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OPTIMISING MEDIA MARKETING STRATEGIES IN A MULTIPLATFORM WORLD: AN INTER-RELATIONAL APPROACH TO PRE-RELEASE SOCIAL MEDIA COMMUNICATION AND ONLINE SEARCHING

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Media marketing in a multi-platform world

In recent decades, multi-platform strategies have strongly focused on the production and distribution side of media industries. Lately, demand-side factors and related marketing aspects of multi-platform strategies have become more important due to growing audience autonomy and fragmentation, in combination with a wider range of accessible information sources. Consequently, online communication and searching on social media platforms has greatly increased the impact of social dynamics on the information diffusion process. The emergence, growth dynamics and inter-relations among user communication, communication by professionals, and online searching are still understudied. The present article uses the German movie market to explore these dynamics, as online searching, user communication, and communication by professionals all play crucial roles in this market. The term communication by professionals here refers to information provided by specialised online media and professional communicators, such as journalists, critics, public relations and marketing managers. It accounts for the effects of public relations and critical reviews on online movie portals and legacy media's online platforms. In general, user communication is expected to be more authentic and reliable than other information sources.

Empirical results indicate that communication has significant positive effects on media product purchases, subscriptions, and usage. The majority of these studies integrate a selected number of social media indicators at a single point in time, mostly during the post-release phase. The focus must therefore shift to the pre-release phase to better understand the emergence of these communication processes and to improve the accuracy of existing forecast models. The present study pursues this goal through a longitudinal analysis of multi-platform social media communication and online searching. Little is known about the growth dynamics and inter-relations of social media communication and online searching. It is still unclear which indicators provide distinctive explanatory power in intra- and inter-platform perspectives. These insights are essential to understand when and where product-related information diffusion processes can be influenced, so as to optimise multi-platform marketing strategies. Consequently, Research Questions 1 and 2 in the present study focus on these inter-relations from two perspectives. Research Question 1 addresses intra-platform correlations, and focuses on the information value of different social media indicators on the same platform.

- Research Question 1: Are there intra-platform correlations among the growth curves of different social media indicators?

Facebook, for example, differentiates among likes, shares, and comments. High intra-platform correlations, if present, would prove that different social media indicators on the same platform share the same statistical information, and are therefore substitute measures.

Research Question 2 addresses inter-platform correlations and focuses on the information value of the same indicators across different social media platforms.

- Research Question 2: Can similar diffusion patterns be identified among platforms?

Consequently, high inter-platform correlations, if present, would indicate that the same social media indicators across different platforms share the same statistical information. Insights into intra- and inter-platform correlations allow researchers to formulate more parsimonious web-monitoring approaches based on the most relevant indicators, which reduces effort and cost.

Research Question 3 takes a more general perspective. User communication and communication by professionals play major roles in movie demand. However, despite this connection, the temporal inter-relations among online user communication, communication by professionals, and online searching remain unclear. These temporal inter-relations must be understood for researchers and marketers to identify causal relationships among these communication behaviours and to develop more accurate multi-platform strategies. If, for example, online searching takes place before user communication and communication by professionals, it would be in distributors' best interests to provide basic information about the movie to all target groups long before the release date. In contrast, if communication by professionals leads and user communication lags behind, critics and journalists should be invited to test screenings long before the release date to convince them of the quality of the product. The following analyses therefore provide insights into how different communication behaviours influence each other over time, as well as the implications that can be drawn from the results.

- Research Question 3: Are there inter-relations among the growth dynamics of online user communication, communication by professionals, and online searching? Do those inter-relations differ among the different movie clusters?

Data

A longitudinal multi-platform social media monitoring approach based on the German movie market was established to address Research Questions 1–3. The sample consisted of social media indicators collected via YouTube, Twitter, Facebook, and online cinema portals, as well as online searching on Google for 12 weeks before each movie's release (see Appendix Table A). The database consisted of all movies released in Germany between June 26 and 27 December 2012 (N = 231); from this, a sub-sample of 216 had complete information. The selection of social media platforms was based on reach: in terms of the number of users in Germany, Facebook is the market leader for online-based social networking services; Twitter is the leading microblogging platform; and YouTube is the leading user-generated audiovisual content provider. The selection of online movie magazines was also based on reach, as measured by the German information association, to determine the reach of advertising. Movie platforms and magazines put out by movie producers, movie distributors, cinema operators, or broadcasters were excluded to ensure the independence of editorial content and recommendations. Based on these criteria, three portals were selected: www.filmstarts.de, www.kino.de, and www.moviepilot.de. The number of movie-specific search queries on Google was used to measure online searching. Google is the world's most extensively used search engine, and can be regarded as a valid representation of online searching, especially in Germany, where Google's market share exceeds 90%.

Conceptualisation of the multi-method design

The German movie market is very diverse: 525 movies premiered in Germany in 2011, and German movies (as opposed to films made in other countries but shown in Germany) had a market share of 22.2%. Germany's diversity in genres, countries of origin, and production factors might lead to different dynamics in pre-release communication and online searching. A multi-method research design was therefore employed to address these dynamics.

To answer research questions 1-3 several statistical methods were applied, such as correlation analysis, hierarchical cluster analysis, discriminatory analysis and path analysis.

Correlation analysis were used for determining the direction and strength of a relationship between two variables, for example, between the number of likes on YouTube trailers and the number of global Google search queries. The correlation coefficient (r) is defined and calculated so that its value lies in the range -1 to +1, $r = +1$ in the case of a perfect direct (increasing) linear relationship (correlation), $r = -1$ in the case of a perfect decreasing (inverse) linear relationship (anticorrelation). When $r = 0$, there is no relationship between the variables. The greater the absolute value of the ratio, the stronger the correlation.

Hierarchical cluster and discriminatory analysis were performed to investigate if different groups of movies appear in the dataset. The growth functions of pre-release social media indicators and online searching for each cluster were then identified. Knowledge about these dynamics is a precondition for intra- and inter-platform analysis, which then allows researchers to formulate more parsimonious web-monitoring approaches based on the most relevant indicators and to refine multi-platform strategies accordingly.

Path analysis combines these insights and identifies temporal inter-relations among online user communication, communication by professionals, and online searching on a more aggregate basis. Path analysis provides insights into how product-related communication processes start and evolve over time. Moreover, path analysis shows the strength and timing of these inter-relations; this knowledge is essential to deriving more accurate multi-platform marketing strategies from the dynamics of online communication and searching.

Results

1. Cluster and discriminatory analysis

Two clusters were identified. The clusters can most clearly be distinguished by distributor power, director power, and the number of screens at theatrical release.

Based on the clustering procedure, as well as on additional descriptive and discriminatory analysis, Cluster 1 ($n = 153$) can be labelled art and auteur movies. Movies in this cluster mostly dealt with serious topics, and had small-to-medium production and marketing budgets. Movies in this cluster also tended to have higher artistic and aesthetic quality, as evidenced by numerous nominations and awards of prizes in filmmaking.

Cluster 2 ($n = 63$) consisted mainly of high-budget productions. Movies in this cluster tended to belong to genres with wide popular appeal; all of the prequels and sequels fell into this cluster, and famous actors and directors were over-represented. This cluster was therefore labelled blockbuster movies.

Table 1. Correlation matrix of social media indicators and online searching

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
A	1	0,53	0,36	0,38	0,52	0,52	0,52	0,53	0,52	n.s.	0,52	0,48	0,52	0,61	0,59	0,40
B		1	0,20	0,24	0,49	0,49	0,50	0,50	0,50	0,14	0,54	0,50	0,34	0,52	0,47	0,20
C			1	0,89	0,54	0,54	0,52	0,53	0,45	n.s.	0,47	0,37	0,22	0,43	0,36	0,14
D				1	0,60	0,59	0,59	0,60	0,54	n.s.	0,54	0,44	0,30	0,50	0,43	0,15
E					1	0,95	0,95	0,97	0,92	0,22	0,91	0,81	0,37	0,75	0,64	0,20
F						1	0,96	0,99	0,88	0,14	0,92	0,77	0,39	0,79	0,66	0,23
G							1	0,98	0,87	0,14	0,89	0,76	0,38	0,79	0,67	0,20
H								1	0,89	0,16	0,91	0,78	0,39	0,78	0,67	0,22
I									1	0,38	0,91	0,88	0,41	0,70	0,65	0,24
J										1	0,29	0,56	n.s.	n.s.	n.s.	n.s.
K											1	0,86	0,42	0,74	0,67	0,23
L												1	0,37	0,63	0,59	0,22
M													1	0,46	0,60	0,50
N														1	0,75	0,21
O															1	0,33
P																1

Note: A, Twitter messages; B, Search queries on Google; C, People talking about the movie on Facebook fan pages; D, Likes on Facebook fan pages; E, Facebook likes on YouTube trailers; F, Facebook shares on YouTube trailers; G, Facebook comments on YouTube trailers; H, Facebook activity on YouTube trailers; I, Likes on YouTube trailers (thumbs up); J, Dislikes on YouTube trailers (thumbs down); K, Page views on YouTube trailers; L, Comments on YouTube trailers; M, Critical ratings on online movie platforms; N, Facebook activity on online movie platforms; O, Comments on online movie platforms; P, Online movie reviews by legacy media. n.s., not significant; N = 216.

2. Intra-platform correlations

Intra-platform correlations were found to be very high across a large number of social media indicators. For example, there were high correlations among the number of Facebook likes, shares ($r = 0.95$), and comments ($r = 0.95$) regarding the film's YouTube trailer. Moreover, the number of people talking about the movie on Facebook fan pages was highly correlated with the number of likes ($r = 0.89$). The sum of likes, shares, and comments is therefore a valid representation of Facebook activity, and the different indicators can be regarded as substitute measures.

Similar relations were observed for YouTube-specific social media measures. For example, the number of comments was highly correlated with likes ($r = 0.88$) and page views ($r = 0.86$). Negative ratings, however, had low correlations with the other social media measures ($r = 0.14$ – 0.38). This means that increasing, for example, the reach of a trailer leads to disproportionately low negative evaluations, which represents either a movie's superior quality or social pressure, as few people oppose majority opinion. Based on these findings, multiplatform marketing strategies should aim to draw as much attention as possible to fan pages and movie trailers.

3. Inter-platform correlations

From an inter-platform perspective, strong correlations were found among YouTube-specific and Facebook-specific social media indicators, with likes on YouTube trailers highly correlated with likes ($r = 0.92$), shares ($r = 0.88$), and comments ($r = 0.87$) on Facebook. Similar

effects were observed among page views on YouTube trailers and the number of Facebook likes ($r = 0.91$), shares ($r = 0.92$), and comments ($r = 0.89$). There was also an inter-relation among the number of Facebook likes and YouTube comments ($r = 0.81$), indicating that more likes also lead to more comments. This proves that these communication patterns are very stable. This is a challenge for movie marketers, as information among those platforms diffuses quickly: on the upside, positive user feedback for a trailer strongly affects other platforms and social media indicators, such as shares and comments; however, the same is true for negative feedback. Once the opinions of users and professional communicators, such as journalists or critics, have been published, it is hard to interfere and change that trend. It is therefore essential for movie marketers to identify the direction of these inter-relations and their evolution over time. Path analysis allows for an evaluation of these interdependencies among online user communication, communication by professionals, and online searching.

4. Inter-relations among the growth dynamics of online user communication, communication by professionals, and online searching

The previous analyses in the present paper revealed strong intra- and inter-platform correlations among different social media measures on the disaggregated level. These variables were then aggregated to three categories: online user communication, communication by professionals, and online searching. This multiplatform cross-comparison identified lead-lag dynamics among these categories, and provided insights into their evolution during the pre-release phase. Each movie cluster was analysed separately to evaluate group-specific growth processes and inter-relations among the three categories. Path analysis based on data for the individual movies was used to identify the strength and timing of these interrelations.

This analysis was conducted to reveal and quantify the most influential interdependencies among the three communication behaviours. Art and auteur movies had a two-sided cross-correlation among online user communication and communication by professionals at time of theatrical release. This two-sided cross-correlation reflects the close relationship and interdependence of these two communication behaviours at that time. More communication by professionals leads to more online user communication and vice versa; however, no lead-lag dynamics were identified. These results imply very stable communication patterns over time, with almost no inter-relations among the different communication behaviours early in the information diffusion process. This suggests that marketing managers should address users and professional communicators with target-group-specific strategies, as inter-relations are small in effect and appear only directly before a movie's release. Due to the stability of these communication patterns, these measures should begin as soon as possible, but no later than 12 weeks before the release.

In addition to strong auto-correlations, blockbuster movies (Cluster 2) showed moderate but very stable patterns of cross-correlations. In contrast to the author's expectation, online searching increased online user communication. These results imply that users first search for basic data about blockbuster movies before they like, share, or comment online. Contrary to expectations, communication by professionals had a negative effect on the amount of online user communication. This negative impact might be attributable to negative critical or press reviews, or to a decrease in information value after professional reviews are published. The idea that information value falls after professional reviews are published is rooted in the idea that users are especially motivated to communicate about a movie when there are few alternative information sources. Online user engagement therefore logically declines when information by professional communicators, such as critics or journalists, becomes available. The results of the present article indicate that users search for more information about blockbuster movies before they communicate about them on social media platforms.

Strategic and managerial implications

The findings presented in this article about dynamics and interdependencies among social media indicators, although confined to behaviours in the German movie market, appear highly relevant for media managers aiming to allocate their social media budgets more efficiently. This study revealed strong intra- and inter-platform correlations; the high degree of interchangeability among different platforms with different users was completely unexpected. Moreover, strong path dependencies indicate that the patterns of online communication and searching are quite stable over time.

While further research is needed in differing market contexts to confirm the outcome of this study, it is possible to offer some initial recommendations. The findings of this study suggest that it is essential for movie marketers to be present across online platforms early in the information diffusion process, as earlier dynamics influence those that follow. High inter-platform correlations imply substitutability among different platforms, for example, in forecast models or in web-monitoring approaches. Moreover, focusing on selected social media platforms is a logical marketing strategy, as spillover effects increase the reach of marketing measures. These spillover effects can, however, also pose a challenge for movie marketers, as information diffuses quickly across platforms. Based on findings in this article, increasing the reach of a trailer, the number of likes, and comments were found to lead to disproportionately low negative evaluations. Multi-platform marketing strategies should aim to draw as much attention as possible to fan pages and movie trailers, for example, with additional advertising expenditures or by directing links to those platforms. Pre-release web-monitoring procedures are essential to identify the nature of these dynamics. Negative feedback and criticism have to be taken seriously, with suitable countermeasures including higher marketing expenditures, dialogue-oriented corporate communications, or changes to the movie itself, such as by cutting out certain scenes.

In addition to these general implications, some recommendations can be made specifically for marketing managers for art and auteur, and blockbuster movies. The characteristics of movies were found to determine the dynamics of online communication and searching, indicating that different communication strategies have to be employed for different types of movies. For example, online user communication, communication by professionals, and online searching were found to be fairly independent from each other for art and auteur movies, so communication and marketing strategies should be widely spread. These findings might also indicate that less information is available about art and auteur movies.

Specific recommendations can also be made for blockbuster movies. For movies within this category, online search processes were consistently found to precede online user communication. Providing information about the movie long before the theatrical release is therefore essential to increase the probability that the movie will be indexed by online search engines. Moreover, specific communication strategies should be established for professional communicators such as critics or journalists. Addressing users directly on the relevant platforms will counterbalance any negative feedback by professional communicators.

Appendix

Table A. Overview of success factors and social media indicators.

Variable name	Description	Data source
<i>Social media indicators</i>		
Twitter messages about the movie	Category: online user communication	https://twitter.com
Press reviews	Category: communication by professionals	www.filmzeit.de
Likes, dislikes, comments, and page views on YouTube trailers	Category: online user communication	www.youtube.de
Facebook likes, comments, and shares on YouTube trailers	Category: online user communication	Facebook query language meta data

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Facebook likes, comments, and shares on online portals	Category: online user communication	
Comments on online portals	Category: online user communication	www.filmstarts.de; www.kino.de; www.moviepilot.de
Critical reviews on online portals	Category: communication by professionals	
Facebook likes on Facebook-fan pages	Category: online user communication	de-de.facebook.com
People speaking about the movie on Facebook	Category: online user communication	
Search queries on Google	Category: online searching	adwords.google.com; www.google.com/trends
<i>Conventional success factors</i>		
Awards	Point scale based on the German federal film board's criteria (FFA)	www.imdb.de, www.mediabiz.de; FFA
Director power	Number of global Google search queries	www.mediabiz.de; adwords.google.com; www.google.com/trends
Distributor power	Movies ranked in the top-100 between 2001 and 2011	FFA
Official movie funding (subsidies)		www.mediabiz.de
Competition	Movies of the same genre class premiered in the same week	SPIO
Number of screens		SPIO
Sequel/prequel		www.mediabiz.de; SPIO
Star power	Number of local Google search queries	www.imdb.de, www.mediabiz.de; adwords.google.com; www.google.com/trends
Genre class 1 "Serious"	Drama, documentary, history, biography, thriller, episode, and road movie	Segmentation according to von Rimscha (2013)
Genre class 2 "Feel-good"	Animation, comedy, romance, musicals, family	
Genre class 3 "Kinetic"	Action, adventure, science fiction, horror, fantasy	
Template	All media except movies	www.mediabiz.de
Certification	FSK 0: no limitation; FSK 6: from 6 years; FSK 12: from 12 years; FSK 16: from 16 years; FSK 18: from 18 years	www.fsk.de/
Official rating	No rating; valuable; exceedingly valuable	www.fbw-filmbewertung.com
Budget	Not specified; under 500,000€; 500,000 to 1.5 million €; 1.5 to 3 million €; 3 to 5 million €; 5 to 10 million €; 10 million € and higher	www.the-numbers.com, www.imdb.de, www.boxofficemojo.com

Вопросы к статье

1. Какую бизнес-проблему рассматривает статья? Является ли данная проблема актуальной для России или же ее актуальность касается только Германии? Дайте развернутый ответ.
2. В начале статьи авторы ставят три исследовательских вопроса. Что это за вопросы? Даются ли на них исчерпывающие ответы?
3. В таблице 1 приводятся величины коэффициента корреляции для переменных, использовавшихся в исследовании. Какие переменные оказались наиболее сильно связаны между собой? Между какими переменными связь оказались наиболее слабой?
4. Автору статьи удалось выделить два кластера на основе типов рассматриваемых фильмов. Опишите эти кластеры. В чем особенность каждого? По результатам исследования, есть ли различие в коммуникативном поведении пользователей интернета относительно каждого из двух кластеров?

Далее Вам предлагается выбрать одну из двух позиций - позицию аналитика- исследователя (А - аналитика) либо позицию медиаменеджера (Б - бизнес).

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А. Если Вы выбрали позицию аналитика-исследователя, то ответьте, пожалуйста, на следующие вопросы:

A1. Что в приведенном исследовании было предметом исследования? Какие методы использовались в исследовании? В чем научная новизна данного исследования? Какова эмпирическая база данного исследования?

A2. Есть ли критические замечания к методологии исследования, используемой эмпирической базе? Можно ли результаты данного исследования считать надежными и достоверными? Обоснуйте свой ответ.

Б. Если Вы выбрали позицию медиаменеджера, то ответьте, пожалуйста, на следующие вопросы:

Б1. Если перед Вами стоит задача продвижения в интернете нового блокбастера, то какие маркетинговые действия, основываясь на результатах данного исследования, необходимо предпринять? И какие действия заведомо будут неэффективными?

Б2. Если перед Вами стоит задача продвижения в интернете нового арт-хаусного кинофильма, то какие маркетинговые действия, основываясь на результатах данного исследования, необходимо предпринять? И какие действия заведомо будут неэффективными?