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DRIVERS OF INFORMATION QUANTITY: THE CASE OF MERGER-ACQUISITION EVENTS

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Abstract

Business and research likewise acknowledge the potential and economic value of information exchange in social media (i.e. the quality and the quantity of user-generated content). While existing research has mainly focused on the analysis of the impact of online information exchange, little attention has been devoted to the drivers of information exchange in social media related to major business events. In this study we explore drivers of information exchange relating to such events. In the context of merger-acquisition events, we posit that firm visibility based on firm characteristics and information needs triggered by the event itself influence the information quantity generated in social media. We test these hypotheses using a rich data set that includes a wide range of social media types and platforms. Our results show that both firm visibility and information needs are driving information quantity in social media in the context of corporate actions. Both of these driving factors are highly significant in explaining the information quantity in social media.

Keywords: Social Media, User-Generated Content, Information Quantity, Information Exchange

1 INTRODUCTION

From Twitter to Facebook, social media activity (i.e. the creation and exchange of user-generated content) is a key driver of business models' success (Luo et al. 2013). It is hence no surprise that social media platforms direct significant efforts to keep the user engaged and create content. Research on what drives information exchange in social media is critical to understanding why some social media businesses succeed while others fail. While prior studies in business-related disciplines (e.g. IS, finance, and marketing) have focused on a range of issues relating to social media, most of it is primarily concerned with the influence and predictive power of user-generated content (UGC) (Antweiler & Frank 2004; Godes & Mayzlin 2004; Luo et al. 2013). Moreover, studies build upon social cognitive theory and the social capital theory in order to investigate and explain information exchange in virtual communities (Lu & Yang 2011; Chiu et al. 2006).

Little attention, however, has been directed to studying drivers of information exchange relating to major business events such as corporate actions. As businesses aim at leveraging the power of social media, an understanding of what drives online chatter relating to the firm can be critical for crafting social media strategies. As a critical first step, in this exploratory study, we examined how factors relating to two categories – *Firm Visibility* and *Information Needs* influence the generation of postings in social media. We study this in the context of a very common and important financial business event - mergers and acquisitions. Using merger events as the context of our study, our research aims to answer the following research question: What are the influencing factors that drive information exchange in social media subsequent to the announcement of major business events?

With an extensive dataset that spans multiple social media platforms, our study is among the first to provide insights into drivers of information quantity for business events across both synchronous (e.g. Twitter) and asynchronous (e.g. message boards or blogs) social media platforms.

The remainder of this paper is organized as follows. In the next section, we review related prior work and develop our hypotheses. In section 3, we describe our datasets. Next, we outline the empirical approach, present analyses and discuss the findings. The final section presents concluding remarks and addresses the limitations of our work and potential future research directions.

2 LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

2.1 Social Media and User-Generated Content

According to Kaplan and Haenlein (2010) social media in general can be defined as: “a group of Internet-based applications that build on the ideological and technological foundations of Web 2.0, and that allow the creation and exchange of User-Generated Content” (p. 61). Types of social media discussed by the authors include: blogs, social networking sites, collaborative projects, content communities, virtual social worlds, and virtual gaming world. Other types of social media generally discussed in practice and research include microblogging services and online message boards.

Taken cumulatively, various types of social media platforms enable individuals/firms to communicate, express opinions and feelings, share information, provide feedback, and to facilitate the building of interpersonal/business-customer relationships on an unprecedented scale. At the center of social media platforms is the engaged user who is responsible for both generating and disseminating of content. According to the OECD (2007), user-generated content can be defined as “i) content made publicly available over the Internet, ii) which reflects a certain amount of creative effort, and iii) which is created outside of professional routines and practices” (p. 4). UGC can be considered as an output through the use of social media by individuals (Kaplan & Haenlein 2010). There is little doubt that the advent of social media fundamentally changes the way in which people generate and exchange information where the density of digital interconnectedness is driven by users themselves. Indeed,

social media enables individuals to spread and share UGC on an unmatched scale and pace (Luo et al. 2013).

The value resulting from this unique ability of social media to reach hundreds of millions of users almost instantaneously is now well recognized by individuals, firms and researchers. Today, due to the vast amount of information exchange by individuals that is facilitated by social media, researchers have the opportunity to directly observe human behavior (Golder & Macy 2012). Enabled through social media, online business communities are emerging with increasing frequency. In virtual communities, communication is facilitated by the use of different types of social media, discussing all kinds of business-related subjects ranging from topics related to products to global market events. In the context of merger-acquisition events, Zülch et al. (2014) showed that the consecutive choices of social media types determine the communication process following a merger announcement. More so today than in the early days of digital technologies, social media is used and perceived to be a reliable source of information. For example in the financial domain, social media types like blogs are commonly used for providing investment advice and further insights on market events (Fotak 2008). Previous empirical research used social media-based metrics like volume (i.e. quantity), dispersion, and the valence of UGC in order to investigate the influence of UGC (Godes & Mayzlin 2004; Liu 2006; Luo et al. 2013). IS, finance, and marketing literature likewise made use of these metrics and investigated the predictive power of UGC with regards to different types of social media. In doing so, studies applied these metrics to different research objectives and contexts, like product sales, capital market performance and major business events.

Information systems and marketing literature has focused on areas like the influence of UGC (in this context also known as electronic word-of-mouth (eWoM)) on product sales. Several studies analyzed the impact of UGC in the context of box office revenues and TV show/movie ratings. Godes and Mayzlin (2004) identified a significant relationship between the dispersion of UGC provided by online message boards (Usenet newsgroups) and future ratings of TV shows. Others investigated the role of UGC with respect to box office sales. Using data from message boards (e.g. Yahoo! Movies) and review sites, these studies show that, in contrast to ratings, the volume of UGC has predictive power with regard to box office revenues (Liu 2006; Dellarocas et al. 2007; Duan et al. 2008). In addition, Duan et al. (2008) could show that the volume of UGC is also strongly influenced by sales providing first insights concerning what influences the volume of UGC. Chevalier and Mayzlin (2006) analyzed the influence of UGC (i.e. online reviews) on relative book sales at two online retailers. They found that the volume of UGC on the site of one online retailer also has an impact on book sales of the other retailer, whereby negative reviews have a greater influence compared to positive ones.

Furthermore, IS, finance, and marketing literature likewise are concerned with the predictive power of UGC in the financial domain. As one of the first studies, Wyzocki (1998) investigated if the quantity of UGC (Yahoo! stock message board postings) is influenced by underlying firm characteristics and stock market activity. Accordingly, the quantity of UGC postings was highest for companies with high market capitalization, low institutional holdings, high number of analyst following, high market-to-book and price-earnings ratios, high trading volume and volatility, and extreme past returns. In addition, overnight posted UGC can predict changes in subsequent returns and trading volumes. Antweiler and Frank (2004) also showed that the quantity of UGC (Yahoo! stock message board postings and raging bull message board postings) and the valence of UGC help to predict subsequent trading volumes, stock returns and stock volatility. Tirunillai and Tellis (2012) used several metrics of UGC and investigated the relationship between UGC and stock market performance. UGC was correlated with abnormal returns, risk, and trading volumes. Interestingly, the quantity of UGC had the strongest relationship with abnormal returns and trading volume. In addition, negative UGC had the strongest effect (shorter wear-in time) on abnormal returns and trading volume. Other studies have focused on the extraction of the sentiment of UGC and investigated how this relates to stock market performance. Das and Chen (2007) extracted investor sentiment from stock message boards and showed that the sentiment of UGC can be related to stock index levels, trading volumes, and volatility. Furthermore, Bollen et al. (2011) extracted the sentiment of daily UGC posted on Twitter

(representing the public mood) and were able to find a correlation between the public mood and subsequent changes in the Dow Jones Industrial Average index values. Luo et al. (2013) analyzed the predictive relationships between social media and firm equity value. Their study is among the first to show that social media-based metrics like the valence and quantity of UGC postings on blogs and consumer ratings have more predictive power with regard to firm equity value compared to online behavioral metrics like the amount of web searches and web traffic. In addition, one of the most recent studies showed that blog coverage has an impact at the screening stage in a venture financing context (Aggarwal & Singh 2013).

Overall, existing studies provide evidence that companies need to recognize the benefits of social media investments with regard to firm performance, strategic advantages and shareholder value creation.

2.2 Information Exchange in Social Media – Hypotheses Development

The previous section emphasizes the economic value of social media. In addition, in business contexts the literature on social media is mainly concerned with the influence of UGC, especially the predictive power of the quantity of UGC is recognized in the literature. Nevertheless, the growing body of literature on social media does not investigate what influences the generation of UGC related to major business events such as corporate actions (e.g. mergers). Individuals use social media for the creation and exchange of user-generated content. Information exchange in social media refers to the quality of content and the quantity of information exchanged (Lu and Yang 2011). Information quantity represents the total amount of information exchanged, typically represented by the number of messages (postings) sent or exchanged (Lu and Yang 2011). As a first step, in this paper we focus on the quantity of UGC. Therefore, our objective is to analyze what influences the quantity of UGC creation in a business context. As a first attempt in order to explore business-related factors that influence the quantity of UGC, we distinguish between firm characteristics, representing more general factors related to the firm, and event characteristics, representing event-related factors, meaning factors that are tied to and determined by the specific characteristics of a major business event itself. In doing so, we want to explore which of these factors drive information quantity exchanged in social media in the context of a major business event.

We chose the event of a merger attempt (i.e. a corporate action) in order to explore business-related factors that may influence information exchange in social media. In general, a merger is defined as the combination of two firms that form a single legal entity and is driven by financial, strategic, and managerial motives aiming to realize growth opportunities and synergistic gains (Napier 1989; SEC 2013). A merger attempt represents an adequate opportunity to investigate business-related factors that influence information exchange in social media since it represents an event of great interest and informational uncertainties for individuals (i.e. investors or potential investors). In our study, a merger attempt encompasses the time period from the merger announcement till the final outcome of a merger attempt is known (i.e. completion or withdrawal of the merger).

For investors and potential investors of involved companies, a merger attempt bears informational uncertainties on many levels. Depending on the structure of the deal (event-related factors), investors have to reevaluate their investment decisions (Louis & Sun 2010). In order to make informed decisions with regard to the merger, information needs based on merger-related factors may incentivize decision-makers to engage in information exchange via social media during the merger process (Herrmann 2007). A lot of mergers fail with regards to their post-acquisition performance (Chakravorty 2012). Hence, investors have to assess if proclaimed synergies can be realized and if growth can be achieved. Moreover, the relatedness based on the field of business and industries of the two merging companies provide indication about the strategic fit of the combination of the two involved companies, meaning a higher probability for realizing synergistic gains achieved by the merger. A lack of strategic fit will result in a poor post-acquisition performance (Healy et al. 1992; Chakravorty 2012). In addition, the chosen method of payment for the transaction has a signaling

effect to investors (Yook 2003). Overvalued acquirers tend to prefer financing the merger with equity (i.e. stocks) and undervalued acquirers tend to prefer financing the transaction with cash (Myers & Majluf 1984). Cash financed deals signal the acquirer's confidence in realizing synergistic gains, meaning less uncertainty about the post-acquisition performance, whereby stock financed deals may require additional information and evaluation of the offer (Goergen & Renneborg 2004). Finally, the deal size and moreover the magnitude of the difference of the firm size of the involved parties are indicators of the financial risk of the acquirer, giving investors reason to talk about the merger in order to assess the situation at hand (Louis & Sun 2010).

To conclude, information asymmetries do exist between merging companies and investors (Healy and Palepu 2001). Individuals may engage in information exchange via social media, leading to the generation of UGC postings in order to reduce informational uncertainties with regard to the merger attempt. *Information Needs* are caused by the previously described distinct deal characteristics of a merger attempt (event-related factors) that incentivize investors to engage in online information exchange in order to satisfy their information needs (Wysocki 1998). Hence, we posit:

Hypothesis 1 (H1): Event characteristics related to event-specific information needs have a significant predictive relationship with the information quantity exchanged in social media.

Besides event-related factors that trigger *Information Needs*, other more general and event-unrelated factors representing firm characteristics of each of the involved companies may influence information exchange in social media. To some extent, users may talk about an announced merger because they are familiar with one or both of the involved companies. The level of awareness about a firm is determined by a firm's visibility (Chang et al. 2012; Pfarrer et al. 2010). *Firm Visibility* can influence the awareness about a firm and can draw the attention of an investor or an individual to an event like a merger and accordingly will be more likely to talk about the merger.

Several factors determine the visibility of a firm. Higher media coverage by traditional news media creates more awareness among users of social media about a firm and thus it is more visible (Aggarwal et al. 2012; Chang et al. 2012, Pfarrer et al. 2010). In addition, the greater the size of a firm, the more it receives media coverage and analyst following which positively influences the visibility of a firm (Bushee & Miller 2012; Pfarrer et al. 2010; Wyzocki 1998). Furthermore, the proportion of shares of a firm that are held by ordinary investors and not held by institutional investors as a strategic investment, is also an indicator that the ownership of a company is more dispersed among a higher amount of investors leading to a higher visibility in the capital market (Chang et al. 2012; Pfarrer et al. 2010; Wyzocki 1998). Finally, from a consumer perspective, if a firm is more focused on selling goods and services to consumers, it creates awareness and visibility among consumers who then engage in online discussions concerning these products and their producers (Capriotti 2009; Godes & Mayzlin 2004). We posit that a firm's visibility is associated with the information quantity exchanged in social media:

Hypothesis 2 (H2): Firm characteristics related to a firm's visibility have a significant predictive relationship with the information quantity exchanged in social media.

To conclude, in the context of a major business event such as a merger announcement, we are investigating if the quantity of UGC postings is influenced by *Firm Visibility* of involved firms and/or by *Information Needs* triggered by the merger attempt.

3 DATA

We used several databases for the data collection process. For all financial data, we used Thomson Reuters SDC Platinum database (SDC) and Thomson Reuters Datastream (Datastream), which are very commonly used in empirical financial studies (Bates & Lemmon 2003; Faccio & Masulis 2005). In addition, we used LexisNexis in order to access published news articles (Antweiler & Frank 2004). Finally, we used Social Intelligence Solutions' SM2 database (SDL-SM2) to obtain UGC posted via various social media types and platforms.

3.1 Sample Selection – Event Data

First, we identified 5,022 US Merger transactions that were announced between 1.1.2008 and 31.12.2011 (SDC). In order to ensure the attention by individuals (e.g. private investors) concerning these transactions, only mergers of listed companies were included where the deal value was equal or greater \$100 million (Kau et al. 2008), leaving us with 323 observations. In addition, only merger attempts were included for which the outcome of the merger process (i.e. ‘completed’ or ‘withdrawn’) was already known, leaving us with 318 merger attempts (Bates & Lemmon 2003). Furthermore, in order to ensure coverage by social media, we focused on mergers attempts that were announced between 1.1.2010 and 31.12.2011. Finally, based on the availability of data from other data sources (which will be described in the following section), we were left with 143 observations in our sample. Table 1 provides an overview of the sample selection with respect to the merger data and overall data availability.

Merger –Data	
No. of Observations after Query	Query Description
5,022	US merger transactions announced between 1.1.2008 and 31.12.2011
640	Only public companies
323	Deal value at least \$100 million
318	Deal status is either 'completed' or 'withdrawn' as of July 2012
159	Merger announced between 1.1.2010 and 31.12.2011
143	Data availability (including SDL-SM2, Datastream, and LexisNexis data)

Table 1. Sample Selection

3.2 Data Collection

SDC provides merger- and company-related data (e.g. names of merging companies and the date of announcement). We made use of Datastream in order to gather financial and company-related information that was not provided by SDC. As mentioned above, we used LexisNexis in order to obtain news articles citing a respective company of our sample. We used the company search feature of LexisNexis in order to maximize the accuracy of our queries. In addition, LexisNexis provides the opportunity to restrict the search to specific sources.

SDL-SM2 is a database for historical social media content which gave us the opportunity to not only focus on one specific social media platform representing one specific social media type, but to analyze UGC postings across the whole variety of social media types. In the social media literature, a lot of studies focus their inquiries on one specific social media type and platform (Das & Chen 2007; Aggarwal et al. 2012; Bollen et al. 2011). In contrast, our study is concerned with the overall information exchange, including various social media types represented by all kinds of social media service providers and platforms. We made use of SDL-SM2 in order to identify merger-related UGC. SDL-SM2 captures data from all kinds of social media platforms as well as provides extensive historical data including in-depth information for each identified search result. SDL-SM2 also provides the possibility to use specific search strings, apply a filter for languages, and set a date range for which results are retrieved. Table 2 provides a description of the available data that is provided for each search result (original denotation of SDL-SM2).

Data Field	Description
Media Type	"Message Board/Forum", "Microblog", "Blog", "Social Network", "Video/Photo Sharing", "Wiki", or "Media Types – Other"
Platform	Identified social media platform (e.g. Facebook or Twitter)
Author Name	Name or nickname of the author of UGC
Full Content	Textual content of UGC
Blog URL	URL of the social media platform
Time Published	Date and time of publication

Table 2. *SDL-SM2 – Data Fields*

SDL-SM2 classifies each result to one out of six social media types, which is in line with the classification of social media types of previous literature (Kaplan & Haenlein 2010). A list of these media types and a well-known example found in our sample for each of these is as follows: “Message Board/Forum” - finance.yahoo.com/mb/, “Microblog” - twitter.com, “Blog” - blogger.com, “Social Network” - facebook.com, “Video/Photo Sharing” - youtube.com, “wiki” - wikipedia.org. Results that cannot be assigned to one of the six mentioned social media types are classified as “Media Types – Other” representing content provided by professional news sites that cannot be considered as UGC (OEDC 2007).

4 EMPIRICAL APPROACH

4.1 Variables

In the following we describe the operationalization of the previously described constructs according to our formulated hypotheses (see Section 2.2).

4.1.1 Information Quantity – Dependent Variable

Quantity of UGC (QUGC): Following Lu and Yang (2011), we operationalize information quantity that is exchanged in social media as the number of UGC postings. We collected postings across all social media types (content classified as “Wiki” and “Media Types – Other” are excluded) per merger attempt that have been posted between the date of announcement of a merger attempt and the date when the final outcome of the merger attempt is known (SDL-SM2). For each merger attempt, we applied the following Boolean search expression in order to maximize accuracy in identifying merger-related UGC: “name of acquiring company” AND “name of the target company” and filtered for content written in English language. Finally, we were left with a total of 104,337 social media postings for our sample (N = 143).

4.1.2 Information Needs – Independent Variables

Relatedness (R): We measure the degree of relatedness between a potential acquirer’s industry and the target’s industry by comparing the two-digit SIC code (Standard Industrial Classification) of both companies (SDC). The value of one indicates that both companies’ business is related and zero otherwise (binary variable) (Louis & Sun 2010).

Method of Payment (MOP): SDC provides information about the method of payment of the transaction for all merger attempts in our sample. The transaction can be carried out by either a transaction of cash, stock, a mixture of both, or other forms of payment. The value of one indicates that a transaction in our sample would have been carried out by cash and zero otherwise (binary variable) (Yook 2003).

Deal Value (DV): Magnitude of a merger attempt is measured as the total amount of consideration paid by the acquirer (excluding fees and expenses) (SDC) (Luo 2005).

Ratio of Target-to-Bidder Size (T-MV/A-MV): The relative size of companies involved in a merger attempt is measured as the ratio of the target's market value to the market value of the acquirer (Rosen 2006). The market value of a company is measured as the share price multiplied by the number of ordinary shares in issue four weeks prior to the announcement of a merger attempt (SDC) (Schwert 2000).

4.1.3 Firm Visibility - Independent Variables

Media Attention (A-MA or T-MA): In our sample we differentiate between companies that receive a lot of media coverage and those who do not. Hence, *Media Attention* is measured as the total number of articles citing the name of a company published in The Wall Street Journal and The New York Times (LexisNexis) (Power 2004; Antweiler & Frank 2004). For each company involved in a merger attempt, we only took articles into account that were published during the year prior to the announcement of the merger attempt. The value of one indicates that a company is in the top quartile of number of citations across companies in our sample and zero otherwise (binary variable) (Pfarrer et al. 2010).

B2B vs. B2C (A-B2B or T-B2B): The business model of each company in our sample has been classified with regard to their four-digit SIC code as either being business-to-business (B2B) oriented or being business-to-consumer (B2C) oriented.

Firm Size (A-FS or T-FS): The enterprise value of each company is used in order to measure *Firm Size* of each company in our sample (Agrawal & Nasser 2012; Mantecon 2008). The enterprise value is commonly calculated by "adding together a company's market capitalization, its debt such as bonds and bank loans, other liabilities such as a pension fund deficit and subtracting liquid assets like cash and investments" (Reuters Financial Glossary). For each company the enterprise value is determined as of the date of the end of the prior fiscal year before the announcement of a merger attempt (Datastream).

Free Float (A-FF or T-FF): For each company *Free Float* was measured as the percentage of total shares in issue that are available to ordinary investors (strategic holdings are excluded) as of the date of the end of the prior fiscal year before the announcement of a merger attempt (Datastream) (Chang et al. 2012).

Table 3 provides an overview of all the described variables above as well as the respective data source.

Construct	Name of Variable	Abbreviation	Data Source
Information Quantity	Quantity of UGC	QUGC	SDL-SM2
Information Needs	Relatedness	R	SDC
	Method of Payment	MOP	SDC
	Deal Value	DV	SDC
	Ratio of Target-to-Bidder Size	T-MV/A-MV	SDC
Firm Visibility	Media Attention (of acquirer or target company)	A-MA or T-MA	LexisNexis
	B2B vs. B2C (of acquirer or target company)	A-B2B or T-B2B	SDC
	Firm Size (of acquirer or target company)	A-FS or T-FS	Datastream
	Free Float (of acquirer or target company)	A-FF or T-FF	Datastream

Table 3. Description of Variables

4.2 Analysis and Discussion

To test the proposed hypotheses, we use a multiple linear regression model (in SPSS) for which all previously described variables (see table 3) are used as predictors for the *Quantity of UGC* (QUGC). In addition, specific continuous variables (DV; T-MV/A-MV; A-FS; T-FS; QUGC) have been log transformed in order to reduce skewness and improve data normality. We also applied an arcsine transformation to variables measured as percentages (A-FF; T-FF) in order to reduce skewness and improve data normality (McDonald 2009).

Analysis of variance inflation factors (VIFs) indicates no evidence of multicollinearity between predictors. Furthermore, residual analyses verified the assumptions of normally distributed errors and homoscedasticity. In addition, no serial correlations between errors have been detected (Durbin-Watson test).

The descriptive statistics of continuous and binary variables are provided by Table 4.

Variable	Mean	Std. Deviation	N	Min.	Max.	
log_DV	2.976	0.594	143	2.000	4.468	
log_T-MV/A-MV	-0.934	0.736	143	-3.315	0.552	
log_A-FS	3.958	0.652	143	0.000	5.353	
log_T-FS	2.912	0.700	143	0.000	4.467	
arc_A-FF	1.204	0.229	143	0.451	1.571	
arc_T-FF	1.082	0.244	143	0.383	1.571	
log_QUGC	2.437	0.609	143	0.903	4.235	
R	0.720	0.450	0	40	0.000	1.000
			1	103		
MOP	0.450	0.500	0	78	0.000	1.000
			1	65		
A-MA	0.240	0.427	0	109	0.000	1.000
			1	34		
T-MA	0.200	0.398	0	115	0.000	1.000
			1	28		
A-B2B	0.620	0.488	0	55	0.000	1.000
			1	88		
T-B2B	0.590	0.494	0	59	0.000	1.000
			1	84		

Table 4. Descriptive Statistics

The model is specified as follows:

$$\begin{aligned} \log_QUGC_i = & b_0 + b_1 R_i + b_2 MOP_i + b_3 \log_DV_i + b_4 \log_T-MV/A-MV_i + b_5 A-MA_i + b_6 T-MA_i \\ & + b_7 A-B2B_i + b_8 T-B2B_i + b_9 \log_A-FS_i + b_{10} \log_T-FS_i + b_{11} \text{arc_A-FF}_i + b_{12} \text{arc_T-FF}_i + \varepsilon_i \end{aligned} \quad (1)$$

Let $i=1, \dots, N$ index the merger attempts.

The results of the linear regression are presented in Table 5. The regression model overall predicts the *Quantity of UGC* (\log_QUGC) significantly well (F is 11.042). The overall model is significant,

explaining 50.5% (45.9% - adjusted R Squared) of the variance in the *Quantity of UGC*. While there is evidence that two key variables – *Deal Value* and *Media Attention* of our two constructs - *Firm Visibility* and *Information Needs* are driving online chatter (i.e. *Quantity of UGC*). Both variables make a significant contribution ($p < 0.01$) to predict the *Information Quantity* in social media.

The coefficient of *Deal Value* (log_DV) is positive (0.708) and statistically significant. This means that a 1% increase of the *Deal Value* leads to an increase of the total *Quantity of UGC* (log_QUGC) by 0.708%. Furthermore, the coefficient of *Acquirer's Media Attention* (A-MA) is also positive (0.364) and significant. The predicted *Quantity of UGC* (log_QUGC) is approximately 36.4% higher for companies belonging to the group that receives high media coverage. Overall, results show support for hypotheses 1 and 2.

Dependent Variable = log_QUGC				
Variable	Coefficient	Standard Error	t-value	Sig.
(Constant)	0.533	0.361	1.476	0.14
R	0.018	0.090	0.198	0.84
MOP	0.077	0.090	0.858	0.39
log_DV	0.708***	0.140	5.038	0.00
log_T-MV/A-MV	-0.040	0.092	-0.431	0.67
A-MA	0.364***	0.119	3.065	0.00
T-MA	0.042	0.105	0.399	0.69
A-B2B	-0.001	0.116	-0.013	0.99
T-B2B	0.099	0.117	0.850	0.40
log_A-FS	0.055	0.096	0.573	0.57
log_T-FS	-0.139	0.103	-1.349	0.18
arc_A-FF	-0.263	0.193	-1.363	0.18
arc_T-FF	0.059	0.168	0.349	0.73

R Squared = 50.5% (Adjusted R Squared = 45.9%); F = 11,042***

*** indicates 1% level of significance

Table 5. Regression Output

The significant influence of *Deal Value* on *Quantity of UGC* (H1) suggests that online discussions are driven by the significance of the transaction. Higher value deals attract the attention of users and the sheer magnitude of the merger event serves to generate higher online chatter activity. Interestingly, the other variables (R; MOP; T-MV/A-MV) in the *Information Needs* category appear to have little influence on chatter activity in terms of the amount of information exchanged. Specifically, the information quantity in social media is not influenced by the evaluation uncertainties indicated by the method of payment. One possible explanation for this result could be that most merger-acquisition deals involve high levels of informational uncertainties and the method of payment does little to reduce it, at least in the initial stages. Initial results on *Relatedness* suggest that there is no impact on the *Quantity of UGC*. In our analysis, merging companies of different fields of business do not drive online chatter activity. This requires further investigation. It is possible that this relationship is more nuanced and the binary coding based on the two-digit SIC code doesn't help us uncover the dynamics. In addition, the *Ratio of Target-to-Bidder Size* (T-MV/A-MV) does not drive online chatter. This also supports the notion that the pure size of the merger attempt is driving online chatter and that the relative size of both companies does attract the attention of social media users.

With respect to *Firm Visibility*, the significant impact of the *Acquirer's Media Attention* on the *Quantity of UGC* (H2) suggests that online chatter is also driven by media exposure of the acquiring company. It is particularly important to underline that media exposure was measured prior to the merger attempt and thus firms have little leverage over the information exchange in social media relating to a particular event. Consequently, firms' persistent efforts over a long period of time to be covered in the press do pay off when such events occur. Conclusively, firms are well advised to design strategies for creating visibility of their company over the long run to reap benefits of significant social media activity relating to specific events and corporate actions (Aggarwal & Singh 2013).

The lack of association of other measures related to *Firm Visibility* (T-MA; A-B2B; T-B2B; A-FS; T-FS; A-FF; T-FF) requires further inquiry. Surprisingly, the size of a firm (A-FS; T-FS) does not drive the *Quantity of UGC*, whereat *Acquirer's Media Attention* does (H2). It is reasonable to expect that larger firms would experience more news coverage than smaller firms and thus, the size of a firm should also influence online chatter activity. More surprisingly, occurring online chatter in the event of a merger attempt depends not on a company's field of business being associated with the everyday life of social media users. Our analysis does not support that consumer-oriented companies attract more amounts of UGC being generated. Furthermore, the *Quantity of UGC* is not influenced by the dispersion of ownership among institutional and ordinary investors. Since social media is heavily used by private investors to discuss stock and trading related topics (Antweiler & Frank 2004), this slightly indicates that there is no connection between the *Information Quantity* in social media and the structure of ownership of companies.

In general, the results indicate that our suggested constructs account significantly for the *Information Quantity* in social media related to companies that are involved in a merger attempt. Although, both constructs *Firm Visibility* and *Information Needs* explain a significant percentage of the variation in the total quantity of user-generated content, further research is needed to understand the dominant nature of these influencers.

5 CONCLUSIONS

Business and research likewise acknowledge the potential and economic value of social media. In this paper we explored how factors influence online chatter activity (UGC) in terms of information quantity in the context of economic events. In the context of merger attempts, we explored factors that are either related to the event or factors that are determined by certain characteristics of the involved companies. We made use of a rich data set that is not limited to specific social media types and platforms but also includes financial market data. We were able to show that the magnitude of transaction (i.e. *Deal Value*) and the media coverage of the acquiring company (i.e. *Media Attention*) explain a significant percentage of the variation in the total quantity of information (i.e. *Quantity of UGC*) shared via social media platforms in the event of a merger attempt.

In doing so, we contribute to the growing body of literature on information exchange in social media by proposing two categories of influencers – *Firm Visibility* and *Information Needs* on information exchange in social media. Our exploratory analysis suggests that there is evidence of strong positive influence of both these categories. Building on this study which explored the UGC postings across various social media types and platforms, it is important to construct a theory of information exchange in social media that helps uncover deep interconnections between the characteristics of social media platforms, user activity, and the business context. In the social media literature the predictive power of both quantity and quality of UGC has been investigated (Antweiler & Frank 2004; Luo et al. 2013). Therefore, our study is a first exploratory attempt to understand influencing factors on the quantity of information exchange via social media in the case of merger-acquisition events.

Finally, our findings bear important practical implications. Our analysis revealed that event-related factors are not only responsible for event-related information exchange in social media. Instead, firm-related factors are also responsible for higher amounts of information exchange in social media. This means that businesses, which want to leverage the power of social media, cannot rely only on short-

term corporate social media strategies. To attract attention in social media, i.e. to achieve desired amounts of online chatter with respect to corporate actions and business events, firms have to design strategies for creating higher levels of firm visibility, which can only be achieved in the long term. For example, a generally higher level of media coverage cannot easily be achieved by short-term measures.

6 LIMITATIONS AND FURTHER RESEARCH

While our results provide empirical insights into drivers of online chatter (UGC) related to major business events, our research provides motivation for future research directions in the field of information exchange via social media. Our research is based on some basic measures (e.g. *Relatedness*) that we aim to refine on future research in order to capture and explore more deeply what drives information exchange via social media. Moreover, since we explored influencing factors on the *quantity* of postings that were generated on social media platforms, from a scientific and practical perspective it is also important to explore influencing factors on the nature of the content itself, i.e. the *quality* of the shared content. Furthermore, in order to unravel drivers of information exchange in social media even further, a comprehensive analysis is needed that reveals the dynamics between social media types and their distinctive characteristics with regard to the creation of user-generated content.

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