

# Determining the Effectiveness of Promotion and Reviews of Bollywood Films from Audiences : An Empirical Study

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## Abstract

**Purpose :** The study aimed to upsurge box-office revenue of films.

**Objective :** The broad aim of the proposed study was to find out the effectiveness of various promotion and reviews of Bollywood films from audiences.

**Design/Methodology/Approach :** Data were collected from 1165 respondents of dissimilar age groups and genders. The questionnaire was created by using a Likert scale and managed by using convenience sampling.

**Originality/Value :** The paper adds theoretical, empirical depth, and probe to the study approach and preferences of audiences towards promotion and reviews of Bollywood films. The role of reviews and promotions in the film-making process and its effectiveness from audiences are not keenly researched in India. The study, therefore, aimed to unearth the effective mediums for promotion of films and to study the audiences' preferences towards reviews before, during, and after the release of films.

**Future Research Scope :** Future research can benefit from further advances in measuring techniques and also by using a greater volley of questions. Even in the case of awareness campaigns, they might well vary in other countries or at times. Future research should address the generalizability of our findings across time periods and geographical settings. It is proposed that further research needs to be done for the validation of the findings of the present study.

**Practical Implications :** The findings can provide some significant scope for directors, film reviewers, and marketers in direction, reviews, and promotions, respectively.

**Keywords :** films, reviews, promotion, audience

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India, a population of 1300 million and still counting, has varied cinematic cultures of Mumbai, Andhra Pradesh, Gujarat, Karnataka, Kerala, Punjab, Tamil Nadu, Uttar Pradesh, West Bengal, and Maharashtra in languages especially Hindi, Telugu, Gujarati, Kannada, Malayalam, Punjabi, Tamil, Bhojpuri, Bengali, and Marathi, respectively. The film industry is perhaps the most vibrant industry of the Indian economy. The number of films produced annually in India is higher than the films produced in any country of the world including USA - Hollywood. While Hollywood produces around 550 movies a year, the Indian film (movie) industry produces more than 1000 movies every year (Krishnan & Sakkthivel, 2010). Around four million Indians

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'go to movies' on any given day of the year, and this number swells during festivals and holidays (Krishnan & Sakthivel, 2010). The Hindi film making industry in India that is based out of Mumbai, referred to commonly as 'Bollywood' by the media and people, is the largest film producing centre in India.

The Indian entertainment and media (E&M) industry, with revenues of about 805 billion INR (17.2 billion USD) in 2011, is poised to grow strongly over the next few years on the back of strong to moderate economic growth, increasing power of consumer spending, and having positive demographic indicators (Confederation of Indian Industry and PwC India, 2012). The industry revenues were expected to reach 1,764 billion INR (37.6 billion USD) by 2016, with a CAGR of about 17% from 2012 – 2016 (Confederation of Indian Industry and PwC India, 2012). Currently, India has the 14th largest E&M market in the world, contributing about 1% of the GDP.

According to Ramchandran and Mukherji (2010), films are cultural goods that derive value from the subjective experiences, perceptions, and emotions of consumers, all of which are idiosyncratic and do not have predictable patterns such as utility curve. According to Jha and Balaji (2015), the familiarity with name or other identity of product, service, or brand helps consumers to evaluate. Moreover, Ramchandran and Mukherji (2010) stated that consumers not only judge cultural goods from their own experience, but are also influenced by what others perceive about these goods. According to Kretschmer, Kimis, and Choi (1999), movies are classified as 'credence goods' as opposed to search goods, where quality can be assessed before purchase, or experience goods where quality can be learnt after use. For credence goods, quality can only be partially assessed during experience because the perception of quality is significantly influenced by what other people think about it. As a result, what makes audiences to watch Bollywood films also depends on another crucial question, "role of reviews". In such a scenario, systematic research is aimed to find out preferences by authors from the viewers. Moreover, due to the intensity of large number of films produced in a year, especially in a country like India, shelf-life of films is becoming shorter and shorter. Thus, there is need to study the influencing factors like 'role of reviews' and 'role of promotion' that make audiences watch movies or at least create a sense of urgency or desire to consume.

## **Review of Literature**

Researchers have attempted to know the "role of promotion" of films that helps to create awareness among people about releasing films and screening of films. Zufryden (1996) suggested a model that sequentially linked planned advertising expenditures of creating awareness of films to be released, making people to watch a film, as well as to project ticket sales at the box office. A study conducted by Eliashberg, Jonker, Sawhney, and Wierenga (2000) suggested a model called MOVIEMOD which was designed to forecast box-office collection and to support the marketing decisions for a new movie after the movie has been made (or when it is available in a rough cut) but before its final release. MOVIEMOD produces forecasts of the awareness, adoption intention, and cumulative penetration for a new movie within the population of interest for a given base marketing plan. Marketing variables that influence the evolution among the states are movie theme acceptability, promotion strategy, distribution strategy, and the movie experience. According to Beckwith (2009), knowing the personal values of protagonists in films can provide a good foundation or appear to build upon marketing campaigns of films.

Only a limited number of studies have been carried out about another influencing factor – Role of reviews that make people to watch a movie. According to Boatwright, Basuroy, and Kamakura (2007), the aggregate of critical opinion and product sales are closely associated for the intrinsic quality of a product. The study also found that critics and their opinions or critical reviews played a key role in many markets. According to Rao and Rao (2019), electronic word-of-mouth has a good influence on consumer consumption intention. Some studies (e.g., Wang, Zhang, Li, & Zhu, 2010) stated that the role of critics is especially important in the film business, in which one can find many expert opinions about each movie and where even critics' endorsements are used in advertising. The

authors explored how media publicity and word of mouth (WOM) about a to-be-released new movie drove the movie goers' behavior in emerging markets like China. According to Chandel, Sethi, and Mishra, (2017), social media (like Facebook) plays an important role in influencing consumers' decision of choosing restaurants. According to Moon, Bergey, and Lacobucci (2010), movie ratings from professional critics, amateur communities, and viewers themselves influence key movie performance measures (i.e., movie revenues and new movie ratings). Using movie level data, the authors found that good opening of movie revenues enhanced subsequent movie ratings. They also found that high advertising expenditure on movies supported by high ratings enhanced the movie's revenues. However, they empirically showed that sequel movies lean to reap more revenues, but received lower ratings than the original one. In a study by Brown, Camerer, and Lovallo (2012), film studios occasionally withhold movies from critics before their release; these cold openings offer a natural setting to apply laboratory-developed models of limited strategic thinking to the field. In a set of 1,303 widely released movies, cold opening was correlated with a 10 – 30% increase in domestic box-office revenue and a pattern of fan disappointment, consistent with the hypothesis that some moviegoers do not infer low quality from cold opening.

Suárez – Vázquez (2011) observed that experimental tests show how individual movie-goers are influenced by two variables that have aroused considerable interest in the literature : Critical reviews and the role of box office stars. The author found that both positive and negative reviews were correlated with weekly box office revenue over an eight-week period, suggesting that critics play a dual role as influencers and predictors. They can influence and predict box office revenue. Moreover, the authors found the impact of negative reviews to diminish over time, a pattern that is more consistent with critics' role as influencers. McKenzie (2009) observed that in particular, it is shown that film success (defined in a duration context) responds to previewing, advertising, critical reviews, and U.S. box office – but not to production budget, star power, or opening-week screens. Henning - Thureau, Marchand, and Hiller (2012) examined the relationship between the judgments of professional reviewers and the economic success of cultural products, such as motion pictures, by further investigating whether and how isolated reviews and quality perceptions were associated with box office results.

## **Objective of Study**

The broad aim of the proposed study is to find out the effectiveness of various promotions and reviews of Bollywood films from audiences.

## **Literature Gap**

From the literature review and related works, it is found that hardly any research in the Indian context about approach and preferences towards promotion and reviews of Bollywood films from audiences has been conducted. Most of the studies were carried out to ascertain the “Role of Promotion and Role of Reviews” having an impact on audiences to watch films in a foreign context. Further, into depth, there is hardly any research that has been conducted to find out disparity among genders and in age-groups of audiences approach to promotion and reviews of Bollywood films. This implies that there is a need to understand the way the audiences get into to watch films. Given the fact that the Indian marketplace is experiencing a new spurt of films – 100 crore club, the need becomes all the more relevant.

In such a scenario, systematic research is required to measure the division of respondents in terms of age-groups and disparity among genders regarding promotion and reviews of Bollywood films. As a result, it is the need of the hour to conduct a micro-level analysis of audiences in totality for increasing the box office revenues of films. It would have a huge scope for marketers to recognize the impact of promotion from audiences and its importance on box office collections ; also, it can enable to figure out an effective medium to promote the films in

Indian markets. The study will also help to get knowhow about the role of reviews, which can play some significant role for watching a film. The main focus, however, will be on division of respondents into different age groups and gender with respect to ascertaining the impact of reviews and promotion. However, it would be interesting to note whether there are any specific age groups and gender that have dominance with respect to reviews and promotion.

## Methodology

Since the nature of the study is descriptive and exploratory ; so, to explore the approach of audiences towards promotion and reviews of Bollywood films and also to attain the earlier part of the objective, we framed a questionnaire and collected responses regarding reviews and promotion of films and demonstrated results in frequency tables. To fulfill the latter part of the objective, we examined the 'role of reviews and role of promotion' in depth by segregating the audiences into different age groups and genders by applying cluster analysis and discriminant analysis, respectively.

✎ **Data Collection and Sample Characteristics :** The data were collected through a structured questionnaire from audiences to fulfill the objectives of the paper during 2016 – 18 ; 1165 respondents participated in the study. The data were collected via online and offline modes.

## Data Analysis and Results

**(1) Role of Reviews :** From Table 1, it can be summarized that all forms of reviews of films were important for the respondents except certification reviews, which were given less importance as compared to other reviews. Respondents gave significant consideration to reviews of friends and relatives, newspapers, colleagues, and experts reviews while considering which films to watch.

**(2) Role of Promotion :** It was decided to apply a 5 - point Likert scale to study which factors play a significant or important role for promotion of films. From Table 2, it is summarized that trailers in theaters play a very important role followed by advertisements on television, release of songs in advance, PWOM, and media interviews, etc. It is also observed that promotion through Internet, impact of release date, and advertisements in print, etc. also play a substantial role for promotion of films.

**(3) Cluster Analysis :** Cluster analysis is conducted out to find out whose comments the audiences would consider

**Table 1. Frequency Table for Role of Reviews**

	<i>Not at all Important</i>	<i>Not Important</i>	<i>Neutral</i>	<i>Important</i>	<i>Very Important</i>
Critics' Reviews	37	77	217	544	290
Experts' Reviews	22	58	190	573	322
Online Reviews	38	91	182	592	262
Newspaper and/or Magazine Reviews	19	63	192	639	252
Reviews of Relatives and/or Friends	3	13	99	591	459
Reviews of Colleagues	11	21	124	582	407
Certification Reviews	40	100	165	485	375

**Table 2. Frequency Table for Role of Promotion**

	<i>Not at all Important</i>	<i>Not Important</i>	<i>Neutral</i>	<i>Important</i>	<i>Very Important</i>
Through advertisements on television	29	38	174	600	324
PWOM	15	73	301	538	238
Media interviews	14	92	408	545	106
Trailer in theaters	9	6	147	485	518
Merchandise of film	71	168	576	290	60
Release of songs in advance	26	36	240	499	364
Reality shows	62	133	457	380	133
Pre - release controversy	75	197	454	299	140
Free tickets	135	199	433	237	151
Through Internet	44	148	350	439	184
Bollywood celebration awards	49	138	464	393	121
Film festivals and premieres	58	146	440	405	116
Impact of release date	80	105	395	450	135
Promotional tours	79	224	454	329	79
Advertising in print media	47	155	421	463	79
Standalone website	112	282	519	205	47
Advertising on radio	75	222	496	286	86
Large scale opening of films	58	186	464	343	114
More frequency of screenings	49	173	443	390	110

for watching films. For that, the respondents were provided 5 - point Likert scales on which they rated the given variables with respect to degree of importance that they attached to them. Table 3 presents the last seven observations of agglomeration schedule for hierarchical clustering. The first column of the table represents the cluster number, second and third columns show the cluster combined, and fourth column shows the coefficients. Fifth and sixth columns show stages of the cluster. Eighth column represents the absolute change in the clustering coefficients. This is obtained by subtracting the present stage's coefficient value from the previous stage's coefficient value. The ninth column gives percentage change in the coefficient values. To generate the

**Table 3. Average Linkage (Between Groups) - Agglomeration Schedule**

<b>Agglomeration Schedule</b>								
<b>Cluster Combined</b>				<b>Stage Cluster First Appears</b>		<b>Difference (Diffusion Coefficient)</b>		<b>Percentage Change</b>
1158	1	232	19.386	1155	3	1159	0.386	-66.4639
1159	1	231	19.465	1158	1150	1160	0.079	-79.5337
1160	1	946	20.622	1159	1140	1161	1.157	1364.557
1161	1	129	22.49	1160	1156	1162	1.868	61.45203
1162	1	921	29.925	1161	1157	1164	7.435	298.0193
1163	929	1053	35.214	1151	1106	1164	5.289	-28.8635
1164	1	929	42.389	1162	1163	0	7.175	35.65891

**Table 4. Initial Cluster Centers**

	Initial Cluster Centers		
	Cluster		
	1	2	3
Critics' Reviews	1.00	5.00	1.00
Experts' Reviews	1.00	2.00	5.00
Online Reviews	1.00	2.00	4.00
Newspaper and/or Magazine Reviews	1.00	4.00	3.00
Reviews of Relatives and/or Friends	3.00	5.00	4.00
Reviews of Colleagues	1.00	2.00	5.00
Certification Reviews	1.00	5.00	1.00

stopping rule, agglomeration coefficients and percentage changes in these coefficients are used to identify the number of clusters.

From the column fusion coefficient, it is seen that there is a difference of 7.175 ( $42.389 - 35.214$ ) between the cluster solution 1 and cluster solution 2. The next difference is 5.289 ( $35.214 - 29.925$ ) between 2 and 3 cluster solutions. After that, the difference between 3 and 4 cluster solutions rises, which is 7.435 ( $29.925 - 22.49$ ). After that, again, the difference between 4 and 5 cluster solutions falls, which is 1.868 ( $22.49 - 20.622$ ). This provides a three cluster solution.

➤ **Quick Cluster :** K-means clustering is also known as quick clustering. The significance of the first stage is just to identify appropriate number of clusters, which is used as input for the K-mean clustering. The objective of carrying out the second stage is to consider the practical implication of the clusters derived from hierarchical clustering method to meet the objectives of classification of respondents based on the level of satisfaction (Chemmanoor & Pandya, 2017). In this stage, clusters are developed and interpreted. Table 4 denotes initial cluster centers for considering three clusters.

These initial solutions, presented in Table 5, are improved by performing a number of iterations. By these iterations, initial cluster centers are improved and final cluster centers are developed. The final cluster centers are a good solution, and are used to interpret average values of each variable for a cluster, and thereby describe clusters. Table 5 represents iteration history for three cluster solutions.

Table 5 shows changes in cluster centers. The iteration process stops when no more changes in the cluster centers is likely, that is, the changes in all the centers are 0.000. From Table 5, it is witnessed that in 14 iterations, the changes are 0.000 for all four clusters. In other words, it can be said that 14 iterations are essential for developing final cluster centers for a three cluster solution.

The final cluster centers in Table 6 describe the mean value of each variable for each of the three clusters, for example, Cluster 1 is described by the mean values of variable 1 = 2.63, variable 2 = 2.70, and so on. After deriving the final clusters, the next stage is to interpret the clusters in terms of original variables.

➤ **Cluster 1 :** Respondents belonging to this group were neutral towards critics' reviews, experts' reviews, online reviews, newspaper/magazine reviews, colleagues' reviews, and certification reviews. However, reviews received from friends/relatives were important to view a film for this cluster.

➤ **Cluster 2 :** For them, reviews received from experts, relatives/friends, colleagues, and certifications were very important ; while reviews received from critics, online reviews, newspaper /magazine reviews came into the important category for them.



**Table 5. Iteration History**

Iteration History <sup>a</sup>			
Change in Cluster Centers			
Iteration	1	2	3
1	2.801	3.735	3.386
2	1.009	.375	.445
3	.502	.158	.203
4	.157	.084	.169
5	.053	.032	.083
6	.020	.039	.082
7	.035	.052	.105
8	.160	.042	.122
9	.091	.110	.174
10	.088	.075	.112
11	.112	.034	.076
12	.056	.020	.031
13	.000	.014	.016
14	.000	.000	.000

**Note.** <sup>a</sup> Convergence achieved due to no or small change in cluster centers. The maximum absolute coordinate change for any center is .000. The current iteration is 14. The minimum distance between initial centers is 6.782.

**Table 6. Final Cluster Centers**

Final Cluster Centers			
	Cluster		
	1	2	3
Critics' Reviews	2.63	4.43	3.62
Experts' Reviews	2.70	4.52	3.79
Online Reviews	2.52	4.35	3.70
Newspaper and/or Magazine Reviews	2.82	4.30	3.84
Reviews of Relatives and/or Friends	3.90	4.52	4.15
Reviews of Colleagues	3.29	4.50	4.06
Certification Reviews	2.61	4.54	3.67

➤ **Cluster 3 :** Reviews received from relatives/friends and colleagues were more important than other reviews like critics' reviews, experts' reviews, online reviews, newspaper/magazine reviews, and certification reviews.

From the ANOVA Table 7, it can be inferred that all the variables are significant at the 99% confidence level. Table 8 represents the number of cases (respondents) in each cluster. From Table 8, it is found that for a three cluster solution, 175 and 523 respondents have a presence in Clusters 1 and 2, while 467 respondents fall in Cluster 3.

**Table 7. ANOVA**

	ANOVA					
	Cluster		Error		<i>F</i>	Sig.
	Mean Square	<i>df</i>	Mean Square	<i>df</i>		
Critics' Reviews	229.884	2	.565	1162	406.839	.000
Experts' Reviews	228.001	2	.416	1162	547.558	.000
Online Reviews	223.990	2	.570	1162	393.182	.000
Newspaper and/or Magazine Reviews	145.662	2	.484	1162	300.803	.000
Reviews of Relatives and/or Friends	31.470	2	.416	1162	75.648	.000
Reviews of Colleagues	99.620	2	.491	1162	202.896	.000
Certification Reviews	265.908	2	.652	1162	407.741	.000

**Note.** The *F* tests should be used only for descriptive purposes because the clusters have been chosen to maximize the differences among cases in different clusters. The observed significance levels are not corrected for this and thus cannot be interpreted as tests of the hypothesis that the cluster means are equal.

**Table 8. Number of Cases in Each Cluster**

Number of Cases in Each Cluster		
Cluster	1	175.000
	2	523.000
	3	467.000
Valid		1.165E3
Missing		.000

#### (4) Discriminant Analysis

✎ **Role of Promotion :** Through discriminant analysis, an attempt is made to know the characteristics of the variables at the time of the release of a movie that differentiates between male and female audiences.

Discriminant analysis is used to find distinctive sets of features and assign new ones to those pre defined groups. Moreover, this test gives better and reliable results in a large sample size. Here, the sample size is of 1165 respondents and it is very required to know the segregation of the responses as per gender, and hence, we decided to conduct discriminant analysis. In many ways, it is better than regression analysis as it tests discrete dependent variables concerned with separating sets of observed values and allocating new values.

✎ **Descriptive Statistics :** Here, two groups (female and male) are to be compared on the basis of 20 variables studied regarding how the respondents came to know about the release of a film. It is useful to compute their mean values to get an idea of the differences in their mean scores. The mean score along with the standard deviation of all 20 characteristics studied for the release of a film are presented in Table 9. For most of the variables, mean score of females is higher than that of males. Variables like through ads on television, trailers, release of songs in advance have higher mean score for both the dependent variables – male and female. Variables like participation in TV serials, pre - release controversy, free tickets, and social media marketing have higher standard deviation.

✎ **Tests for Differences in Group Means :** To identify for which of the variables a significant difference exists between means of the two groups, a one-way ANOVA is carried out for each of the variables, where each of



**Table 9. Group Statistics**

Group Statistics				
			Valid N (Listwise)	
Gender	Mean	Std. Deviation	Unweighted	Weighted
Female	Through Adv.	<b>4.0071</b>	.82663	560560.000
	PWOM	<b>3.8250</b>	.93132	560560.000
	Media interviews	3.6393	.76499	560560.000
	Trailers in theatre	<b>4.2750</b>	.76560	560560.000
	Merchandising	3.1536	.88193	560560.000
	Public relations	3.2036	.89801	560560.000
	Participation in TV serials	3.0839	.94675	560560.000
	Release of songs in advance	<b>4.0696</b>	.90148	560560.000
	Advertising on radio	3.3625	<b>1.01634</b>	560560.000
	Pre - release controversy	3.2911	<b>1.05277</b>	560560.000
	In entertainment news	3.4429	.95720	560560.000
	Online	3.4661	<b>1.11852</b>	560560.000
	Bollywood celebration awards	3.4214	1.01557	560560.000
	Film festivals and premieres	3.4661	1.05260	560560.000
	Social media marketing	3.1929	1.00372	560560.000
	Impact of release date	3.4750	1.01125	560560.000
	Promotional tours	3.1286	.93887	560560.000
	Advertisements in print media	3.3589	.89007	560560.000
	Stand alone website	2.9339	.92138	560560.000
	Large scale openings of films	3.2232	.95432	560560.000
	More frequency of screenings	3.2714	.92543	560560.000
Male	Through Adv.	<b>3.9719</b>	.93543	605605.000
	PWOM	<b>3.7421</b>	.83762	605605.000
	Media interviews	3.4612	.84604	605605.000
	Trailers in theatre	<b>4.2942</b>	.75865	605605.000
	Merchandising	3.0231	.93998	605605.000
	Public relations	3.0744	.97964	605605.000
	Participation in TV serials	3.1818	.95772	605605.000
	Release of songs in advance	<b>3.8926</b>	.92609	605605.000
	Advertising on radio	3.3074	<b>.98399</b>	605605.000
	Pre - release controversy	3.1140	<b>1.06193</b>	605605.000
	In entertainment news	3.3851	.93786	605605.000
	Through online	3.5124	.92711	605605.000
	Bollywood celebration awards	3.2694	.90169	605605.000
	Films festivals and premieres	3.1884	.89565	605605.000
	Social media marketing	3.2678	<b>1.10284</b>	605605.000
	Impact of release date	3.3124	<b>1.04371</b>	605605.000
	Promotional tours	3.0545	<b>1.06199</b>	605605.000

<b>Total</b>	Advertisements in print media	3.2826	.96174	605605.000
	Stand alone website	2.7190	.99521	605605.000
	Large scale openings of films	3.2380	<b>1.03396</b>	605605.000
	More frequency of screenings	3.3091	1.01414	605605.000
	Through Adv.	3.9888	.88460	11651165.000
	PWOM	3.7820	.88449	11651165.000
	Media interviews	3.5468	.81265	11651165.000
	Trailers in theatre	4.2850	.76173	11651165.000
	Merchandising	3.0858	.91448	11651165.000
	Public relations	3.1365	.94310	11651165.000
	Participation in TV serials	3.1348	.95331	11651165.000
	Release of songs in advance	3.9777	.91823	11651165.000
	Advertising on radio	3.3339	.99962	11651165.000
	Pre - release controversy	3.1991	1.06078	11651165.000
	In entertainment news	3.4129	.94724	11651165.000
	Through online	3.4901	1.02341	11651165.000
	Bollywood celebration awards	3.3425	.96072	11651165.000
	Film festivals and premieres	3.3219	.98367	11651165.000
	Social media marketing	3.2318	1.05657	11651165.000
	Impact of release date	3.3906	1.03100	11651165.000
	Promotional tours	3.0901	1.00494	11651165.000
	Advertisements in print media	3.3193	.92837	11651165.000
	Stand alone website	2.8223	.96601	11651165.000
	Large scale openings of films	3.2309	.99608	11651165.000
	More frequency of screenings	3.2910	.97228	11651165.000

**Table 10. Tests of Equality of Group Means**

Tests of Equality of Group Means					
	Wilks's Lambda	F	df1	df2	Sig.
Through Adv.	1.000	.461	1	1163	.497
PWOM	.998	2.555	1	1163	.110
Media interviews	.988	14.130	1	1163	.000
Trailers in theatre	1.000	.185	1	1163	.667
Merchandising	.995	5.941	1	1163	.015
Public relations	.995	5.478	1	1163	.019
Participation in TV serials	.997	3.072	1	1163	.080
Release of songs in advance	.991	10.908	1	1163	.001
Advertising on radio	.999	.882	1	1163	.348
Pre - release controversy	.993	8.149	1	1163	.004
In entertainment news	.999	1.080	1	1163	.299
Online	.999	.596	1	1163	.440

Bollywood celebration awards	.994	7.320	1	1163	.007
Films festivals and premieres	.980	23.618	1	1163	.000
Social media marketing	.999	1.462	1	1163	.227
Impact of release date	.994	7.273	1	1163	.007
Promotional tours	.999	1.579	1	1163	.209
Advertisements in print media	.998	1.965	1	1163	.161
Stand alone website	.988	14.563	1	1163	.000
Large scale openings of films	1.000	.064	1	1163	.800
More frequency of screenings	1.000	.436	1	1163	.509

the variables is treated as a dependent variable and the female/male group is treated as an independent variable. Table 10 indicates that variables namely media interviews (0.000), public relations (0.019), merchandising (0.015), release of songs in advance (0.001), pre - release controversy (0.004), Bollywood celebration awards (0.007), film festivals and premieres (0.000), impact of release date (0.007), and stand alone website (0.000) for which the  $p$  - value is less than 0.05, the assumed level of significance. There does not seem to be any significant difference in the means of the remaining variables as the  $p$  - value for each of the variables is greater than 0.05.

Table 11 depicts the pooled within group matrices. It represents the correlation matrix for the entire predictor variables. It is important to detect the problem of multicollinearity. If it is found that the correlation coefficient between any two variables is greater than 0.75, it means both the variables in the particular pair share a large amount of common shared variance and might reflect the same attribute. Table 11 indicates that the correlation between any pair of independent variables is not more than 0.75. So, there is no serious problem of multicollinearity.

✎ **Summary of Canonical Discriminant Functions :** As shown in Table 12, Eigen values for this discriminant function are 0.116 with 100% variance explained. The last term in the table is canonical correlation, which is simple correlation coefficient between the discriminant score and their corresponding groups (male/female). Here, the canonical correlation value is 0.322 and the square of it is  $(0.116)^2 = 0.13456$ , which means 13.46% of the variance in the discriminating model is because of changes in all 21 variables.

As in Table 13, Wilks's lambda is ratio of within group sum of squares to total sum of squares. The Wilks's lambda takes a value between 0 and 1 and lower the value of Wilks's lambda, higher is the significance of the discriminant function. The statistical test of Wilks's lambda is carried out with the chi-squared transformation statistics, which in the table is 126.079 with 21 degrees of freedom and a  $p$  - value of 0.000. As the  $p$  - value is 0.000, it is inferred that the discriminant function is significant and can used for the further interpretation of results.

Table 14 depicts the standardized canonical discriminant function coefficients. It is interpreted in the same way as regression coefficients. This means that each coefficient reflects the relative contribution of each of the predictor variables on the discriminant function. A small value of a discriminant coefficient indicates that the impact of a unit change in predictor variable is small in the discriminant function score. Further, standardized discriminant function does not have a constant term in it and is independent of the units of the measurement ; whereas, unstandardized discriminant function depends upon the unit of measurement. The absolute value of the coefficients in standardized discriminant function indicates the relative contribution of the variables in discriminating between the two groups. From Table 14, it can be interpreted that film festivals and premieres is the most important variable followed by standalone website, media interviews, merchandising, pre-release controversy, and release of songs in advance.

Structural coefficient is another way to find out the relative contribution of the predictor variables in

Table 11. Pooled Within-Groups Matrices

Pooled Within-Groups Matrices																					
Correlation	Through Ads	PWOM	Media Inter-views	Trailers in Theatre	Merchandising	Public Relations	Participation in TV Shows	Release of Songs	Advertising on Radio	Pre-release Controversy	In Entertainment News	Online Celeb-ration	Bollywood Awards	Film Festivals and Premieres	Social Media Marketing	Impact of Release Date	Promotional Tours in Print Media	Stand alone Website	Large Scale Openings of Films	More Frequency of Screenings	
	Through Ads.	.320	.312	.286	.167	.164	.109	.369	.222	.216	.311	.030	.141	.239	.003	.128	.156	.211	-.019	.245	.187
Correlation	PWOM	.320	.359	.122	.092	.143	.166	.184	.257	.175	.341	.173	.174	.257	.055	.116	.079	.208	.146	.189	.176
	Media interviews	.312	.359	.273	.333	.369	.468	.325	.472	.360	.376	.179	.350	.312	.208	.345	.297	.329	.276	.345	.375
	Trailers in theatre	.286	.273	1.000	.211	.142	.213	.297	.109	.141	.260	.170	.100	.197	.183	.218	.097	.195	-.014	.239	.180
	Merchandising	.167	.092	.333	.211	1.000	.670	.549	.210	.372	.308	.402	.336	.216	.272	.230	.302	.294	.388	.341	.397
	Public relations	.164	.143	.369	.142	.670	1.000	.626	.334	.436	.355	.357	.293	.221	.303	.332	.340	.266	.397	.378	.382
	Participation in TV serials	.109	.166	.468	.213	.549	.626	1.000	.368	.478	.389	.453	.292	.378	.390	.337	.358	.304	.322	.440	.458
	Release of songs in advance	.369	.184	.325	.297	.210	.334	.368	1.000	.402	.264	.371	.064	.237	.228	.233	.209	.187	.094	.308	.293
	Advertising on radio	.222	.472	.109	.372	.436	.478	.402	1.000	.423	.461	.288	.367	.428	.242	.262	.306	.316	.415	.365	.416
	Pre-release controversy	.216	.175	.360	.141	.308	.355	.389	.264	.423	1.000	.473	.234	.189	.192	.195	.203	.239	.229	.358	.348
	In entertainment news	.311	.341	.376	.260	.402	.357	.453	.371	.461	.473	1.000	.380	.312	.271	.283	.292	.316	.299	.387	.436
	Online Bollywood celebration awards	.030	.173	.179	.170	.336	.293	.064	.288	.234	.380	1.000	.338	.321	.289	.216	.251	.241	.421	.300	.253
	Film festivals and premieres	.141	.174	.350	.100	.216	.221	.378	.237	.367	.231	.359	.338	.571	.217	.279	.344	.345	.358	.343	.347
	Social media marketing	.239	.257	.312	.197	.272	.303	.390	.373	.428	.189	.312	.321	1.000	.301	.240	.325	.374	.300	.329	.262
	Impact of releasedate	.003	.055	.208	.183	.326	.336	.421	.228	.242	.192	.271	.289	.301	1.000	.397	.416	.324	.381	.381	.385
	Promotional tours	.128	.116	.345	.218	.230	.332	.337	.233	.262	.195	.283	.216	.240	.397	1.000	.511	.399	.385	.459	.381
	Advertisements in print media	.156	.079	.297	.097	.302	.340	.358	.209	.306	.203	.292	.251	.325	.416	.511	1.000	.484	.490	.409	.412
	Stand alone website	.211	.208	.329	.195	.294	.266	.304	.187	.316	.239	.316	.241	.345	.324	.399	.484	1.000	.383	.352	.330
	Large scale openings of films	-.019	.146	.276	-.014	.388	.397	.322	.094	.415	.229	.299	.421	.358	.381	.385	.490	.383	1.000	.367	.403
	More frequency of screenings	.245	.189	.345	.239	.341	.378	.440	.308	.365	.358	.387	.300	.343	.381	.459	.409	.352	.367	1.000	.693
		.187	.176	.375	.180	.397	.382	.458	.293	.416	.348	.436	.253	.347	.385	.381	.412	.330	.403	.693	1.000

**Table 12. Eigen Values**

Eigen values				
Function	Eigen Value	% of Variance	Cumulative %	Canonical Correlation
1	.116 <sup>a</sup>	100.0	100.0	.322

**Note.** <sup>a</sup> First 1 canonical discriminant functions were used in the analysis.

**Table 13. Wilks's Lambda**

Wilks's Lambda				
Test of Function(s)	Wilks's Lambda	Chi-square	df	Sig.
1	.896	126.079	21	.000

**Table 14. Standardized Canonical Discriminant Function Coefficients**

Standardized Canonical Discriminant Function Coefficients	
	Function
	1
Through Ads	-.232
PWOM	.014
Media interviews	<b>.398</b>
Trailers in theatre	-.121
Merchandising	<b>.363</b>
Public relations	.157
Participation in TV serials	-.760
Release of songs in advance	<b>.347</b>
Advertising on radio	-.364
Pre - release controversy	<b>.351</b>
In entertainment news	.026
Online	-.297
Bollywood celebration awards	.040
Films festivals and premieres	<b>.591</b>
Social media marketing	-.260
Impact of release date	.280
Promotional tours	-.081
Advertisements in print media	-.099
Standalone website	<b>.412</b>
Large scale openings of films	-.134
More frequency of screenings	-.191

discriminating between two groups through comparing the structural coefficients of the predictor variables. The structural coefficient presented in Table 15 is obtained by computing the correlation between the discriminant score and each of the independent variables. It is also called discriminant loadings. From Table 15, it can be ascertained that the correlation coefficient between the discriminant score and the variable – film festivals and

**Table 15. Structure Matrix**

Structure Matrix	
	Function
	1
Films festivals and premieres	.419
Standalone websites	.329
Media interviews	.324
Release of songs in advance	.285
Pre - release controversy	.246
Bollywood celebration awards	.233
Impact of release date	.233
Merchandising	.210
Public relations	.202
Participation in TV serials	-.151
PWOM	.138
Advertisements in print media	.121
Promotional tours	.108
Social media marketing	-.104
In entertainment news	.090
Advertising on radio	.081
Online	-.067
Through Ads	.059
More frequency of screenings	-.057
Trailers in theatre	-.037
Large scale openings of films	-.022

**Note.** Pooled within-groups correlations between discriminating variables and standardized canonical discriminant functions.

Variables ordered by absolute size of correlation within function.

premiers is 0.419 ; whereas, correlation with variables like standalone website, media interviews, release of songs in advance, pre - release controversy, Bollywood celebration awards, impact of release date, and merchandising is 0.329, 0.324, 0.285, 0.246, 0.233, 0.233, 0.210, and 0.202, respectively. In a similar way, other variables are interpreted. From Table 14 and Table 15, it can be concluded that film festivals and premieres is the most important variable in discriminating between the two groups. The change in the relative importance of the variables using a structure matrix in comparison to what is obtained through standardized coefficients is due to an intercorrelation between the predictor variables.

The mean discriminant score is also computed for the two groups separately. This is known as group centroids. This works out to be 0.353 for a female and -0.327 for a male. This is shown in Table 16.

The value of the function at group centroids is used for designing a decision rule to categorize respondents into the female/male category. Any group whose discriminant score is greater than zero can be classified as a female and as prospective respondents for the given study and less than zero score is classified as non prospective respondents. Here, the size of the two groups is not equal, and the cut-off score for classification is computed as :



**Table 16. Functions at Group Centroids**

Functions at Group Centroids	
Gender	Function
	<b>1</b>
Female	.353
Male	-.327

**Note.** Unstandardized canonical discriminant functions evaluated at group means.

$$\begin{aligned}
 C &= \frac{(n_2 y_1 + n_1 y_2)}{n_1 + n_2} \\
 &= \frac{605*(-0.327) + 560*(0.353)}{605 + 560} \\
 &= \frac{197.835 + 197.68}{1165} \\
 &= 0.3394
 \end{aligned}$$

Table 17 is called confusion matrix or classificatory table. It can be concluded from Table 17 that out of the 605 males, 364 are predicted by the model. Similarly, out of the 560 respondents, 354 are predicted as females. The overall classificatory ability of the model is measured by the hit ratio. Here, there are 718 correct predictions out of 1165. So, the hit ratio works out to be 61.6%.

**Table 17. Classification Results**

Classification Results <sup>b,c</sup>					
		Predicted Group Membership			
		Gender	Female	Male	Total
Original	Count	Female	354	206	560
		Male	241	364	605
	%	Female	63.2	36.8	100.0
		Male	39.8	60.2	100.0
Cross-validated <sup>a</sup>	Count	Female	346	214	560
		Male	256	349	605
	%	Female	61.8	38.2	100.0
		Male	42.3	57.7	100.0

**Note.** <sup>a</sup>. Cross validation is done only for those cases in the analysis. In cross validation, each case is classified by the functions derived from all cases other than that case.

<sup>b</sup>. 61.6% of original grouped cases correctly classified.

<sup>c</sup>. 59.7% of cross-validated grouped cases correctly classified.

## **Managerial Implications**

This study adds historical and theoretical depth to the debate of effectiveness of promotions and reviews of films. The role of reviews and promotions in the film-making process is not a keenly researched topic in India. The study, therefore, contributes towards an improved understanding for marketers and other stakeholders for effective medium of promotion of films and the impact of reviews among audiences to watch films. Every film is a new product. Each film is produced by millions of dollars at stake; even statistics have revealed that only less than 5% of the films get break-even (no profit or no loss). So, this study will eventually help many stakeholders, especially marketers at large, and highlight the substantial role of film reviewers that make audiences watch films. It will help the marketers to know about different promotion tools and innovative ways to promote films, and moreover, aid in understanding the effective promotion tools that help audiences to watch Bollywood films.

Marketers need to be more focused regarding the segmentation of audiences and their preferences to watch films with respect to age and gender. It also supports the role of reviews, which can play an important role at a critical juncture during the release of films. The study also reveals that reviews by relatives, friends, and colleagues are taken into prime consideration by audiences for watching films. It reflects the paramount importance of promotion and reviews besides the film itself for a production house. Fundamentally, three major implications of the study can be summarized as follows. First, this study supports the existing literature regarding the role of promotion and reviews at a comprehensive level. Second, the study investigates at a micro level (for e.g., segmenting into age-group and gender in the role of reviews and promotion) in India. Lastly, the study can also act as an eye-opener for the film industry to take a cue from our findings and use this study for planning promotions for the release of upcoming films.

## **Limitations of the Study and Scope for Future Research**

Like any study, the present research findings are subject to various limitations and caveats. We have taken into consideration the various ways of promoting of films, even though there may be also other ways of promotions, that is, our list is certainly not inclusive. Future research can incorporate more and more innovative ways or methods of promoting the films by drawing the questionnaire from people to get their views about awareness of releasing the films in the market. There may also be other variables apart from the role of promotion and role of reviews that make audiences watch films like star cast, distribution strategy, storyline, etc. To sum up, all the caveats and limitations support the need for future investigations of using data from multiple time periods, multiple countries, and multiple reviewers. Moreover, availability of movie and entertainment related data on the Internet and elsewhere has grown by leaps and bounds in the recent past. This progress predicts well for the potential feasibility of future studies aimed at addressing the issues in the study. In the case of motion pictures, they may well differ in other countries or at other times. Future research should address the generalizability of our findings across time periods and geographical settings. It is proposed that further research needs to be done for the validation of the findings of the present study.

## **Authors' Contribution**

Dr. Prince C. Thomas and Dr. Naresh K. Patel conceived the presented idea. Both developed the theory and performed various computations. Both together verified the analytical methods that have been used in the paper. Both encouraged each other to investigate and develop the findings of this work. Both the authors discussed the results and contributed to the final manuscript.

## Conflict of Interest

The authors certify that they have no affiliations with or involvement in any organization or entity with any financial interest (such as honoraria, educational grants, participation in speakers' bureaus, membership, employment, consultancies, stock ownership, or other equity interests, and expert testimony or patent-licensing arrangements) or non-financial interests (such as personal or professional relationships, affiliations, knowledge, or beliefs) in the subject matter or materials discussed in this manuscript.

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