quality perceptions should influence LTBO and VRR but not STBO because the latter offers a limited time for word-of-mouth effects and repeat viewings. The longer a film is available, the more likely it is that consumers form opinions that may evolve into recommendations. However, although word of mouth will be influential when it occurs in either the theater or the rental channel, the lower the financial consequences of a decision, the lower a consumer's motivation will be to exert the effort to seek out and interpret opinions from others. Therefore, we expect quality to be least influential for the low-risk context of VRR.

Awards. Finally, awards given by acclaimed institutions reflect a film's excellence. Consumers' ex ante evaluations of a nominated or awarded movie and the movie's subsequent success may be enhanced because of expert (award) endorsements (Prag and Casavant 1994). We expect awards to influence LTBO and VRR but not STBO because important awards rarely coincide with a film's theatrical release. The impact of awards should be higher on VRR than on LTBO because award information is featured on rental display covers, making the information available without search effort. This feature should be key in the lower risk context of video rental, particularly because award information does not reduce a film's novelty.

Hypothesis 3: External factors will influence a movie's box office and video rental outcomes differently. Specifically,

(a) movie reviews will relate more strongly to short-term box office than to video rental and to video rental more strongly than to long-term box office revenues,
(b) customer-perceived movie quality will relate more strongly to long-term box office than to video rental revenues, and
(c) awards will relate more strongly to video rental than to long-term box office revenues.

Interrelations Among Theatrical Box Office and Video Rental Revenues

Consistent with information economics, we expect the three outcomes to be interrelated. Specifically, a movie's STBO influences LTBO by signaling its quality to potential viewers (Kirmani and Rao 2000). This relationship is bolstered by a "success-breeds-success" effect for films that have successful openings. Moviegoers climb on the bandwagon, extensive media presence emerges, and the studio allocates more theater screens (Elberse and Eliashberg 2003) and additional promotional resources. In a similar manner, STBO and LTBO should influence rental decisions and thus VRR. Although some consumers will see a film only once, signals of success from prior channels should attract new viewers.

Hypothesis 4: Short-term box office, long-term box office, and video rental revenues are interrelated such that

(a) a movie's short-term box office positively influences its long-term box office and video rental revenues, and
(b) a movie's long-term box office positively influences its video rental revenues.

METHOD

Our hypotheses required a sample of films (1) with varying levels of success, (2) that had been released first at the box office and later to rental stores, and (3) for which financial data were available. To avoid sampling only successful films, we examined all movies that met criteria (2) and (3) and were listed in *Video Store Magazine*'s U.S. Top 50 weekly video charts between August 1999 and May 2001 at least once but were no longer in theaters or on the video charts by March 2002. The final sample consisted of 331 movies (see appendix).

Measures

Outcomes. As we noted previously, STBO is the dollar amount of box office receipts generated by a movie during its nationwide opening weekend, and LTBO is the dollar amount of the total receipts generated by a movie during its entire theatrical run minus STBO. Both STBO and LTBO were taken from the Internet Movie Database (www.imdb.com; hereafter, IMDB) and cross-validated with data provided by Screenline, Inc. Finally, VRR is a

video's cumulative earnings, taken from *Video Store Magazine,* which samples a wide range of video stores monthly across North America and calculates dollar estimates of rental revenues for individual titles.

Movie characteristics. Personnel attractiveness is a formative construct (Diamantopoulos and Winklhofer 2001) determined by a motion picture's star power, director power, and producer power. The formative approach is appropriate because these three elements combine to create a movie's overall level of personnel attractiveness but are not necessarily correlated (Jarvis, MacKenzie, and Podsakoff 2003). We use only those actors, directors, and producers listed on a film's theatrical poster, because it seems logical to assume that a distributor promotes its most influential assets. For each star, director, and producer, we drew data from IMDB and calculated the mean box office receipts for that person's three most recent movies. In the case of stars, we considered only movies in which the star received first, second, or third credit. When multiple actor names were listed on the movie's poster, we calculated an overall star power (or director or producer power) index by weighting the mean box office value of the first name on the list by 1, that of the second by .5, the third by .25, and the fourth by .125 and then summing the products. We also conceptualize cultural familiarity as a formative construct, with the dimensions of being a sequel, a remake of an existing movie, or an adaptation of a novel or TV series. For remakes and novel and TV series adaptations, our nominal variables are based on data from IMDB (1 = yes, 0 = no). For sequels, we used the North American box office gross for the most recent previous installment in the series. Finally, we consider rating an ordinal indicator of the restrictiveness of the rating assigned to a film by the MPAA (G = 1, PG = 2, PG-13 = 3, R = 4).

Postfilming studio actions. We gathered the advertising expenditures that a distributor incurred during the theatrical release of a film from the 1998, 1999, 2000, and 2001 volumes of *Ad $ Summary* (published by Competitive Media Reporting, New York), which records advertising expenditures in 10 U.S. media (magazines, Sunday magazines, newspapers, outdoor, national spot radio, cable networks, network radio, and network, spot, and syndicated TV) by specific campaigns.[4] We obtained the number of opening weekend screens from IMDB. If a movie had a limited release in selected cities, followed by a wide release in the weeks thereafter, we used the number of screens for the movie's wide release. We used the same procedure for the number of screens during a movie's 2nd week of release. In both cases, we cross-validated the values with data from The Numbers (www.the-numbers.com). For the number of rental units, we purchased information from Adams Media Research and used the number of VHS copies and DVD copies as formative indicators. Finally, because summer and Christmas release dates presumably enhance box office results (e.g., Krider and Weinberg 1998), we produced two timing variables: theater release (1 = June, July, or August or December 20–31, 0 = otherwise) and rental release dates.

External factors. To capture the valence of a movie's reviews, we used Metacritic.com, which provides a "metascore"—a weighted average of up to 40 reviews from national critics and publications—for films (Metacritic 2001). On a 10-point scale (1 = *very negative review*, 10 = *very positive review*), Metacritic.com weights the publications and reviewers relative to their prestige. For films for which a metascore was unavailable, we collected reviews from the *Los Angeles Times*, *The New York Times*, *USA Today*, *The Washington Post*, and *Chicago Sun-Times*, used two judges to rate each review on a scale of 1 to 10 (using the metascore scale; differences resolved through discussion), and then averaged all available ratings across reviews for the film.

To quantify awards, we focused on the Academy Awards and used a scoring model to give credit for awards won and, to a lesser degree, nominations received (because distributors publicize their award nominations). Specifically, a film earned 50 points for a Best Picture award (10 points for a nominee); 25 for Best Actor, Best Actress, and Best Director awards (5 for a nominee); and 10 for each remaining award category (2 for a nominee).

Finally, we measured perceived quality with two indicators. First, we used Cinemascore, a service that surveys 1,000 people from a dozen major U.S. cities on films' theatrical opening nights. Respondents rate movies from A+ to F, which we transformed to 0 to 10 (10 = *best quality*). Second, we collected each movie's user rating from IMDB (0-10), based on up to 128,000 votes per movie.

RESULTS

We provide correlations and descriptive statistics in Table 1. Using partial least squares (PLS), with PLS-Graph 3.0 (Chin 2001), we tested the hypotheses in a structural model estimation. We chose PLS for two reasons. First, it enables us to incorporate both reflective and formative indicators; for formative measurements, PLS uses the full information available for each indicator to measure the construct (Chin 1998). Second, PLS can handle many variables and relationships, an important benefit given our model's complexity (Fornell and Bookstein 1982). Furthermore, there is precedence for the use of PLS in marketing (e.g., Slotegraaf and Dickson 2004; Zinkhan, Joachimsthaler, and Kinnear 1987).

TABLE 1
Correlation Matrix and Descriptive Statistics

	M	SD	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
1. Star power	43.00	47.38	.07	−.07	.07	−.05	.09	.14	−.05	−.02	−.02	.26	.20	.18	−.04	.11	−.04	−.06	−.01	−.07	.16	.12	.29
2. Director power	7.19	28.01	1.00	−.06	−.02	.01	.03	.17	−.02	−.05	.09	.15	.12	.13	.11	.15	.11	.08	.01	.08	.16	.19	.17
3. Producer power	5.32	22.68		1.00	−.33	.07	−.02	−.02	.17	−.01	.05	.06	.07	.09	.28	.15	−.04	−.03	−.02	.13	.09	.13	.03
4. Restrictiveness of rating	3.40	0.83			1.00	−.23	−.06	−.02	−.39	.11	−.12	−.27	−.31	−.33	−.47	−.18	.05	.09	.06	−.40	−.24	−.27	−.01
5. Sequel	6.63	39.41				1.00	−.05	−.09	.11	−.05	−.05	.20	.21	.20	.55	.28	−.01	−.03	−.01	.10	.45	.51	.08
6. Remake	NA	NA					1.00	.10	.00	−.01	−.02	.05	.04	.05	−.01	.04	−.04	.01	.02	−.06	.01	.03	.07
7. Novel adaptation	NA	NA						1.00	−.06	.02	.00	−.03	−.09	−.06	−.02	−.08	.12	.11	.00	−.04	−.06	−.04	−.04
8. TV series adaptation	NA	NA							1.00	−.04	.07	.11	.24	.22	.22	.09	−.05	−.18	−.04	.11	.23	.10	.00
9. Timing of video release	NA	NA								1.00	.11	−.06	−.12	−.10	−.10	−.13	.00	−.01	.01	−.08	−.11	−.09	−.01
10. Timing of theatrical release	NA	NA									1.00	.14	.16	.17	.15	.12	.05	.03	−.04	.13	.19	.21	.20
11. Advertising expenditures	105.81	89.20										1.00	.70	.73	.38	.64	.04	.08	.09	.30	.64	.60	.69
12. Number of screens opening week	1,527.24	1,133.65											1.00	.96	.42	.51	−.27	−.25	−.08	.15	.71	.53	.66
13. Number of screens 2nd week	1,656.37	1,065.69												1.00	.46	.54	−.23	−.22	−.04	.22	.72	.57	.70
14. Number of VHS copies	953.99	1,970.61													1.00	.56	.16	.09	.05	.34	.68	.72	.26
15. Number of DVD copies	381.78	561.54														1.00	.17	.23	.24	.36	.76	.84	.64
16. Metascore review value	4.86	2.15															1.00	.83	.27	.40	.06	.20	.06
17. IMDB user rating	6.19	1.19																1.00	.31	.46	.01	.21	.12
18. Academy Awards score	2.48	12.11																	1.00	.15	.05	.28	.15
19. Cinema score value	3.84	.91																		1.00	.29	.41	.27
20. Short-term box office	9.48	11.63																			1.00	.83	.67
21. Long-term box office	27.80	40.94																				1.00	.65
22. Video-rental revenues	26.80	21.21																					1.00

NOTE: IMDB = Internet Movie Database.

The goodness of fit of a PLS model can be assessed by explained variance and the Stone-Geisser criterion (Q^2), which uses a blindfolding procedure to measure the model's predictive power.[5] Predictive power is sufficient if Q^2 is positive (Stone 1974). Note that Q^2 is not a simple squared term but rather represents 1 minus the ratio of two squared terms, with the numerator representing the model's predictive ability (sum of squared error, SSE) and the denominator a simple alternative. If the model outperforms the alternative (smaller SSE), the ratio is less than 1, and Q^2 is positive. In our case, explained variance is high (R^2 = .683 for STBO, .802 for LTBO, and .685 for VRR), so predictive power is supported (Q^2 = .63). The highest variance inflation factor is 2.62 (Hair, Anderson, Tatham, and Black 1998), multicollinearity is not an issue, and path coefficients appear unbiased. Finally, with a reliability of .74 and an average variance extracted of .59, the measures for perceived quality demonstrate convergent validity (Fornell and Larcker 1981).

Testing the Conceptual Model

In Table 2, we list path coefficients, *t*-values for those coefficients, and total effects from PLS and summarize the results of hypothesis tests. Because PLS does not impose a distribution assumption, we produced the reported *t*-values with a bootstrapping procedure (Chin 1998).

To test Hypotheses 1–3, we compared the strength of the standardized path coefficients across the relevant paths. In addition to requiring a pattern in which the proposed stronger path has a higher path coefficient, we test the significance of the *difference* between two paths. Following Chin (2000), we use the path differences and the standard deviations generated through bootstrap resamplings to calculate an empirical *t*-value that reflects the statistical significance of the difference between the two paths. Therefore, we find support for a difference if two conditions are satisfied: (1) the appropriate path coefficient is larger, and (2) the *t*-value of the difference is significant at $p < .05$.

In Hypothesis 1, we argue that movie characteristics will relate differently to STBO, LTBO, and VRR. However, personnel attractiveness does not relate significantly to the three outcomes, and the paths do not differ in magnitude, so Hypothesis 1a is not supported. Cultural familiarity has a positive relationship with STBO and LTBO but is negatively related to VRR, and the comparisons of path strength are significant, in support of the predicted categorization-based Hypothesis 1b. Finally, we find a significant impact of MPAA rating restrictiveness for VRR, such that more restrictive ratings are more successful, but not for STBO or LTBO (both paths differ at $p < .05$), in support of H1c.

According to H2, we expect studio activities to relate more strongly to STBO than to VRR. Advertising relates to STBO and VRR but not to LTBO (strength of paths differs significantly for STBO versus LTBO and LTBO versus VRR); its relationship to VRR is more than two times greater than that to STBO, with the difference being significant, so we must reject Hypothesis 2a. Regarding release timing, a summer or Christmas release relates significantly to both STBO and LTBO but not to VRR (path strengths differs significantly for STBO vs. VRR and LTBO vs. VRR), in support of Hypothesis 2b. For the number of units, we find general support for Hypothesis 2c. The impact of the number of units is strongest on STBO, with a path estimate almost five times greater than the VRR path estimate, with the difference being significant. However, the relationship between the number of 2nd-week screens and LTBO is not significant, supporting our argument that market efficiency takes place after a movie has been theatrically released, such that the effect of number of screens becomes marginalized over time.

Hypothesis 3 deals with external factors. We find support for Hypothesis 3a; movie reviews relate to the outcomes in the predicted pattern, that is, significantly more positively to STBO than to VRR and LTBO. Although the relationship between movie reviews and LTBO is not significant and that for VRR is negative, the strength of the path to VRR is significantly stronger than that to LTBO, as we predicted. Providing full support for Hypothesis 3b, consumers' movie quality assessments relate to LTBO but not to VRR, with the difference in strength being significant. Turning to Hypothesis 3c, we find that award nominations and wins influence LTBO quite strongly but do not relate to VRR (difference is significant); thus, this hypothesis is not supported.

In Hypothesis 4, we argue that shorter term outcomes influence subsequent outcomes because of signaling and "success-breeds-success" effects. Both Hypothesis 4a (STBO relates to LTBO and VRR) and Hypothesis 4b (LTBO relates to VRR) are supported. Furthermore, although we did not offer hypotheses regarding these effects, we find that success in one channel influences allocation decisions in a subsequent channel. Specifically, STBO relates to the number of screens allocated to a movie in the 2nd week of its box office run, and LTBO influences the number of VHS and DVD copies made available in the rental channel.

Finally, the paths that we included to control for potential endogeneity in our model are generally significant. Personnel attractiveness relates significantly to advertising and indirectly (through advertising) to the number of opening week screens. Cultural familiarity relates significantly to both advertising and the number of opening week screens. Advertising relates positively to the number of opening week screens.

Comparison to an Alternative Model

To assess the incremental ability of our model to explain variance in VRR, we identify an alternative model and

TABLE 2
Results of Partial Least Squares Analysis

Effects of	*On*	*PLS Estimate*	t-*Values*	*Total Effects*	*Hypothesis*	*Rationale*	*Support*
Personnel attractiveness	Advertising	.302	3.91*	.302			
	Number of screens (opening week)	.046	0.99	.243			
	STBO	.057	1.35	.191	Hypothesis 1a	Search/ categorization	Not supported
	LTBO	.060	1.26	.177			
	VRR	.077	1.58	.154			
Cultural familiarity	Advertising	.215	3.05*	.215			
	Number of screens (opening week)	.143	2.77*	.283			
	STBO	.336	3.41*	.492	Hypothesis 1b	Search/ categorization	Supported
	LTBO	.169	3.46*	.469			
	VRR	−.261	−3.20*	−.057			
Rating restrictiveness	STBO	.093	1.93*	.093	Hypothesis 1c	Search	Supported
	LTBO	.003	0.08	.060			
	VRR	.175	3.25*	.201			
Advertising	Number of screens (opening week)	.653	11.33*	.653			
	STBO	.176	1.89*	.535	Hypothesis 2a	Information economics	Not supported
	LTBO	.103	1.23	.429			
	VRR	.374	5.29*	.562			
Summer/Christmas video release	VRR	.051	1.52	.051	Hypothesis 2b	Empirical precedence	Supported
Summer/Christmas theatrical release	STBO	.081	1.76*	.081	Hypothesis 2b		
	LTBO	.079	2.45*	.128			
Number of screens (1st week)	STBO	.550	6.08*	.550	Hypothesis 2c	Information economics and supply	Partially supported
Number of screens (2nd week)	LTBO	−.032	0.58	−.032	Hypothesis 2c		
Number of video/DVD copies	VRR	.118	1.26	.118	Hypothesis 2c		
Reviews	STBO	.204	3.76*	.204	Hypothesis 3a	Information economics	Supported
	LTBO	−.006	−0.18	.118			
	VRR	−.103	−1.67*	−.049			
Customer-perceived quality	LTBO	.170	3.56*	.170	Hypothesis 3b	Information economics/WOM	Supported
	VRR	.081	1.38	.155			
Awards	LTBO	.204	2.86*	.204	Hypothesis 3c	Information economics	Not supported
	VRR	.022	0.56	.111			
STBO	LTBO	.633	8.46*	.610	Hypothesis 4a	Information economics/ bandwagon	Supported
	VRR	.388	3.08	.654			
	Number of screens (2nd week)	.719	24.61*	.719			
LTBO	VRR	.340	2.43*	.436	Hypothesis 4b	Information economics/ bandwagon	Supported
	Number of copies	.813	31.96*	.813			

NOTE: *t*-values are derived from a bootstrapping calculation with 331 samples. The weights for the formative constructs are the following: (a) personnel attractiveness: star power .747, director power .564, producer power .357; (b) cultural familiarity: sequel .885, TV series .338, remake .187, novel −.100; and (c) number of copies: VHS copies .256, DVD copies .863. PLS = partial least squares; STBO = short-term theatrical box office; LTBO = long-term box office; VRR = video rental revenues; WOM = word of mouth.
* Parameter is significant at $p < .05$.

compare its explanatory powers with our central model. Lehmann and Weinberg (2000) modeled video outcomes using box office revenues and the time lag between theatrical and video releases, which offers a reasonable, parsimonious alternative. We use PLS (*t*-values generated by bootstrapping) to fit a model that explains VRR on the basis of STBO, LTBO, and the time difference (in weeks) between a film's theatrical and video releases. We find

that STBO (PLS estimate [est.] = .444, $t = 3.54$, $p < .05$) and LTBO (PLS est. = .278, $t = 2.16$, $p < .05$) relate to VRR, but the time difference (PLS est. = .065, $t = 1.34$, *ns*) does not. The alternative model explains 48.4 percent of the variance in VRR, which means that our model ($R^2 = .685$) explains 41.5 percent (or 20.1 percentage points) more variance than does the alternative.

DISCUSSION OF RESULTS AND IMPLICATIONS

Overall, our results suggest that various motion picture characteristics are differentially important across sequential channels. In response to the unexpected patterns for advertising (relates positively to STBO and VRR but not to LTBO), we examined the total effects to search for any indirect impact on LTBO (Eliashberg and Shugan 1997). When we compare the total effects of advertising on STBO and VRR, the impact is similar. Advertising also has a strong total effect on LTBO, mediated by STBO, which suggests that advertising influences LTBO only indirectly by stimulating success-breeds-success effects.

Unlike Eliashberg and Shugan (1997), who find that reviews correlate more highly with LTBO, we find that reviews have a greater impact in the short term. Although we do not test the underlying causal chain of events, our conceptualization supports the speculation that reviews provide information to potential viewers that reduces the risk of an opening-weekend purchase, even before word-of-mouth quality information is available from other consumers. Our results also imply that the preferences of video renters seem to run counter to those of professional critics. This discrepancy might be attributed to differing consumption motives. Given the low risk of rental, renters might seek distraction (simple entertainment), whereas critics may respond to cinematic ambition and value innovative approaches and controversial topics.

The finding that awards relate positively to LTBO is consistent with findings of previous studies. Nonetheless, the preferences of rental consumers and award givers appear unrelated. Even though an award might be featured on the rental cover, the majority of consumers may not view award status as useful information for their decision. The time lag between award ceremonies and a movie's video release also might lead to award information being of low salience to consumers.

Managerial Implications

Our results offer specific implications with regard to product, communication, and distribution policy. Each is discussed, in turn.

Product. Video renters respond positively to more restrictive ratings; therefore, a studio might benefit from releasing a more restrictive version of a film on video or DVD (e.g., an R-rated version of a PG-13 theatrical film; an unrated version of an R-rated film). Perhaps in-home consumers respond to the forbidden nature of more explicit content, such as violence, language, and erotic scenes.

Communication. Cultural familiarity enhances box office success but hurts VRR. For the recent box office release of *Batman Begins*, the studio made clear the film's relationship to the prior installments of the Batman franchise. However, during its rental release, promotions did not mention the prior films and instead focused exclusively on its plot and personnel.

In contrast to cultural familiarity, box office success enhances VRR. We believe that STBO and LTBO provide hard-to-falsify quality signals. Furthermore, STBO strongly influences LTBO. Thus, promotions later in a film's theatrical run and rental-era promotional messages, including product packaging, should feature box office successes. This implication might be critical for films that are high in cultural familiarity and therefore need an alternative promotional message in the rental channel.

Distribution. Absolute release timing—a summer or holiday release date—is a strong driver for LTBO and meaningful for STBO but does not relate to VRR. Thus, industry norms claiming that the best time to release a film is either in summer or over a holiday appear effective for theater release dates (for which they apply more strongly to long- than to short-term outcomes) but do not relate to VRR success. Perhaps consumers will see a highly anticipated film regardless of when it opens, but mass audiences and heavy repeat viewings are more likely when consumers have more disposable time. Absolute timing does not relate to VRR. Finally, distribution intensity drives STBO but not VRR. A wide launch can create short-term benefits at the box office, but flooding the market with rental copies does not provide a similar result. Such a strategy actually might increase costs without a simultaneous increase in sales.

Theoretical Implications

Information economics and cognitive categorization theory help explain why the influence of success factors differs across phases of distribution. Factors that provide basic information or signals of quality without aiding in categorization (e.g., ratings, advertising levels, success in prior channels) have greater impact when the consequences are lower, consistent with information economics predictions. Factors that provide substantive content information and that help a film be clearly categorized appear to matter less in these settings. One key implication for theory development is the further exploration of the relationship between risk and the type of information

that influences consumers. For example, what level of risk is required to cause consumers to prefer the "safety" of a clearly categorized (versus an incongruent) alternative?

Many of our arguments imply differences in consumer information processing, based on perceptions of risk. Although we provide exploratory evidence, an avenue for further research is to examine these processes and perceptions in context and with more precision. Specifically, within extant motion picture literature, no studies examine the processing of information by consumers when they purchase a ticket or select a VHS or DVD to rent. No motion picture consumption studies have measured consumer perceptions of risk directly and thus have not assessed its impact. A study that measured these aspects directly would help researchers better understand film consumption decisions and enable specific managerial implications.

Limitations and Future Research Directions

Our study samples films from a limited time period from the domestic U.S. market, so its generalizability to other time periods and countries is uncertain. Furthermore, our sample is limited to box office films that also appeared on *Video Store Magazine's Top 50* rental charts. Although this latter criterion could introduce a success bias, we believe such a bias is unlikely because the source is a weekly chart (vs. monthly or yearly), and most films of even modest distribution appear during their 1st week. However, future studies should sample other time periods and countries and use other selection criteria to assess the generalizability of our results.

Turning to measurement, our operationalization of personnel attractiveness does not include all personnel that could be meaningful to audiences. For example, a popular composer or special effects wizard could add to a film's attractiveness. We follow extant literature and tap personnel types whose inclusion is supported by empirical evidence, but research might test a more exhaustive classification of movie personnel. Furthermore, our method of calculating star power gives greater weighting to the lead actor, with decreasing weights to others. Although our results are robust to variations in weightings, further research should examine alternative operationalizations to assess the sensitivity of results. Finally, we compare box office and rental success but do not examine video sales, a major market. Scholars could examine how a film's theatrical success relates to its video sales, as well as the impact of video sales on video rentals.

It is increasingly important to understand the sequential distribution of motion pictures through ancillary channels as traditional theater revenues are no longer growing (e.g., after 2 years of flat growth, North American box office revenues fell by 5.2% in 2005; McBride, Grant, and Marr 2006). Our study lays a foundation for further work by demonstrating that consumer responses to marketing and external variables differ across the theater and rental channels.

APPENDIX
Listing of Films in the Final Sample

102 Dalmatians
13th Warrior, The
200 Cigarettes
28 Days
3 Strikes
6th Day, The
Adventures of Elmo in Grouchland, The
Adventures of Rocky & Bullwinkle, The
Affair of Love, An
Almost Famous
American Beauty
American Pie
American Psycho
Among Giants
Angela's Ashes
An Ideal Husband
Anna and the King
Any Given Sunday
Anywhere But here
Arlington Road
Art of War, The
Astronaut's Wife, The
Austin Powers: The Spy Who Shagged Me
Autumn in New York
Bachelor, The
Backstage
Bait
Bamboozled
Bats
Battlefield Earth
Beach, The
Beautiful
Beautiful People
Bedazzled
Being John Malkovich
Besieged
Best Laid Plans
Best Man, The
Better Than Chocolate
Beyond the Mat
Bian Lian (The King of Masks)
Bicentennial Man
Big Daddy
Big Kahuna, The
Big Momma's House
Billy Elliot

Black and White
Blair Witch Project, The
Bless the Child
Blue Streak
Body Shots
Boiler Room
Bone Collector, The
Book of Shadows: Blair Witch 2
Bossa Nova
Bounce
Bowfinger
Boys and Girls
Boys Don't Cry
Breakfast of Champions
Bring It On
Bringing Out the Dead
Brokedown Palace
Broken Hearts Club: A Romantic Comedy, The
Cecil B. DeMented
Cell, The
Center Stage
Charlie's Angels
Chicken Run
Chill Factor
Chuck & Buck
Cider House Rules, The
Committed
Contender, The
Cookie's Fortune
Corruptor, The
Coyote Ugly
Cradle Will Rock
Crazy in Alabama
Crime and Punishment in Suburbia
Dancer in the Dark
Deep Blue Sea
Deterrence
Detroit Rock City
Deuce Bigalo: Male Gigolo
Dick
Dinosaur
Dog Park
Dogma
Double Jeopardy
Doug's 1st Movie
Down to You
Dr. T and the Women
Drive Me Crazy
Drop Dead Gorgeous
Drowning Mona
Dudley Do-Right
East Is East
El Abuelo (The Grandfather)
Election
End of Days
End of the Affair, The
Entrapment
Erin Brockovitch
Est-ouest (East/West)
Existenz
Exorcist (New Version), The
Eye of the Beholder
Eyes Wide Shut
Fantasia/2000
Fight Club
Final Destination
Finding Forrester
Five Senses, The
Flawless
Flintstones in Viva Rock Vegas, The
Foolish
For Love of the Game
Forces of Nature
Frequency
Galaxy Quest
General's Daughter, The
Get Carter
Ghost Dog: The Way of the Samourai
Girl, Interrupted
Girlfight
Gladiator
Go
God said, "Ha!"
Gojira ni-sen mireniamu (Godzilla 2000)
Gone in Sixty Seconds
Goodbye Lover
Gossip
Green Mile, The
Groove
Guinevere
Gun Shy
Hak Hap (Black Mask)
Hamlet (2000)
Hanging Up
Happy, Texas
Haunting, The
Held Up
Here on Earth
Hideous Kinky
High Fidelity
Highlander: Endgame
Hollow Man
Holy Smoke
House on Haunted Hill, The
Hurricane, The
I Dreamed of Africa
Idle Hands
I'll Be Home for Christmas
In Crowd, The
In Too Deep
Insider, The
Inspector Gadget
Instinct
Iron Giant, The
Isn't She Great?
Jack Frost
Jakob the Liar
Jing ke ci qin wang (The Emporer and the Assassin)
Joe Gould's Secret
Joe the King

Keeping the Faith
Kid, The
La Vita e Bella (Life Is Beautiful)
Ladies Man, The
Lake Placid
Legend of Bagger Vance, The
Legend of Drunken Master, The (Jui kuen II)
Le Violon Rouge (The Red Violin)
Liberty Heights
Life
Light It Up
Limey, The
Little Nicky
Little Vampire, The
Lola rennt (Run, Lola, Run)
Loser
Lost & Found
Lost Souls
Love & Basketball
Love Letter, The
Love Stinks
Lucky Numbers
Magnolia
Man on the Moon
Mansfield Park
Map of the World, A
Matrix, The
Me, Myself & Irene
Meet the Parents
Men of Honor
Messenger: The Story of Joan of Arc, The
Mickey Blue Eyes
Midsummer Night's Dream, A
Million Dollar Hotel, The
Miss Julie
Mission to Mars
Mission: Impossible II
Mod Squad, The
Mumford
Mummy, The
Muppets From Space
Muse, The
Music of the Heart
My Dog Skip
My Favorite Martian
Mystery Men
Mystery, Alaska
Never Been Kissed
Next Best Thing, The
Next Friday
Ninth Gate, The
Notting Hill
Nurse Betty
Nutty Professor II: The Klumps
Office Space
Omega Code, The
Original Kings of Comedy, The
Other Sister, The
Out-of-Towners, The
Outside Providence
Passion of Mind
Patriot, The
Perfect Storm, The
Pitch Black
Play It to the Bone
Plunkett & McLeane
Pokemon the First Movie
Pokemon: the Movie 2000
Price of Glory
Prince of Egypt, The
Pushing Tin
Rage: Carrie 2, The
Random Hearts
Ready to Rumble
Red Planet
Reindeer Games
Remember the Titans
Replacements, The
Return to Me
Ride With the Devil
Road to El Dorado, The
Road Trip
Romance
Romeo Must Die
Rugrats in Paris: The Movie
Rules of Engagement
Runaway Bride
Saving Grace
Scary Movie
Scream 3
Shaft
Shanghai Noon
Simon Sez
Simpatico
Sixth Sense, The
Skulls, The
S.L.C. Punk!
Sleepy Hollow
Small Time Crooks
Snow Day
Snow Falling on Cedars
South Park: Bigger, Longer and Uncut
Space Cowboys
Star Wars I: The Phantom Menace
Steal This Movie
Stigmata
Stir of Echoes
Story of Us, The
Straight Story, The
Strike!
Stuart Little
Summer of Sam
Supernova
Superstar
Sweet and Lowdown
Talented Mr. Ripley, The
Tao of Steve, The
Tarzan
Tea With Mussolini
Teaching Mrs. Tingle

Ten Things I Hate About You
Thirteenth Floor, The
This Is My Father
Thomas and the Magic Railroad
Thomas Crown Affair, The
Three Kings
Three to Tango
Tigger Movie, The
Titan A.E.
Titus
Todo Sobre Mi Madre (All About My Mother)
Topsy-Turvy
Toy Story 2
Trick
Trippin'
Trixie
Tumbleweeds
Turn It Up
Twin Dragons (Shuang long hui)
Twin Falls Idaho
U-571
Under Suspicion
Universal Soldier: The Return
Up at the Villa
Urban Legends: Final Cut
Virgin Suicides, The
Walk on the Moon, A
Watcher, The
Way of the Gun
What Lies Beneath
What Planet Are You From?
Whatever It Takes
What's Cooking?
Where the Heart Is
Where the Money Is
Whipped
Whole Nine Yards, The
Wild Wild West
Winslow Boy, The
Woman on Top
Wonder Boys
Wood, The
World Is Not Enough, The
X-Men
Yards, The

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NOTES

1. The average price for a movie theater ticket was $5.39 in 2000 versus only $2.64 for rental (Hettrick 2001). Rentals are not priced on a per-seat basis, which implies further cost savings when a film is watched by more than one person. Also, rentals do not force consumers to incur additional costs, such as for baby-sitting and high-priced theater concessions. To provide empirical support for our assumption that consumers perceive more risk in the theater context, we included two questions in an online survey of consumers that tapped felt consequences (e.g., regret) for movie decisions. Using a stratified random sampling approach, the final sample ($N = 504$) represented key demographic criteria (i.e., age, gender, and household size) of the general population. Rather than asking directly about risk, we chose an approach that was less likely to generate response bias. Respondents were asked, "When you are watching a movie and you realize that you *don't like* it at all: How much regret do you feel (a) when watching the movie in a movie theatre or (b) when having rented the movie in a video rental store?" We used 5-point Likert-type scales, with 1 = *very little regret* and 5 = *a lot of regret*. The mean score for theatrical visits ($\text{Mean}_{\text{Risk/Theater}} = 4.12$) was higher than that for video rentals ($\text{Mean}_{\text{Risk/Video}} = 3.38$), at a highly significant level ($t = 12.77$, $p < .01$). Further information is available from the first author on request.

2. In the survey described in Note 1, we also assessed the extent of information processing in the theater and the rental contexts. Respondents were asked "How much time and effort do you spend deciding on the 'right' movie (a) before entering a movie theater when you plan to watch a movie there or (b) before entering a video rental store when you plan to rent a movie there?" Again, we used 5-point Likert-type scales, with 1 = *very little time and effort* and 5 = *a lot of time and effort*. Consistent with our theoretical argument, the mean for theater ($\text{Mean}_{\text{InfoProc/Theater}} = 3.15$) is significantly higher than that for video rental ($\text{Mean}_{\text{InfoProc/Video}} = 2.78$) ($t = 6.62$, $p < .01$).

3. Although box office receipts represent the revenues divided among all channel members (Swami, Eliashberg, and Weinberg 1999), sales to rental outlets do not capture the purchases by final customers or the full channel revenues but instead represent the sales that accrue only to the producer/distributor. Sales to rental outlets may proxy rental managers' *expectations* regarding ultimate rental revenues, but the unit of analysis across channels is not consistent. Also, the revenue-sharing structures of box office and rental channels have become more similar as a result of a recent development in which many major rental chains now share rental revenues with the movies' distributors (Dana and Spier 2001) instead of buying the videos and keeping all subsequent rental revenues.

4. When the advertising expenditures from *Ad $ Summary* are expressed as a percentage of production costs, the 49.76 percent average in our sample is close to an industry rule of thumb that places the ad budget at 50 percent of production costs (Jedidi, Krider, and Weinberg 1998). However, a high standard deviation ($SD = \$8.9$ million) indicates that using actual advertising data is a significant improvement.

5. In blindfolding, part of the data matrix for the construct being examined is systematically omitted. We then test how the lack of data affects the model parameter estimates.

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