

# When marketing strategy meets culture: the role of culture in product evaluations

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**Abstract** This research investigates how national culture interacts with marketing strategy to influence consumers' organic post-consumption satisfaction ratings of entertainment products rich in cultural content. Drawing upon a communication theory framework, we develop hypotheses concerning multiple interaction effects between culture and marketing strategies on consumers' product evaluations. We test these hypotheses by analyzing consumer reviews of 260 movies in 25 country markets. In support of our hypotheses, we find that the cultural congruence between the product and the market improves consumer reviews, and that the effect is stronger in cultures characterized by collectivism, femininity, and uncertainty avoidance, as well as for products more heavily loaded with cultural content. In addition, we find that the negative effect of delay in product launch timing weakens for cultures characterized by long-term orientation, and that the positive effect of advertising spending on

consumer evaluations is stronger in cultures characterized by high power distance belief. These results provide practical insights into how managers should make decisions concerning product design, launch timing, and advertising strategies in international markets.

**Keywords** Culture · Cultural congruence · Marketing strategy · Product evaluation · Movies · Entertainment products · Online review

## Introduction

Multinational corporations face various firm-level strategic choices, such as which international markets to enter, on what scale to enter, and how to enter. In addition, international businesses must make marketing strategy decisions regarding product content, launch timing, promotional strategies, pricing, and distribution channels. While firms' strategic choices greatly influence market outcomes, consumers' *reactions* to multinational firms' product offerings and marketing strategies often vary substantially across national cultures. For this reason, researchers have long tried to uncover the role of cultural factors in marketing strategies and consumer behaviors in various domains, such as branding strategies (Roth 1995), product development (Nakata and Sivakumar 1996), customer loyalty (Thompson and Chmura 2015), international marketing channels (Hoppner and Griffith 2015), word-of-mouth referrals (Money et al. 1998), and price fairness perceptions (Bolton et al. 2010). Understanding the impact of culture on the effectiveness of firm strategies and consumer behaviors is especially important for firms that produce offerings that are rich in cultural content, as are entertainment products (e.g., movies, music, food, fashion).

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The disparate streams of research noted above each demonstrate that consumers from different cultures react differently to marketing activities. However, what is notably missing is a robust and generalizable systematic framework to explain why and how these differences manifest. For products sold into international markets, understanding how consumers' cultural orientations interact with firms' marketing strategies is arguably the most crucial aspect of predicting products' success (Steenkamp and Jong 2010); thus, a theory-based framework would help focus future research and could guide managerial action. To be most useful, such a framework should capture the institutional forces that define the consumer as a cultural being at the macro level and explain how such macro-level cultural factors interact with firms' marketing strategies to alter consumers' responses to product offerings.

One likely reason for the scarcity of macro-level analyses of the interaction between consumer culture and marketing strategy is the difficulty of obtaining suitable data across national cultures. The recent growth of the Internet and social media provides researchers with much better access to national-level data from multiple countries. For example, [BoxOfficeMojo.com](http://BoxOfficeMojo.com) reports how an individual movie performs in individual countries. We take advantage of the international growth in consumer product evaluations in online forums to investigate how national culture interacts with marketing strategy to affect consumers' post-consumption product evaluations. Specifically, we examine (1) the phenomenon of consumer-initiated product evaluations via online platforms, (2) the interaction of marketing strategy and national culture in a systematic theory-based framework, and (3) the effect of cultural congruence between product content and a consumer's cultural background on product evaluation. We focus on entertainment products because they are rich in cultural content and because consumer evaluation data (in the form of overall summary judgments) for these products are relatively accessible.

Our research contributes to the literature in three important ways. First, this research examines the interaction effects of national culture and marketing strategy on product evaluations. As illustrated in Table 1, most research in this area has focused on cultural differences in marketing strategies or in product evaluations/consumer attitudes. Little work has been conducted on how marketing strategies affect product evaluation in a cross-cultural setting. In reality, the effect of marketing strategy cannot be separated from the national culture of the country market. Indeed, there is significant research on how consumers in various cultures perceive imported products differently (e.g., Craig et al. 2005; Moon and Song 2015; Moon et al. 2016; Zhou et al. 2010; Kwak et al. 2006). While these studies shed light on how consumers in different cultures react to a variety of products, we propose that the effectiveness of marketing efforts to promote product offerings also

depends critically on how consumers with various cultural backgrounds react to these efforts. Therefore, to take a step toward filling this notable void in the literature, we examine the interaction effects of marketing strategy and national culture on consumers' post-consumption product evaluations.

Second, most existing studies on online reviews in international marketing investigate the commercial success of imported products in international markets and have not paid much attention to post-consumption product evaluation; existing studies typically focus on final outcome measures in the marketplace (e.g., box office performance of movies, e.g., Lee 2006; Craig et al. 2005; but see Laroche et al. 2004 for a possible exception; Table 1). Given the demonstrated importance of consumer word-of-mouth, in general, the lack of research regarding post-consumption evaluation in international markets is notable. Simply reaffirming that consumer evaluations matter would be of little value; rather, we develop a rich explanation of the cognitive underpinnings of such effects and suggest critical contingencies in international markets. That is, we open up the "black box" and investigate consumer-initiated post-consumption product evaluations for cultural products in international markets.

Finally, while it is well-known that consumers prefer products that are congruent with the consumer's culture (i.e., cultural congruence effect, Lee 2006; Ross 1971), most of the extant research focuses on the general cultural proximity between the producer's country and the consumer's country; importantly, the cultural (mis)match between the *specific product* and the consumer's country has not been fully considered. For example, using an aggregate measure of national cultural distance among countries based on Hofstede's cultural dimensions, Ganesh et al. (1997) find that the more similar the lead and lag markets are culturally, the stronger is the learning effect.<sup>1</sup> This focus on country–country comparisons needs to be extended to the study of differences in the cultural content of individual products because all products originating in the same home country do not have the same cultural implications for consumers in a given foreign country (Moon et al. 2016; Moon and Song 2015). We isolate the cultural content of the individual product and then examine its congruence with the culture of the consumer's country. Further, we identify moderating effects of the cultural congruence effect that are due to consumers' cultural orientations (e.g., individualism, masculinity, and uncertainty avoidance), and products' cultural content (e.g., independent films and comedies vs. other genres).

As an outcome measure, the product evaluations we examine in this research are organic in the sense that they are initiated by consumers who have actually consumed the products.

<sup>1</sup> Learning effect refers to the fact that if the product is successful in the lead country, then the risk associated with the innovation is reduced, thus contributing to an accelerated diffusion of the product in the lag countries.

**Table 1** Summary of studies on consumer culture and marketing strategy

| Article                   | Key finding   | Culture | Marketing strategy | Culture × Marketing strategy | Product evaluation/<br>Consumer attitude |
|---------------------------|---|---------|--------------------|------------------------------|--|
| Alden et al. 1999         | Proposed the construct of “global consumer culture positioning.”  | x       | x                  |                              |  |
| Deleersnyder et al. 2009  | Advertising spending exhibits less cyclically in countries with high power distance beliefs.                                  | x       | x                  |                              |  |
| Hoppner and Griffith 2015 | Culture moderates the effect of reciprocity on relationship quality and customer satisfaction                                 | x       | x                  |                              |  |
| Nakata and Sivakumar 1996 | Proposed a conceptual framework to study the relationship between Hofstede’s cultural dimensions and new product development. | x       | x                  |                              |  |
| Roth 1995                 | Studied the effect of culture on global brand image strategies.   | x       | x                  |                              |  |
| Thompson and Chmura 2015  | Consumers with different cultural background react differently to loyalty programs.   | x       | x                  |                              |  |
| Aaker and Lee 2001        | Western (eastern) consumers are more receptive to promotion (prevention) focused persuasion messages.                         | x       |                    |                              | x  |
| Bolton et al. 2010        | Eastern consumers find it less fair to pay a higher price than in-group (e.g., friends) due to face concerns.                 | x       |                    |                              | x  |
| Briley and Aaker 2006     | The tendency to choose a compromise option is stronger in eastern cultures when reasons for choice are required.              | x       |                    |                              | x  |
| Chen et al. 2005          | Eastern consumers discount the future and value immediate consumption less than western consumers.                            | x       |                    |                              | x  |
| Craig et al. 2005         | U.S. movies perform better in countries that are culturally closer to the U.S.  | x       |                    |                              |  |
| Laroche et al. 2004       | Japanese patients’ ratings of dentists’ service quality are less extreme than American patients’.                             | x       |                    |                              |  |
| Lee 2006                  | Cultural discounting is stronger for comedies than for sci-fic.   | x       |                    |                              |  |
| Moon and Song 2015        | U.S. movies’ box office shows a U-shaped relationship with inter-country cultural distance.                                   | x       |                    |                              |  |
| Moon et al. 2016          | Cultural congruence between the movies and the local market improves US movies’ box office.                                   | x       |                    |                              |  |
| This article              |   | x       | x                  | x                            | x  |

In our empirical context, movie consumers voluntarily post their ratings and reviews on [IMDb.com](http://IMDb.com) after watching a movie. With organic product evaluations, consumers voluntarily provide their reviews without researchers’ engagement, making the responses less prone to measurement effects (Dholaki and Morwitz 2002). Although measuring consumer evaluations via a multi-item scale might otherwise be desirable, it is simply infeasible to gather such primary data across a large sample of movies across such a large number of countries. Further, it is unnecessary to do so; the results of many published studies demonstrate the construct validity of single-item ratings for summary evaluative judgments of entertainment products (for movies, for example, see Liu 2006, and Moon et al. 2010; for music, see Lynn et al. 2016).

Examining the determinants of consumers’ product evaluations will help multinational firms better understand consumers’ information processing as managers adapt international relationship marketing strategies for specific markets

(Samaha et al. 2014). In a review of international relationship marketing research, Samiee et al. (2015) note a paucity of relevant studies and urge scholars to examine the impact of cultural factors on the development of effective customer relationships in individual markets; this knowledge could be a source of competitive advantage. Samiee et al. (2015) conclude that understanding how cultural factors affect consumers’ product evaluations is critical in the global economy.

## Research background

We borrow from the framework of communication theory and examine how the reception of the symbolic messages contained in an entertainment product is affected by the product’s cultural content, the cultural context that influences how the message receiver decodes the cultural message, and how the message sender facilitates the decoding of the cultural content. In our empirical test, we study U.S. movies (an

exemplar of culturally loaded products) released in international markets. We now elaborate on our key independent variables (marketing strategies and culture), dependent variable (online product evaluations), and empirical setting (movies).

### Firms' marketing strategies

We focus on variables that represent three of the 4 Ps of marketing mix strategy. First, determining the content of a *product*, such as culture, art, or humor, is an important marketing decision that firms make to enter foreign markets. Second, release timing is a critical distribution (*place*) strategy because it determines when the product is available to target consumers. Third, advertising is essential to the *promotion* strategy for the product.<sup>2</sup> We examine the effects of these marketing strategies and their interactions with consumers' cultural orientations. Instead of exhausting all possible interactions, we focus on those interaction effects predicted by theory.

### Cultural congruence of the product and the consumer

Cultural congruence matters in international marketing, yet the cultural congruence between a specific product and consumers in a particular country has rarely been examined directly. Typically, studies use Hofstede's national cultural dimensions to capture the cultural characteristics at the level of national markets, not that of individual products within a market (Chen et al. 2005; Deleersnyder et al. 2009). Even using this broad, country-level view, research finds that consumers' acceptance of cultural products is higher when the cultural content of the product matches consumers' cultural dispositions and tastes (Lee 2006; Craig et al. 2005). However, all movies from one country (e.g., the U.S.) are not equally appreciated by consumers in another (e.g., Japan). Such cultural differences among products originating in the same country emphasize the need to better understand cultural congruence effects beyond simple, generalized national culture. We believe that understanding the cultural congruence effect is especially important for managing products that are rich in cultural content.

### Online product reviews

Given the increasing impact of online reviews on consumers' decisions and firms' marketing strategies, our study sheds light on the determinants of consumer evaluations in international markets by utilizing information contained in consumer

reviews (e.g., Liu 2006). The so-called "data revolution" is making available unprecedented amounts of data in various new formats. To decode a product's cultural content, we use one of these new types, online consumer reviews, an unstructured, text-heavy form of data. Thus, in our study, we not only draw upon Hofstede's (2001) widely used national cultural dimensions but also use data from consumers' deep and rich consumption reviews to also draw upon the previously documented congruence effect between a market's cultural orientation and a product's cultural content. Consumers' product evaluations have been shown to influence other consumers' product choices (Moe and Trusov 2011) and to predict consumers' brand loyalty (Szymanski and Henard 2001) and spending growth (Fornell et al. 2010). Studies also suggest that product evaluations are affected by culture in various consumer decision contexts (e.g., Laroche et al. 2004). To draw from and expand this research stream, we examine how culture interacts with marketing strategies to influence post-consumption product evaluations.

Consumers' purchase decisions are increasingly influenced by online product evaluations by others who have experienced the product (Zhu and Zhang 2010). Therefore, analyzing and predicting the determinants of consumer reviews and associated ratings is useful for improving business performance. Scholars also provide empirical evidence that consumer reviews can change consumers' decision-making processes and alter the role of traditional marketing. Simonson and Rosen (2014) suggest that the information contained in other consumers' product evaluations can make consumers less subject to psychological pitfalls. These changes in the consumer decision-making processes, in turn, potentially alter the effect of traditional marketing such as brand equity, as consumer reviews partly assume the role previously played by traditional marketing (Simonson and Rosen 2014). In sum, a better understanding of product evaluations and associated ratings in international markets has the potential to offer important managerial implications in an era in which online consumer evaluations are ubiquitous.

### Movies as culturally loaded products

We focus on entertainment products as an exemplar to examine how national culture and marketing strategy interact to influence consumers' product evaluations. While the value of many products is driven heavily by their utilitarian functions (e.g., a washing machine by its efficiency and capacity), the value of entertainment products depends considerably on their ability to convey cultural meanings to consumers. Our focus on entertainment products rich in cultural content (i.e., culturally loaded products vs. utilitarian) is motivated by the unique characteristics of such products (Michel et al. 2008).

In particular, with regard to the international diffusion of new products, the time-to-take-off varies substantially

<sup>2</sup> We do not include price, because the movie industry practices uniform pricing. In addition, theater ticket prices are rarely under the control of firms that produce movies.



between entertainment and utilitarian products (Tellis et al. 2003). In addition, entertainment products are uniquely positioned at the crossroad of art and business. The market for cultural entertainment products is highly unpredictable due to the complicated production processes and fundamental contradictions between creative goals (due to the artistic nature of these products) and the traditional business emphases on resource efficiency and profit maximization (Caves 2002). Therefore, careful attention must be paid to the content of these products to strike a subtle balance between the two sometimes-conflicting goals. Given the centrality of culture in the construction and interpretation of entertainment, the commercial success of many entertainment products depends heavily on their cultural content (O'Connor 2010). Prior research on cultural studies has largely ignored this cultural compatibility issue.

Movies, like many entertainment products, are central to consumer culture (Tomlinson 1999). As a prominent component of global media, movies are “the foot in the door that opens the way for other changes in beliefs and behavior” (Arnett 2002, p. 774). Movies comprise a major global industry and relevant websites (e.g., [IMDb.com](http://IMDb.com), [BoxOfficeMojo.com](http://BoxOfficeMojo.com)) provide easy access to rich data containing consumer-initiated organic product evaluations. On conceptual and empirical fronts, therefore, the movie industry is particularly useful for our study of the cultural congruence between product content and consumers' cultural background.

### Theoretical foundations and hypotheses development

For people to assess the cultural congruence of any object, they must perceive and decode stimuli that carry cultural information. Although stimuli can carry cultural information without being consciously designed to do so, firms that sell products into countries with differing cultures typically encode cultural information into stimuli purposefully. A relevant base for theorizing about encoding, perceiving, and decoding information is communication theory, in which a message is communicated from a sender to a receiver through some media (Littlejohn and Foss 2010). Applying the theory to entertainment products, the cultural content of such a product is the intended message. The cultural background of a message receiver (i.e., consumers) sets boundaries for consumers' ability to decode the message and provides an important medium through which the message is processed and received by the consumers. The sender of the message (i.e., the firm) plays a critical role in facilitating the production, distribution, and reception of the message intended by culturally loaded products. Due to the incommensurability of values across cultures (Hofstede 1983), consumers' cultural orientations are indispensable in the reception and interpretation of culturally

loaded content of entertainment products, as is the facilitating role of marketers' strategies. That is, a market's culture affects consumers' abilities and willingness to receive a culturally loaded product; firms need to be strategic in making marketing mix decisions, such as the cultural content of a movie, the appropriate release time, and the right level of advertising spending, to facilitate the reception of the product. Such strategic marketing decisions can be informed by understanding local cultures (Gertler 2003).

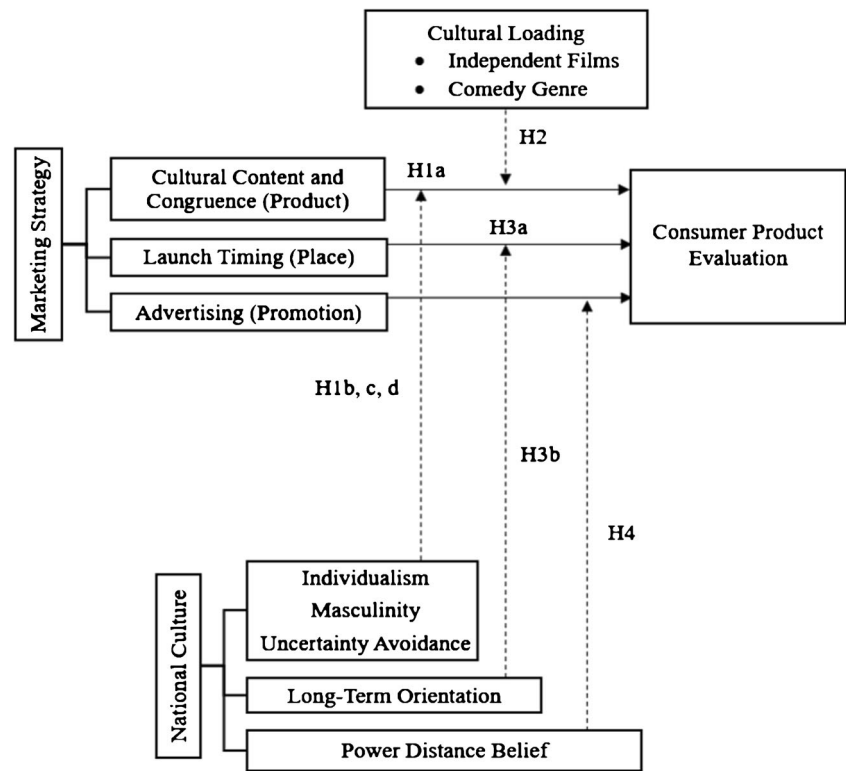
Based on this communication theory framework, we propose that consumers' reception of the symbolic messages contained in an entertainment product depends critically on (1) the cultural content of the product as the message, (2) the cultural medium that influences the ease and manner with which consumers decode the message, and (3) how the firm facilitates the consumer's decoding of the message. Specifically, in our investigation of entertainment products released in international markets, we focus on how the firm's marketing strategies (i.e., product's cultural content, product release time, and advertising spending) interact with country-level cultural variables (i.e., individualism, masculinity, uncertainty avoidance, power distance belief, and long-term orientation) to affect consumers' reception of the products. In other words, we propose that interactions among the message, the media, the message sender, and the message receiver affect the decoding and reception of the message intended by culturally loaded products, subsequently affecting consumers' product evaluations.

To measure national culture, we use Hofstede's cultural dimensions and examine their impacts on product ratings across countries. We first focus on how theory predicts three of these dimensions (individualism, masculinity, and uncertainty avoidance) to interact with the cultural congruence between the product and the market. After articulating H1, we develop theory-based predictions regarding interactions of the other cultural dimensions with marketing strategy variables that tap product, place, and promotion. Figure 1 illustrates our conceptual framework.

### Cultural congruence and interactions with individualism, masculinity, and uncertainty avoidance

From the perspective of communication theory, a message will be decoded easily and received positively if the receivers have the ability to decipher the message and the media facilitates the reception of the message. Just as all messages are not decoded and interpreted equally well by receivers, all products are not judged to be equal by consumers. In that regard, research has shown that consumers may shy away from foreign-made products for many reasons: economic (e.g., fear of domestic job losses; Shimp and Sharma 1987), historical (e.g., war and colonization; Klein et al. 1998), or socio-psychological (e.g., difficulty grasping culturally loaded

**Fig. 1** Conceptual model and hypotheses. *Definitions* *Product evaluation* Average consumer rating of products in each country; *Cultural congruence* Congruence between the cultural content of a product and consumers’ national cultural background; *Advertising* Advertising expenditures for products; *Launch timing* Time difference between U.S. and country launch date; *Individualism, masculinity, uncertainty avoidance, power distance belief, long-term orientation* Hofstede’s cultural indices for each country; *Independent films* Movies produced by independent studios with lower budgets and characterized by different content and style than major films



humor; Lee 2006). In addition, consumers often anthropomorphize products (Aggarwal and McGill 2012) and even develop relationships with products (Fournier 1998). For these reasons, the congruence between a consumer’s self-image and a product’s image tends to enhance product evaluations, akin to the notion that people like others who are similar (Ross 1971). In other words, differences in aesthetic tastes, social and cultural values, or languages between the product-producing and product-consuming countries can cause an imported product to feel culturally incongruent to the local consumers, resulting in downgraded product evaluations (Craig et al. 2005). This cultural discount effect should be more pronounced in culturally loaded movie genres (e.g., comedies; Lee 2006). In other words, congruence between a message intended by a culturally loaded product and the message receivers’ ability to decipher the cultural message should facilitate message decoding and product evaluation (Laroche et al. 2007).

Most of the extant research on the cultural congruence effect focuses on the general cultural proximity between the product-producing country and the product-consuming country, without fully considering the specific cultural match or mismatch between the actual *product* and the consuming country. This stream of research does not account for important differences in the cultural content among products originating from the same country. All products originating in the U.S. do not have the same cultural implications in China just because both are

“American” (e.g., *Kung Fu Panda* vs. *Dr. Seuss’ The Lorax*). Therefore, we extend the logic of cultural congruence from between countries to the congruence between the cultural content of the *product* and the product-consuming *country*. Specifically, we argue that when a product contains cultural elements familiar to local consumers (e.g., martial arts in *Kung Fu Panda* for Chinese consumers), the message intended by the product should be more easily decoded and better received by the message receivers. Subsequently, those consumers should evaluate the product more positively (Moon et al. 2016). This cultural congruence effect will be especially strong for entertainment products because they are rich in cultural elements.

H1a: The congruence between a product’s cultural content and a consumer’s national culture (i.e., cultural congruence) has a positive effect on product evaluation.

The prediction of a positive congruence effect is consistent with (1) the basic tenet of communication theory (Littlejohn and Foss 2010), (2) evidence that products whose images are congruent with consumers’ self-image tend to be evaluated more positively (Stern et al. 1977), and (3) the notion that products are part of a consumer’s extended self (Belk 1988). Thus, products whose cultural content matches consumers’ cultural backgrounds should be evaluated more positively. We predict moderation by three cultural dimensions.

**Individualism** A key cultural factor that may play a moderating role is a consumer's self-construal regarding individualism. To the extent that consumers define themselves differently across national cultures (Hofstede 2001), self-construals may imbue the communication media and, in turn, influence consumers' product evaluations (Aaker 2000). As congruence between self-construal and product content affects self-identity (Kipnis et al. 2013), we expect the congruence effect to be moderated by cultural differences in self-construal.

Research in cultural psychology distinguishes between interdependent and independent self-construals at the individual level and the corresponding societal-level notions of collectivism and individualism (Aaker and Lee 2001). Collectivistic cultures tend to emphasize interdependence, attend to others' needs, and value social harmony. Individualistic cultures value independence and define the self in terms of individuals' unique characteristics (Markus and Kitayama 1991). Since consumers in collectivistic cultures tend to define the self in terms of relationships with others, especially with in-groups, the congruence effect should be stronger in collectivistic cultures; these consumers are more likely to develop social relationships with products by assigning more value to culturally congruent products that they perceive as belonging to their in-group. By the same token, the social herding effect points to the tendency among members of collectivistic societies to respond positively to in-group products, which will strengthen the evaluation of such products (Deleersnyder et al. 2009).

In contrast, consumers in individualistic cultures may be less likely to develop relationships with products and pay less attention to others' consumption experiences with those products. Accordingly, the positive effect of cultural congruency on product evaluation should be weaker in individualistic cultures. Therefore, we predict:

H1b: The positive effect of cultural congruence on product evaluation is stronger in collectivistic than in individualistic cultures.

**Masculinity** Another cultural orientation that may help shape the communication media in the decoding of cultural messages is masculinity. Masculinity represents a preference toward achievement, heroism, assertiveness and material reward for success in society. Femininity, in contrast, implies a preference for cooperation, modesty, and caring for the weak. Societies with high masculinity tend to be more competitive with higher levels of self-confidence (Beyer and Bowden 1997), while those with high femininity are more consensus-oriented (Hofstede 2001). Compared to males, females tend to avoid competitive environments to instead seek harmonious relationships (Gneezy et al. 2003).

Masculinity and femininity at the country level refer to the gender role patterns in society at large (i.e., the extent it is

characterized by male or female characteristics; Tellis et al. 2003). Thus, masculine (versus feminine) cultures will show a higher level of confidence, more competitive tendencies, and a less-caring attitude for the weak. Likewise, people in masculine societies tend to make decisions independently and admire the strong and the independent (Hofstede 2001). In contrast, females are more communal and concerned with "a focus on social relationships, interpersonal affiliation, and harmony with others" (Winterich et al. 2009). Given the differences between masculine and feminine societies, consumers in masculine societies are less likely to consider culturally congruent products in a favorable light when judging cultural products. In other words, masculinity in a country facilitates the formation of communication media that diminishes consumers' reliance on culture-congruence in product evaluations. Therefore,

H1c: The positive effect of cultural congruence on product evaluation is weaker in masculine cultures.

**Uncertainty avoidance** A final cultural orientation that may shape the communication media in which the decoding of cultural messages occurs is uncertainty avoidance, i.e., the degree to which members of a society feel uncomfortable with uncertainty and ambiguity. Countries exhibiting strong uncertainty avoidance maintain rigid codes of belief and behavior to reduce ambiguity; they are intolerant of unorthodox behaviors and ideas. In contrast, societies with low uncertainty avoidance maintain a more relaxed attitude towards such behaviors and ideas (Hofstede 2001). Further, societies with high uncertainty avoidance are less willing to take risks and are less tolerant of ideas and products that go against cultural norms. Therefore, when these society members encounter culturally congruent products, they perceive uncertainty to be lower and they are more likely to accept the new product. In evaluating imported products, cultural congruence in product content can be a catalyst for reducing uncertainty. Such a conservative product evaluation is supported by the finding that consumers in high (versus low) uncertainty avoidance cultures are less innovative (Steenkamp et al. 1999). Therefore, uncertainty avoidance creates communication media that encourages consumers' reliance on cultural congruence in decoding a product and forming product evaluations.

H1d: The positive effect of cultural congruence on product evaluation is stronger in high uncertainty avoidance countries.

### Other interactions involving elements of the marketing mix

After presenting our hypotheses regarding interactions between cultural congruence and the first three of

Hofstede's cultural dimensions, we now turn to specifying how cultural congruence and the remaining cultural dimensions interact with key marketing strategy variables to influence product evaluation.

**Cultural congruence and product strategy (cultural loading)** Consumer evaluations of cultural products will depend on the proper match between the cultural meaning embedded in the product and the cultural environment of the market (Moon and Song 2015); the message receivers' enhanced ability to decode a culturally-congruent message should heighten message reception. We expect the effect of this cultural congruence between product and market to be moderated by consumers' culture-bound social and psychological inclinations that would affect the media of communication (i.e., the extent to which individual consumers' preferences are affected by those of socially relevant others, how masculine the national culture is, and the degree of uncertainty avoidance), as we hypothesized above.

The cultural congruence effect should also be moderated by a firm's product strategy, specifically by the extent to which a product communicates cultural content. The culturally loaded nature of movies should strengthen consumers' reliance on culture congruence in decoding the intended message and in evaluating the product. Consider two types of movies, independent movies and comedies. Independent movies produced by independent studios (i.e., "indies") are characterized by different content and styles than those of major studio films (Caves 2002). Both makers and consumers of indie movies tend to see such movies as works of art and enriched cultural expressions rather than simple entertainment (Vahemetsa 1970), with greater importance attached to their quality (Chuu et al. 2009). Independent movies often illuminate cultural aspects largely ignored by mainstream movies; as such, indies often tend to be popular in lesser-known subcultures (Newman 2009). This nature of indie movies' cultural richness and depth should enhance the positive effect of cultural congruence in international markets. Because indie movies' releases in international markets are limited, such cultural congruence, if present, is more strongly felt by international audiences. Therefore, cultural congruence of culture-loaded indie movies in international markets will enhance local consumers' evaluations.

Similarly, comedies present culturally loaded content (e.g., English slang, word play, hip-hop music). Research on cultural discount theory finds that comedies are highly particularistic whereas other genres (e.g., science fiction) are more universal (Lee 2006); thus, foreign audiences may find it hard to appreciate the cultural meanings of comedies. For any culturally loaded product, consumers' ability to decode information may be especially facilitated by cultural congruence. In sum, the positive effect of cultural congruence should be

accentuated for culturally loaded products (e.g., in our empirical context, independent movies and comedies).

H2: The positive effect of cultural congruency on product evaluation is stronger for products that are highly loaded (versus low) in cultural content.

### **Product release timing strategy and long-term orientation**

A second firm strategy that may constitute a signal in the communication media is product release timing (this signal is independent of a product's message). The timing of new product release in different countries is of strategic importance because it affects product performance (Elberse and Eliashberg 2003). Indeed, in their review of entry timing research, Zachary et al. (2015, p. 1407) identify "simultaneous [vs. sequential] entry of the same product into different geographical markets" as fruitful for future research. Within our communication theory framework, this consideration implies that product release timing can be a signal that affects message decoding and reception, independent of the actual message intended by the product itself. There are two reasons. First, when there is a release delay for a product in a sequential market, consumers in the later markets may be exposed to consumer reviews from prior markets. Second, consumers are keenly aware when movies have been released earlier in other markets; studios enable and leverage this awareness to build anticipation and "momentum" in subsequent markets (see Elberse and Eliashberg 2003 for empirical evidence; for industry evidence see Hennig-Thurau and Houston 2017).

Broadly speaking, new products can be launched in different countries simultaneously or sequentially. When new products are introduced in different countries sequentially, the time gap between the original and the subsequent launches influences product performance. The evidence concerning the effect of such a time gap, however, is mixed. Several studies indicate a positive effect of the time gap (e.g., Van Everdingen et al. 2009; Ganesh et al. 1997). Other studies suggest that the time gap may negatively affect performance. In an empirical study of cross-country spill-over effects, Elberse and Eliashberg (2003) find that a longer launch time gap weakens the relationship between the home country and foreign market performance because the positive "buzz" about successful movies dissipates over time. Similarly, Griffith et al. (2014) find a negative relationship between launch time lag and country level performance. These findings suggest that industries that rely heavily on consumer buzz for commercial success tend to benefit from simultaneous product releases.

From the perspective of communication theory, buzz generated through simultaneous release transmits a strong signal to consumers. The intensity of buzz is especially important for entertainment products in the social media era, in which the



time to take off in international markets tends to be very short (Tellis et al. 2003). For this reason, firms (especially in short lifecycle industries) spend heavily during the pre-launch period to create an intense buzz that will generate strong initial demand. Therefore, for new products, we expect a negative effect of a long launch time gap on consumer ratings. In our context, short product release gaps should emit a positive signal that enhances product evaluations of movies.

H3a: A longer product release time gap has a negative impact on consumer evaluation of culturally loaded products.

However, this positive effect of a short release gap may be moderated by the cultural dimension of time orientation, i.e., the extent to which consumers in different countries vary in long versus short-term orientations. Generally speaking, societies with a short-term orientation focus on achieving quick results and enjoy the “here and now.” In contrast, societies with a long-term orientation tend to demonstrate a strong propensity toward savings and investment, valuing thriftiness and perseverance (Steenkamp et al. 1999). Such differences have been documented for consumers (Chen et al. 2005) and managers alike (Brochet et al. 2015).

Strong and positive buzz should bolster consumers’ product ratings through the mere exposure effect, whereby people develop a preference due to increased familiarity (Fang et al. 2007). This phenomenon that consumers tend to base their product evaluations on popular opinions is akin to social herding (Bikhchandani et al. 1992). Because the buzz generated in earlier markets dissipates faster among the relatively impatient consumers in short-term orientation societies, the negative effect of an extended product release time gap is accentuated in short-term (versus long-term) orientation countries. In a country with more long-oriented consumers, the signal emitted by the positive buzz fades more gradually, continuing to positively affect consumers’ product evaluation for a longer period of time.

H3b: The negative effect of longer product release time gap on consumer evaluation of culturally loaded products is stronger in short-term-oriented (versus long-term-oriented) cultures.

**Advertising strategy and power distance** A final firm strategy that may constitute a signal in the communication of culturally loaded products is advertising spending. Importantly, advertising spending is publicized by firms (Hennig-Thurau and Houston 2017) and can signal social prestige to consumers, thus directly affecting consumer preferences and utilities (Becker and Murphy 1993). That is, consumers may prefer an identical product that is more heavily advertised, as increased advertising

spending and resulting product images create enhanced utilities among consumers. This prestige role of advertising is not limited to high-priced status goods; for example, Ackerberg (2001) demonstrates the prestige effect of advertising in the yogurt category. Following this logic, viewing heavily-advertised movies may persuade consumers to believe they are better informed and, accordingly, belong to the “in” group.

We theorize that decoding and interpreting advertising spending as a signal depends on national cultural differences in power distance beliefs. Power distance belief is the degree to which members of a society accept and expect hierarchies and inequalities in power distribution. When societies exhibit high power distance belief, their members tend to be more receptive to social hierarchies, whereas in societies with low power distance belief, people tend to strive to equalize the distribution of power and demand justifications of inequality (Hofstede 2001).

To the degree that advertising spending signals prestige, and to the degree that power distance belief is an indicator of social hierarchy, power distance belief may moderate the signaling effect of advertising spending. In their investigation of the cyclical sensitivity of advertising spending in 37 countries, Deleersnyder et al. (2009) identify the cultural impact of power distance beliefs on managerial decisions concerning advertising spending. Advertising spending exhibits less cyclically in countries with high power distance beliefs because these cultures accept and even emphasize social hierarchy, so consumers are motivated to signal their group belonging or aspiration. “In our hypersignified society, brands have become major conduits through which to express class differences and social aspiration. Advertising is a key instrument to build such brand images” (Deleersnyder et al. 2009, p. 626). Their empirical results indicate that advertising is a long-term, strategic investment in brand equity in high power distance societies, irrespective of economic conditions. In other words, in countries with higher levels of power distance beliefs, people have a higher need for social status, indicating that people tend to value well-known products and a sense of prestige communicated by heavy advertising of those products. Therefore, the signaling effect of advertising spending is decoded more easily and interpreted more positively among consumers with higher power distance belief.

H4: The positive effect of advertising spending on product evaluation is stronger in high power distance (versus low power distance) cultures

## Empirical analysis

### Data and variables

We test our hypotheses using a uniquely compiled dataset of the 300 movies that were widely released in the U.S. between

**Table 2** Variables and data sources

| Variable | Description (Measure)  | Data source  |
|----------|--|--|
| Rating   | Average consumer rating (1–10)   | See Table 5  |
| Volume   | Volume of consumer ratings   | See Table 5  |
| IDV      | Hofstede's cultural index of individualism   | <a href="http://geert-hofstede.com">geert-hofstede.com</a> |
| MAS      | Hofstede's cultural index of masculinity   | <a href="http://geert-hofstede.com">geert-hofstede.com</a> |
| UAI      | Hofstede's cultural index of uncertainty avoidance   | <a href="http://geert-hofstede.com">geert-hofstede.com</a> |
| LTO      | Hofstede's cultural index of long-term orientation   | <a href="http://geert-hofstede.com">geert-hofstede.com</a> |
| PDI      | Hofstede's cultural index of power distance  | <a href="http://geert-hofstede.com">geert-hofstede.com</a> |
| Culcong  | Congruence between the cultural content of a movie and consumers' national cultural background   | IMDb.com   |
| Timegap  | Time difference between U.S. and country launch date (day)   | Boxofficemojo.com  |
| Ad       | Advertising expenditures in the U.S. (\$)  | Kantar Media   |
| GDP      | Gross domestic product per capita (purchasing power parity, adjusted for inflation)  | World Bank   |
| English  | The proportion of English-speaking population (%)  | Wikipedia.com  |
| Budget   | Production budget (\$)   | Boxofficemojo.com  |
| Star     | Average box office revenues of all movies in which the actors were cast members in the five years prior to the release of the movie (\$) | Boxofficemojo.com  |
| Critic   | Critical review rating (1–100)   | Metacritic.com   |
| Sequel   | Sequel movie (dummy)   | Boxofficemojo.com  |
| Indie    | Independent films (dummy)  | Boxofficemojo.com  |
| MPAA     | 4 MPAA ratings (G, PG, PG13, and R) (dummy)  | Boxofficemojo.com  |
| Genre    | 15 movie genres (dummy)  | Boxofficemojo.com  |

Ratings are converted into 1–10 scale for websites that use different scales

January 2007 and December 2008. These movies accounted for more than 90% of worldwide revenues in each of the sample years. After excluding entries with incomplete information (e.g., missing production budget, advertising spending), we retained 260 movies. Each movie was released in at least two of the 25 countries listed in Table 2. We identified a broad range of countries for which numerical ratings of movies by consumers could be located. Although our sample covers many countries in America, Europe, and Asia, our selection is not comprehensive because of the unavailability of data for some countries.

Our dependent variable is consumer evaluations (i.e., overall summary judgment) of movies. Most existing studies use consumer evaluations from popular U.S. movie websites (e.g., [IMDb.com](http://IMDb.com), Yahoo Movies; Liu 2006; Moon et al. 2010); for our study, we require consumer evaluations from different countries. For the U.S., we used IMDb ([www.imdb.com](http://www.imdb.com)) consumer evaluations by U.S. consumers. Then, to identify the most popular websites for consumer evaluations in the other 24 countries, we surveyed international students and faculty members at various universities. Once we obtained recommendations for a few websites for each country, we selected the one with the highest overall volume and obtained numerical rating data for each movie in each country (see Appendix Table 5). In Table 2, we describe each variable and the source from which we gathered data. For the

cultural variables, we rely on Hofstede's (2001) cultural indices of individualism, power distance, long-term orientation, masculinity, and uncertainty avoidance. The marketing variables include the cultural congruence between a country and the movie content (product), the time gap between the launch of a movie in the U.S. and in a foreign country (place), and the movie's advertising budget (promotion).

To measure the cultural content of each movie, we used a text mining approach to analyze 93,800 movie reviews from IMDb. The reviews came from consumers all around the world, including Canada, China, Denmark, Egypt, Germany, India, Indonesia, Jamaica, Malta, Mexico, the Philippines, Qatar, Slovenia, Singapore, and the United Kingdom.<sup>3</sup> Using the text categorization methodology, we classified each movie into four predefined cultural categories: American, European, Asian, and South American. We thus used consumers' reviews, rather than movie descriptions or scripts, to reflect the "voice of the consumer," as is commonly done in the text analysis of online product evaluations (Lee and Bradlow 2011; Netzer et al. 2012; Tirunillai and Tellis 2014). Each movie in our dataset attracted an average of 340 reviews; these reviews varied greatly and represented views from consumers in diverse geographical regions, reflecting a

<sup>3</sup> For each consumer review, IMDb provides the information about where the writer of the review comes from.

comprehensive, general interpretation of the cultural content embedded in the movie.

Before describing this approach, we also acknowledge that some movies contain cultural content (e.g., African) beyond our four-dimensional classification; we simply lack sufficient data to identify these cultural categories from our movie reviews. In addition, each of the four cultural categories consists of diverse national cultures, yet classifying the cultural content of each movie at the national level is neither practically meaningful nor empirically feasible. Very few U.S. movies relate to a specific country. Nor do we have enough information to categorize consumer reviews of individual movies at the country level. Therefore, our approach of categorizing the cultural content of each movie into four cultural categories represents a reasonable compromise toward examining products' cultural content.

In conducting this cultural categorization, we began with a list of cultural terms elicited from the movie reviews on IMDb. From the 10,400 most frequently used terms in these 93,800 reviews, we identified 360 American (e.g., cowboy, dollar, Coke), 80 Asian (e.g., China, martial arts, rice), 270 European (e.g., knight, queen, Greek), and 208 South American (e.g., Bossa Nova, Latino, Roman Catholic) cultural terms. Three of the co-authors participated in the term selection and classification process and agreed on the final list after extensive discussions. Using the frequency with which consumers used these cultural terms, we computed the degree of the cultural content of each movie for the four categories. Examples of movies that contain rich American cultural content include *Frost/Nixon*, *American Gangster*, and *Lakeview Terrace*. Movies with rich Asian content included *Kung Fu Panda*, *The Forbidden Kingdom*, and *The Kite Runner*. Movies with rich European content included *The Chronicles of Narnia*, *Valkyrie*, and *Defiance*. Movies with rich South American content were *Indiana Jones and the Kingdom of the Crystal Skull*, *The Ruins*, and *The Incredible Hulk*. In addition, the four cultural categories were not exclusive; a movie could have rich cultural content in more than one category.

All the reviews were written in English, which is not ideal because English-speaking consumers may not represent each country's general population. Yet collecting text reviews and conducting text mining analyses in 25 different languages would not be feasible, nor would it provide meaningful implications because of the incommensurate nature of different languages. Even if we conducted text mining of reviews written in different languages and identified cultural terms in each language, the resulting movie-specific measures of cultural content may not be equivalent across languages. Thus, we chose to use reviews written in a common language; but to mitigate concerns, we included as a control variable the English-speaking population as a percentage of the total population in each country.

To examine the proposed interaction effect of cultural congruence with culture (Hypothesis 1b-1d), we operationalized congruence as the degree of congruence between a movie's cultural content and one of the four regional cultures. For example, for an Asian country, congruence is coded as the degree of Asian cultural content of a movie. European, South American, and American cultural congruence are defined similarly. This cultural congruence measure is based on a similar measure developed in recent studies that have examined how cultural congruence influences movies' box office revenues across countries. (Moon et al. 2016; Moon and Song 2015).

Testing the effect of long-term orientation requires sufficiently long launch time windows. The average launch time gap in our data was around 58 days; for 95% of the sample, the gap was within 200 days, and the maximum launch time gap was close to three years. Thus, our data were suitable for testing the effects of long-term orientation, given that movies are short lifecycle products. For advertising spending, we used the movie's advertising expenditures for its U.S. release. Although it would be ideal to use advertising spending in each country, such data are not reported on a country-by-country basis. However, note that advertising spending is highly correlated with a movie's distribution intensity (e.g., Elberse and Eliashberg 2003; Ho et al. 2009), and in our dataset the correlation between the number of screens (i.e., distribution intensity) in the U.S. and the number of screens in foreign countries was around 70%. Thus, each country's advertising spending for each movie is likely to be proportional to its U.S. advertising spending. With this assumption, we used a movie's U.S. advertising expenditures as a proxy for its advertising expenditures in each foreign country, which provides a reasonable means to deal with the data limitations.

In addition to these focal variables, we included movie-specific variables (volume of consumer ratings, production budget, star power, whether the movie is a sequel, genre, and Motion Picture Association of America [MPAA] ratings) and country-specific variables (e.g., gross domestic product [GDP] per capita and the proportion of English-speaking population in each country) as statistical controls. Table 2 presents variables and sources; Table 3 provides descriptive statistics. The mean consumer rating is 6.65 on a 10-point scale with a great variation across movies and countries. The average launch time gap is 58.1 days with the maximum of 931 days. Advertising spending averages \$24.3 million. Summary statistics of consumer ratings by country are provided in the Appendix Table 5.

### Measurement equivalence across culture

A methodological issue in cross-culture research is measurement equivalence. Baumgartner and Weijters (2015) identify several different response styles that are influenced by culture.

**Table 3** Descriptive statistics

| Variable | N    | Mean      | SD        |
|----------|------|-----------|-----------|
| Rating   | 4274 | 6.65      | 1.29      |
| IDV      | 25   | 48.22     | 22.71     |
| MAS      | 25   | 49.12     | 20.09     |
| UAI      | 25   | 68.92     | 24.25     |
| LTO      | 25   | 44.74     | 24.28     |
| PDI      | 25   | 59.98     | 19.94     |
| Culcong  | 4274 | 0.67      | 0.49      |
| Timegap  | 4274 | 58.07     | 72.40     |
| Ad       | 260  | 21.93     | 10.66     |
| Volume   | 4274 | 5.90      | 17.32     |
| GDP      | 25   | 16,475.30 | 13,277.63 |
| English  | 25   | 37.32     | 32.61     |
| Budget   | 260  | 51.26     | 48.52     |
| Star     | 260  | 933.50    | 980.68    |
| Critic   | 260  | 51.76     | 16.84     |
| Sequel   | 260  | 0.12      | 0.32      |
| Indie    | 260  | 0.18      | 0.38      |

Ad, Budget, and Star are in millions of dollars. Volume is in thousands  
*IDV* Individualism, *MAS* Masculinity, *UAI* Uncertainty Avoidance, *LTO* Long-term Orientation, *PDI* Power Distance, *Culcong* Cultural Congruence, *Ad* Advertising spending

For example, acquiescence response style—the tendency to use the positive side of a scale—is negatively related to individualism and positively related to power distance. We address this issue in this section. First, we note that unlike multi-item constructs often employed in a questionnaire, the only prompt in the consumer reviews in our setting is “Your Rating.” There are no other questions asked or descriptions provided (e.g., 1 = extremely dissatisfied). Our study collected the rating measure from one movie forum website in each country using identical collection procedures. Due to the nature of our measure, however, the analysis suggested by Baumgartner and Steenkamp (2001) to correct measurement bias is not meaningful in our context. Instead, we use stan-

dardized ratings to minimize potential biases due to differences in usage of rating scales across countries.

Second, our data do not reveal patterns that are consistent with the documented differences in response styles. For instance, if the acquiescence response style or disacquiescence response style—the tendency to choose the negative side of the scale—were present, then acquiescence response style (disacquiescence response style) would be negatively (positively) related to individualism. This is because people in collectivistic cultures tend to emphasize their interdependence and value social harmony, and thus will try to avoid extremely negative evaluations. Following this reasoning, one would expect that consumers in collectivistic cultures would provide more favorable evaluations than those in individualistic cultures. However, our data does not support this conjecture. While the correlation between consumer ratings and individualism is  $-0.16$  ( $p < 0.05$ ), the coefficient is negative, but not statistically significant in the full model (Table 4). Similarly, we see no evidence of midpoint or extreme response styles.

We further address the measurement equivalence of culture-related measures in our research context. First, we standardized the rating measures across movies for each country so that each country has the same mean (0) and standard deviation (1) of movie ratings. Second, we included in our model a number of country-specific factors (e.g., proportion of English speaking consumers, GDP) that can be potentially correlated with measurement equivalence, to partially account for its effect. Finally, measurement equivalence issues may bias main effects of culture, but, in the absence of theories postulating how measurement equivalence impact the effect of marketing strategies as well, they should not bias the proposed interactions that rely on differential effects of marketing strategies on culture’s effects.

**Model**

To test our hypotheses, we estimated the following regression model:

$$\begin{aligned}
 \text{Rating}_{mc} = & \beta_0 + \beta_1 \text{IDV}_c + \beta_2 \text{MAS}_c + \beta_3 \text{UAI} + \beta_4 \text{LTO}_c + \beta_5 \text{PDI}_{cc} + \beta_6 \text{Culcong}_{mc} \\
 & + \beta_7 \text{Timegap}_{mc} + \beta_8 \text{Ad}_m + \beta_9 (\text{IDV} \times \text{Culcong})_{mc} + \beta_{10} (\text{MAS} \times \text{Culcong})_{mc} \\
 & + \beta_{11} (\text{UAI} \times \text{Culcong})_{mc} + \beta_{12} (\text{LTO} \times \text{Timegap})_{mc} + \beta_{13} (\text{PDI} \times \text{Ad})_{mc} \\
 & + \beta_{14} \text{Indie}_m + \beta_{15} \text{Comedy}_m + \beta_{16} (\text{Indie} \times \text{Culcong})_{mc} + \beta_{17} (\text{Comedy} \times \text{Culcong})_{mc} \\
 & + \beta_{18} X_{1,c} + \beta_{19} X_{2,m} + \beta_{20} X_{3,mc} + \xi_m + \varepsilon_c + \nu_{mc}
 \end{aligned} \tag{1}$$

where *Rating* is consumer ratings for movie *m* in country *c*, *IDV* is individualism, *MAS* is masculinity, *UAI* is uncertainty avoidance, *LTO* is long-term orientation, *PDI* is power

distance belief; *Culcong* is cultural congruence between the country and the movie content, *Timegap* is the launch time gap, *Ad* is advertising expenditures for the U.S. release, *Indie*



**Table 4** Effects on consumer rating

| Variable                  | Rating               |
|---------------------------|----------------------|
| IDV                       | 0.0002 (0.0010)      |
| MAS                       | 0.0076* (0.0013)     |
| UAI                       | -0.0133* (0.0012)    |
| LTO                       | 0.0054* (0.0009)     |
| PDI                       | -0.0005 (0.0018)     |
| Culcong                   | 0.9842* (0.1627)     |
| Timegap                   | -0.0019* (0.0004)    |
| Ad                        | 0.0113* (0.0034)     |
| IDV × Culcong             | -0.0036* (0.0015)    |
| MAS × Culcong             | -0.0175* (0.0015)    |
| UAI × Culcong             | 0.0072* (0.0012)     |
| LTO × Timegap             | 0.00002* (0.00001)   |
| PDI × Ad                  | 0.0001* (0.00005)    |
| Indie                     | -0.0480 (0.0564)     |
| Comedy                    | -1.0433* (0.1659)    |
| Indie × Culcong           | 0.1614* (0.0639)     |
| Comedy × Culcong          | -0.0692 (0.0811)     |
| Volume                    | 0.0021* (0.0006)     |
| GDP                       | -0.00002* (0.000002) |
| English                   | 0.0006 (0.0010)      |
| Budget                    | -0.0010* (0.0004)    |
| Star                      | -0.00001 (0.00030)   |
| Critic                    | 0.0229* (0.0010)     |
| Sequel                    | -0.1555* (0.0412)    |
| Mills                     | 2.5183* (0.1991)     |
| Random-Effects Parameters |                      |
| $\sigma_\varepsilon^2$    | 0.0031 (0.0011)      |
| $\sigma_\xi^2$            | 0.1131 (0.0081)      |
| $\sigma_\nu^2$            | 0.4935 (0.0124)      |

$N = 4274$ . Bootstrap standard errors are in parentheses. The dependent variable is standardized ratings. Mills is the inverse Mills ratio estimated by the Heckman selection model. Ad, Budget, and Star are in millions of dollars; Volume is in thousands. The dummy variables of the three MPAA ratings and 14 genres are included as control variables but not reported except Comedy genre. The base categories of MPAA rating and genre are R and documentary, respectively

IDV Individualism, MAS Masculinity, UAI Uncertainty Avoidance, LTO Long-term Orientation, PDI Power Distance, Culcong Cultural Congruence, Ad Advertising spending

\*Significant at 5%

is a dummy variable for independent films, and *Comedy* is a dummy variable for comedies.  $X_1$  is a vector of country-specific variables: GDP per capita (*GDP*) and the proportion of English speakers in the population (*English*).  $X_2$  is a vector of movie-specific variables: production budget (*Budget*), star power (*Star*), critical review ratings (*Critic*), whether a movie is a sequel (*Sequel*), genre (*Genre*), and MPAA rating (*MPAA*).  $X_3$  is rating volume (*Volume*), which is specific to both the

movie and the country.  $\nu_{mc}$  is the error term and follows a normal distribution,  $\nu_{mc} \sim N(0, \sigma_\nu^2)$ .

In our sample, each movie was launched in multiple countries. Thus, we included  $\xi_m$  and  $\varepsilon_c$  to control for the unobserved movie- and country-specific heterogeneity, where  $\xi_m \sim N(0, \sigma_\xi^2)$  and  $\varepsilon_c \sim N(0, \sigma_\varepsilon^2)$ . This is equivalent to estimating a multilevel model that accounts for our multilevel data structure, but we specify a two-way random-effects model. This is because movies and countries are not nested in each other (differing from typical multilevel models; Cameron and Trivedi 2005). The dependent variable (*Rating*) is the numeric rating of each movie in each of the 25 countries; we used the textual review data only to measure cultural congruence, not for assessing Rating. Movie websites use different rating scales, so we converted all ratings to a 10-point scale (e.g., for a 1–5 rating scale, we multiplied ratings by 2). We then standardized the ratings of movies for each country to remove any potential bias due to scaling.

Our data show that not all movies were released in all 25 countries. Thus, we observed consumer ratings in a country only if the movie was launched in that country. If the movies released in certain countries are systematically different from those released in another set of countries, there might exist a selection bias. To deal with this potential bias, we used a Heckman sample selection modeling approach (e.g., Heckman 1979; Xiong and Bharadwaj 2011).

First, we estimated an inverse Mills ratio from the probit model in Eq. 2.

$$\text{Launch}_{mc} = \theta_1 W_{1,c} + \theta_2 W_{2,m} + \theta_3 W_{3,mc} + \mu_{mc} \quad (2)$$

Here the dependent variable (*Launch*) is whether a movie was launched in a country. That is,  $\text{Launch}_{mc} = 1$  if  $\text{Launch}_{mc}^* \geq 0$  and  $\text{Launch}_{mc} = 0$  if  $\text{Launch}_{mc}^* < 0$ , where  $\text{Launch}_{mc}^*$  is a latent variable. We observe consumer ratings of a movie when  $\text{Launch}_{mc}^* > 0$ . Otherwise, we do not observe our dependent variable. The decision to launch a movie in a country may be influenced by market potential in that country and performance in the U.S. Therefore, the independent variables ( $W$ ) include the total annual theater attendance in each country and the opening revenues in the U.S. in addition to the independent variables in the main model (Eq. 1). These two variables serve as the exclusion restrictions in the selection equation. After estimating the inverse Mills ratio, we added it as an additional explanatory variable to Eq. 1. We corrected standard errors due to the inclusion of estimated regressor (i.e., the inverse Mills ratio) using a bootstrap method (Woodridge 2010). The coefficient of the inverse Mills ratio is significant, suggesting that our approach is appropriate.<sup>4</sup>

<sup>4</sup> A Wu-Hausman endogeneity test fails to reject the hypothesis that launch timing is exogenous ( $F = 1.141, p = 0.32$ ).

## Results

The empirical results in Table 4 support most of our hypotheses. First, the effect of the congruence between the cultural content of a movie and consumers' cultural background was positive. Consumers evaluated movies more positively when they contained cultural content that was congruent with the culture of their region (supporting H1a). The interaction of individualism and cultural congruence on consumer evaluation was negative; the positive effect of cultural congruence was accentuated in cultures that exhibited a higher level of collectivism (supporting H1b). In addition, the interaction of masculinity and cultural congruence was negative, indicating that consumers in masculine cultures were less likely to evaluate culturally congruent movies positively (supporting H1c). Finally, the interaction of uncertainty avoidance and cultural congruence was positive; consumers in cultures with high uncertainty avoidance evaluated culturally congruent movies more positively (supporting H1d).

Second, regarding genres with high levels of cultural content, the interaction between cultural congruence and independent films is positive and significant (i.e., the positive effect of cultural congruence is stronger for independent films).<sup>5</sup> However, the interaction between cultural congruence and comedies is not significant. Thus, H2 receives partial support.

Third, regarding release timing (i.e., place strategy), the effect of the product launch time gap was negative and significant (supporting H3a), such that consumer evaluations were lower if the movie was released after a longer time gap, consistent with existing evidence that products that rely on consumer buzz for success benefit from early product releases. The interaction of long-term orientation and launch time gap was positive; as we predicted, the negative effect of the launch time gap on consumer rating was mitigated in long-term-oriented cultures (supporting H3b). This finding is consistent with our theory: consumers in countries characterized by a long-term orientation tend to be more patient with delayed product launches.

Fourth, advertising had a positive effect on consumer evaluations of a movie, and the interaction between power distance belief and advertising also was positive. That is, the positive effect of advertising on evaluation was stronger in countries with stronger power distance beliefs (supporting H4). This aligns with our argument

that consumers in countries with high power distance beliefs are more likely to value a product's prestige signaled by heavy advertising.

We also included all the main effects of Hofstede's (2001) five cultural dimensions in our model, as well as various movie- and country-specific variables for statistical controls. We briefly summarize these empirical results here, with the caution that they should be considered in light of the documented interaction effects. First, the effect of uncertainty avoidance was negative, whereas the influences of long-term orientation and masculinity were positive. Thus, viewers in long-term-oriented, high masculinity, and low uncertainty avoidance cultures seemingly give higher consumer evaluations. Individualism and power distance belief are not significant. Second, in countries with a higher GDP per capita, consumers' ratings were lower, presumably due to their wealth and greater access to movies. Of the movie-specific control variables, films with higher volume and higher critical ratings received higher ratings. Sequels and films with higher production budgets received less generous ratings.

## Discussion and implications

### Theoretical implications

The value of consumer goods beyond utilitarian functions lies in their ability to carry and communicate symbolic meanings (McCracken 1986). The meaning of a product depends on the cultural elements that it contains (i.e., the message or product content), the cultural backgrounds that influence consumers' information processing and decision making (i.e., the cultural background of the message receiver), and how the communication is facilitated by other signals (i.e., the strategies of the sender; marketing communications). To study the interplay of these three dimensions, we draw upon communication theory and investigate the effects of cultural factors on consumers' product evaluations through their joint effects with marketing strategy variables. That is, we illuminate how consumers' cultural disposition and firms' marketing strategies interact to affect consumers' evaluations of entertainment products imbued with strong cultural content. Our findings have important implications for communication theory, cultural discount, and cultural congruence as well as for international marketing strategy related to simultaneous or sequential launch strategies, advertising, and new product development.

First, our research contributes to communication theory by embedding consumer–firm–product interactions

<sup>5</sup> Significant interaction effects with insignificant main effects frequently happen. According to the hierarchy principle, the researcher should include the main effect to test an interaction effect even if the main effect is not significant. The interpretation of interaction term remains the same regardless of whether the main effect is significant or not (James et al. 2013).

within its framework and showing how consumers' cultural orientations and firms' marketing strategies influence the reception of the culturally loaded product's intended message. We borrow from the cultural psychology and marketing strategy literature to showcase how self-construal, time orientation, and power distance belief interact with product content, launch timing, and advertising spending to affect the communication process, with important implications for consumer evaluations of culturally loaded products such as movies.

Second, in terms of the cultural content of a product, existing research has shown that products are received well in cultures that are closer to the home country (Lee 2006). We extend this country-level cultural congruence notion to the cultural match between the product and the country (Moon et al. 2016; Moon and Song 2015). We find that this cultural congruence interacts with three national cultural dimensions (individualism, masculinity, and uncertainty orientation). Specifically, we find that the positive effect of cultural congruence on consumer evaluations tends to be attenuated in individualistic cultures. Studies have shown that cultural congruence affects product revenues (e.g., Lee 2006; Craig et al. 2005) and that cultural differences in self-construal influence product evaluations (e.g., Aaker and Lee 2001). Our findings related to cultural congruence and self-construal contribute to both streams of research. We also find novel interaction effects between cultural congruence and masculinity and uncertainty avoidance, respectively, contributing further to the extant literature on cultural congruence.

Third, premised on theories of cultural differences in time orientation (Chen et al. 2005; Hofstede 2001), we find that the negative effect of a launch time gap between the home country and a foreign market decreases in long-term-oriented cultures. This finding contributes to the literature on international product launch strategies and sheds light on the controversy over the optimality of simultaneous versus sequential strategies. The finding is consistent with our argument that for entertainment products for which creating initial buzz is critical, faster release in the international market is beneficial to product evaluation. This effect becomes stronger in a long-term orientation culture, where the marketing buzz as a signal stays longer among relatively less impatient consumers.

Finally, the power distance cultural dimension can influence the effectiveness of advertising spending. Advertising spending signals social prestige. We reveal that power distance belief enhances this positive signaling effect of advertising spending on product evaluation even further. Power distance beliefs likely cultivate a need for prestige among consumers that can be satisfied

by the consumption of heavily advertised products. This result adds to our understanding of the role of advertising by demonstrating that the effect of advertising spending depends on not only our psychological traits (e.g., regulatory foci, Aaker and Lee 2001), but also the cultural environment to which consumers belong.

### Managerial implications

Our research examining the interactions of marketing strategy and national cultural dimensions has the potential to bring out direct managerial implications and provide useful information on which specific marketing strategies will be most effective *given the cultural characteristics* of the national market. In addition, our findings can help marketing managers select appropriate target countries, given their choice of marketing strategies. Even in a globalized economy, consumers are seeking more individualized and culturally differentiated products. Thus, national cultures are a still dominant force in various forms of localized and glocalized products, and companies around the world strive to achieve the delicate balance between marketing locally to meet indigenous demands and marketing globally to benefit from economies of scale and premium perceptions (Steenkamp and Jong 2010; Kjeldgaard and Askegaard 2006; Ang et al. 2007; Kipnis et al. 2013). Firms can increase the cultural congruence of their products by localizing their cultural content, as when production studios collaborate with local studios to customize the content of a film to local tastes (e.g., the Chinese version of *Iron Man 3*; *Variety* 2013). Because the movie studio may not be able to make a different version of the movies for each country due to limited production budget, the studio may begin international releases with a limited number of differentiated versions in culturally fitting countries. Once the studio observes a success in these markets, they can then attempt to transfer the positive buzz to other countries that are culturally fitting (e.g., collectivistic, feminine, and high uncertainty avoidance countries).

Second, paying attention to cultural congruence between product content and consumers' cultural background is even more important for firms that market products rich in cultural and artistic meanings. This is reflected in the stronger cultural congruency effect for independent (vs. mainstream) movies that we show. Therefore, somewhat counter-intuitively, smaller studios who specialize in producing independent movies may have to allocate a bigger budget to ensure the content of their products is well received in the international markets.

Third, firms choose different launch timing in international markets for various reasons. Launching a product in many countries quickly (i.e., simultaneous launch strategy) enables the firm to take advantage of the buzz created by advertising (Elberse and Eliashberg 2003). Yet, launching products into foreign countries with significant time gaps (i.e., sequential launch strategy) allows the firm to leverage learning from previous experiences (Mitra and Golder 2002) and to rely on performance spill-over or cross-country learning effects to boost performance (Talukdar et al. 2002). Our result on the interaction between long-term orientation and launch timing can guide marketers in this important decision. When firms decide between simultaneous and sequential launch strategies, they should factor in the weaker negative effect of a sequential launch in long-term-oriented cultures. If the manager needs to select a few countries for an initial product release (e.g., due to limited budgets), they should prioritize short-term-oriented countries over otherwise similar, long-term-oriented countries.

Fourth, our results suggest that firms should consider consumers' cultural orientation in power distance belief when allocating marketing budgets. They may want to increase advertising spending in countries that exhibit higher levels of power distance belief to take advantage of consumers' high responsiveness to advertising (i.e., a higher return on advertising spending).

### Limitations and future research

Our research has some limitations that may open avenues for future research. First, although we collected data from 25 countries, we only used consumers' movie reviews written in English in our text mining analysis. Therefore, our study may not tap the overall cultural characteristics of the focal country population; the subgroup that speaks English may not represent the culture of the overall population. Although a potential solution would be to collect consumer reviews in multiple languages and apply a text mining technique to each language separately, this approach may generate other potentially more serious biases arising from the incommensurability of different languages, whereby subtle cultural meanings may be lost in translation. Given these conflicting issues, future research may examine reviews in the local language as well as in English, while paying careful attention to minimizing potential biases caused by language translation.

Second, although the number of countries in our sample is much larger than most studies, we excluded several important English-speaking countries due to data unavailability. Because moviegoers in English speaking countries outside the U.S. tend to use IMDb, we could not distinguish them from U.S.-based ratings. Future research can investigate the generalizability of the interaction between marketing strategy and culture in other industries immune to this data issue.

Third, to investigate the moderating role of culture on advertising effectiveness, we use the movie's advertising expenditures for its U.S. release because of data unavailability in other countries. Because advertising spending and distribution correlate highly, we argued that this limitation likely had little effect on our results. However, if such data are available, it would increase the precision when examining the interactions between advertising and culture on performance. In addition to advertising spending, the cultural content of the advertising message itself should influence the effectiveness of advertising for products in foreign countries. While it is difficult to collect and translate a large enough number of actual advertising messages, such data would be useful for research.

Fourth, our study examines consumer ratings in a business-to-consumer market setting. Studies have found that national culture affects not only the behavior of consumers but also of business customers (Hoppner et al. 2015). Future studies can explore how cultural factors interact with marketing strategies in various business-to-business markets.

### Conclusion

To summarize, our research takes an important step toward revealing how cultural factors interact with marketing strategy in determining consumers' product evaluations and, accordingly, how managers' decisions can be shaped by an understanding of national culture in international markets. We draw upon communication theory to develop our hypotheses and we rely on the extant literature on cross-culture and marketing strategies to test our hypotheses. We obtain strong empirical support for our predictions based on an examination of consumer reviewers in an entertainment industry that manufactures and markets products containing rich cultural meanings. We hope that our study stimulates further research to examine how culture affects the effectiveness of firms' other business strategies in a variety of product categories and contexts.



## Appendix

**Table 5** List of countries, data sources for consumer evaluations\*, and summary of consumer evaluation data

| Country        | Region        | Data source  | N   | Mean | SD   |
|----------------|---------------|--|-----|------|------|
| Belgium        | Europe        | <a href="http://www.cinenews.be">www.cinenews.be</a>           | 200 | 7.85 | 0.96 |
| Brazil         | South America | <a href="http://www.cineplayers.com">www.cineplayers.com</a>   | 192 | 6.05 | 1.31 |
| China          | Asia          | <a href="http://movie.douban.com">movie.douban.com</a>         | 40  | 6.93 | 0.82 |
| Columbia       | South America | <a href="http://www.sensacine.com">www.sensacine.com</a>       | 123 | 6.32 | 0.82 |
| Czech Republic | Europe        | <a href="http://www.csfd.cz">www.csfd.cz</a>                   | 167 | 6.58 | 1.31 |
| Denmark        | Europe        | <a href="http://filmz.dk">filmz.dk</a>                         | 138 | 6.39 | 1.41 |
| Finland        | Europe        | <a href="http://www.leffatykki.com">www.leffatykki.com</a>     | 172 | 6.14 | 1.06 |
| France         | Europe        | <a href="http://www.allocine.fr">www.allocine.fr</a>           | 218 | 6.12 | 1.06 |
| Germany        | Europe        | <a href="http://www.moviepilot.de">www.moviepilot.de</a>       | 215 | 6.22 | 0.96 |
| Greece         | Europe        | <a href="http://www.athinorama.gr">www.athinorama.gr</a>       | 181 | 5.73 | 1.41 |
| Italy          | Europe        | <a href="http://www.mymovies.it">www.mymovies.it</a>           | 200 | 5.57 | 1.05 |
| Japan          | Asia          | <a href="http://pia-eigaseikatsu.jp">pia-eigaseikatsu.jp</a>   | 126 | 6.66 | 0.79 |
| Mexico         | South America | <a href="http://www.cuevana.tv">www.cuevana.tv</a>             | 166 | 8.10 | 0.60 |
| Netherlands    | Europe        | <a href="http://www.moviemeter.nl">www.moviemeter.nl</a>       | 202 | 6.32 | 0.84 |
| Norway         | Europe        | <a href="http://www.filmweb.no">www.filmweb.no</a>             | 186 | 7.83 | 0.71 |
| Philippines    | Asia          | <a href="http://www.clickthecity.com">www.clickthecity.com</a> | 78  | 7.57 | 1.29 |
| Poland         | Europe        | <a href="http://www.filmweb.pl">www.filmweb.pl</a>             | 175 | 6.68 | 0.71 |
| Romania        | Europe        | <a href="http://www.cinemarx.ro">www.cinemarx.ro</a>           | 179 | 6.52 | 0.54 |
| Russia         | Europe        | <a href="http://www.kinopoisk.ru">www.kinopoisk.ru</a>         | 192 | 6.88 | 0.92 |
| Singapore      | Asia          | <a href="http://sg.movies.yahoo.com">sg.movies.yahoo.com</a>   | 182 | 6.00 | 1.01 |
| South Korea    | Asia          | <a href="http://www.movist.com">www.movist.com</a>             | 166 | 7.02 | 0.76 |
| Spain          | Europe        | <a href="http://www.filmaffinity.com">www.filmaffinity.com</a> | 222 | 5.62 | 1.05 |
| Thailand       | Asia          | <a href="http://www.siamzone.com">www.siamzone.com</a>         | 129 | 8.31 | 0.75 |
| Turkey         | Europe        | <a href="http://www.sinemalar.com">www.sinemalar.com</a>       | 165 | 8.48 | 0.45 |
| US†            | US            | <a href="http://www.imdb.com">www.imdb.com</a>                 | 260 | 6.28 | 1.20 |

\*We obtain only numerical rating data from these sources. Text review data is acquired from IMDb ([www.imdb.com](http://www.imdb.com))

† IMDb provides separate ratings for U.S. consumers and international consumers. We use consumer ratings from U.S. consumers

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