International Journal of Research in Marketing 33 (2016) 357–374

Contents lists available at ScienceDirect

IJRM
International Journal of Research in Marketing

journal homepage: www.elsevier.com/locate/ijresmar

The effect of critical reviews on exhibitors' decisions: Do reviews affect the survival of a movie on screen?

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ARTICLE INFO

Article history:
First received on April 28, 2014 and was under review for 6 ½ months
Available online 29 July 2015

Keywords:
Expert reviews
Exhibitors
Distribution
Critics
Movies
Survival analysis

ABSTRACT

This article aims to demonstrate that distribution intermediaries, namely exhibitors, are influenced by critical reviews in their programming decisions after the launch of a movie. More specifically, it tests the effect of critical reviews on the decision of exhibitors to keep or withdraw a movie on their screens from week to week. A unique data set comprising more than 165,000 weekly theater level decisions spanning over a decade is used for the analyses. Exhibitors' decisions are modeled through a discrete time survival model with random effects. Results show that a movie with excellent reviews has more chances to stay longer in a theater when compared to one with poor, fair, or good reviews, even after controlling for the previous week's box office. This finding suggests that a portion of the overall commercial performance usually associated with positive reviews can be attributed to the impact of critics' reviews on exhibitors' decisions to keep the movie on screen for a longer period.

1. Introduction

Movies are typical examples of experiential goods: consumers can fully evaluate their utility only after consuming the good. Hence, consumers actively search for information about the quality of such goods. Critical reviews provide this type of information and are thus expected to exert an influence on moviegoers' choices. To this day, more than thirty-five academic articles have been published about the effect of reviews from professional critics on the commercial performance of movies in the fields of marketing, management, and economics (Hadida, 2009). To our knowledge, this body of research only focuses on the effect of critics on the end consumers, i.e., the viewers. This consumer-centric perspective overlooks the possibility that distribution intermediaries such as exhibitors also have to make decisions whether or not to keep a movie on screen after a movie is launched and can thus be influenced by critical reviews.

This article aims to fill this gap and specifically analyzes the effect of critical reviews on the decision of exhibitors to keep or withdraw a movie on their screens from week to week. Our results show that a movie with excellent reviews, compared to one with poor, fair, or good ones, has more chance to stay longer on screen, independently from the previous week box office. It suggests that a portion of the overall commercial performance usually associated with positive reviews (e.g., Basuroy, Chatterjee, & Ravid, 2003; Moon, Bergey, & Iacobucci, 2010) can be attributed to the impact of reviews on exhibitors' decisions to keep the movie on screen for a longer period. Our findings also provide interesting insights on the interaction between a movie's prior performance and critical reviews on an exhibitor's withdrawal decision by showing that a movie's prior performance

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http://dx.doi.org/10.1016/j.ijresmar.2015.07.003
0167-8116/

influences the survival of movies with extreme critical scores (i.e., rated as poor or excellent) more than the survival of movies with moderate critical scores (i.e., rated as fair or good).

A unique data set comprising theater level decisions and box office revenue for 118 theaters over a period spanning between 2002 and 2011 is used for the analyses. We model exhibitors' decisions at the theater level through a discrete time survival model with random effects (Hedeker, Siddiqui, & Hu, 2000). This approach is distinctive in that most existing survival models in the movie literature have been meant as an alternative or a complement to predict commercial performance of movies. Their main objective is to estimate the life expectancy of a movie at the market level, which explains why most survival models use market level data and not the individual decisions of an exhibitor (De Vany & Walls, 1997; Deuchert, Adjamah, & Pauly, 2005; McKenzie, 2009; Nelson, Donihue, Waldman, & Wheaton, 2001; Walls, 1998). Furthermore, the few studies that have used survival models at this disaggregate level of analysis as in our model did not focus on the effect of critics' reviews (Chisholm & Norman, 2006; Fu, 2009).

A better understanding of the effects of professional critics is crucial because of the economic importance of the film exhibition industry. In 2012, the world box office reached 32.6 billion dollars (McClintock, 2012). In North America, the movie box office segment contributed revenues of 12.3 billion dollars in 2013, equating 48.6% of the film market aggregate value, just behind the home video market (MarketLine, 2014). By better understanding the effect of critics on exhibitors, producers and distributors in the business will be able to better adjust their marketing efforts to leverage or offset the impact of reviews on these major channel members. The theatrical performance of a movie is indeed acknowledged to be a major predictor of its success in later release formats (Eliashberg, Elberse, & Leenders, 2006; Hennig-Thurau, Henning, Sattler, Eggers, & Houston, 2007; Lehmann & Weinberg, 2000). Results from this study may also have implications for other contexts than cinema. Our results could help someone understand how experts' reviews may have an influence on the survival of other experiential products in their respective distribution channels. For example, video games, tourism and consumer electronics are experiential contexts where independent information sources may influence distribution intermediaries by providing information about the quality of the offers.

The remainder of this article is structured as follows. The theoretical foundation is presented in the next section. We then present a detailed description of the data set and the model that is used to estimate the effect of critical reviews on exhibitors' decisions. Next, we report the results of the main model as well as several robustness checks. Finally, we provide concluding remarks, offer some managerial recommendations, and discuss avenues for future research.

2. Theory

2.1. Distribution intermediaries in the film industry

The movie industry as a value chain is divided between production, distribution, and exhibition activities. Production includes development, financing, shooting, and post-production activities. In addition to supplying movies to theaters and other media such as television, DVD, and internet outlets, distributors are also tasked with film promotion at a national and international level. If distributors can be viewed as wholesalers, exhibitors are to be considered retailers (Hadida, 2009). Exhibitors assume some promotional activities locally and in their own theaters. However, their main tasks are to select and allocate movies on their screens (Gil, 2009). Specifically, once a movie has been selected, the exhibitor must first decide how many screens to allocate to it and, after the release, when to withdraw the movie from a screen. With few exceptions (Chisholm & Norman, 2006; Eliashberg et al., 2009; Fu, 2009; Swami, Eliashberg, & Weinberg, 1999), the latter decision has received little attention from research on the movie industry, potentially because it requires some data at the theater level that are far less common than box office data sets. This research bridges that gap and focuses on the exhibitor decision to keep a movie on screen and more specifically on the impact of critical reviews on this decision.

Production and distribution activities are vertically integrated in the American domestic market (United States and Canada) with major studios such as Disney, Sony, Fox, Paramount, Universal, Warner, and DreamWorks producing and distributing their own movies in these territories. They also act as distributors for independent producers. However, since the Paramount Decree in 1948, major studios have been barred from exhibition. Consequently, exhibitors are independent intermediaries who sign revenue-sharing contracts with distributors. Gil (2009) notes that “the contracts that distributors and exhibitors use do not specify how long the movie must remain on screen (p. 583),” except sometimes for an “obligation period” that sets a minimum run of a few weeks for a movie (Swami et al., 1999). Hence, the exhibitors have the decision autonomy required to react to reviews by keeping or withdrawing a film from their screens.

2.2. Information theory and the influence of critics

The dominant paradigm in the literature on the effects of independent sources such as experts on a product's commercial performance is information theory (Hadida, 2009). Information theory states that consumers will search for information about a product in order to diminish the risk associated to purchase and consumption (Stigler, 1961).

The role of this information is especially critical for experiential goods whose pre-consumption quality is difficult to assess before actually viewing the movie (Eliashberg & Sawhney, 1994). In the same way as consumers seek information provided by critics to form a judgment about the quality of a movie, exhibitors may use the quality signals delivered by these experts in their programming choices. The theater owners will search for external signals to help them detect the winners and losers of the box office.