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**Author(s):** Töllinen, Arne; Järvinen, Joel; Karjaluoto, Heikki

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## Social Media Monitoring in the industrial Business to Business Sector

Aarne Töllinen\*, Joel Järvinen\*\* and Heikki Karjaluoto\*\*\*

*The objective of this paper is to provide new knowledge of social media monitoring (SMM) in the B2B sector. Specifically, we study the quantity of electronic word-of-mouth (eWOM) found on social media sites concerning B2B companies, as well how B2B companies view the nature and importance of eWOM. This case study research combines eight qualitative theme interviews executed in the autumn 2011 with a quantitative web data based on 3849 social media mentions collected with a social media monitoring (SMM) software from the 25 August till 25 October 2011. Thus, the research contributes to marketing research both methodologically and theoretically. The results of this paper suggest that B2B companies can leverage social media monitoring to gain insights into what customers genuinely think about the company and to identify the volume of company-specific online discussions and where they happen. Nevertheless, several pitfalls remain, and SMM software products seem still to require product-development action.*

**Field of Research:** Marketing

### 1. Introduction

Firms are showing a growing interest in mining internet users' opinions from the likes of news pages, blogs and product reviews (Bautin et al. 2008). It is widely stated that eWOM is a good reflector of overall WOM and can effectively influence web users' mindset and buying decisions (Zhu & Zhang 2010).

So, WOM and eWOM are relevant concepts of marketing communications in both B2B and B2C contexts, although it has also been questioned how well eWOM actually reflects offline opinions and experiences (Godes & Mayzlin 2004; Liu 2006). There is a clear uncertainty about how to measure the effectiveness of the communications of the interactive digital media (Winer 2009). Wyld (2008) calls for research to map and measure the viral nature of blogging to increase the understanding about influence networks.

According to Dubelaar (2003) there is a need to develop a set of business-based metrics for online performance measurement. The Marketing Science Institute (2010) has also called for research to create new frameworks and methods that link existing marketing metrics and marketing performance measures with new media. In this

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\*M.Sc.Econ. Aarne Töllinen, Jyväskylä University School of Business and Economics, Finland,  
Email: aarne.tollinen@jyu.fi

\*\*M.Sc.Econ. Joel Järvinen, Jyväskylä University School of Business and Economics, Finland,  
Email: joel.jarvinen@jy.fi

\*\*\* Dr. Heikki Karjaluoto, Jyväskylä University School of Business and Economics, Finland  
Email: heikki.karjaluoto@jyu.fi

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paper we aim to answer these calls and explore the measurement options for digital marketing communication by examining if social media monitoring could be one answer to the demands above. Our research questions are: How actively do people discuss B2B companies on social media and on which social media sites? How do B2B company staff interpret the eWOM on their company found on social media sites?

This paper is structured as follows: in the next section, we begin the literature review with a conceptual discussion in which we justify the selection of the topic. Thereafter, we discuss the opportunities and challenges of social media monitoring according to the earlier literature. After that, the methodological considerations of the study are introduced which are followed by the study results. Finally, we draw the study conclusions, present the limitations and suggest sources for future research.

### **2. Literature Review**

Sponder (2011) summarizes SMM as a means of organizing conversations on the internet (eWOM) in a structure that allows a user to slice and dice, drill down, and see how conversations interconnect in one holistic view. In the early days of SMM, the work was done manually by analyzing the routes of individual URLs to visualize and explain information flows (Adar & Adamic 2005), but recently the monitoring and analyzing options have greatly expanded (Sharma 2011).

#### **2.1 The Opportunities of Social Media Monitoring**

In practice, monitoring online discussions has enabled marketers to gain insight into what customers think about the company and its products, and to determine the awareness of eWOM and how persuasive it is through automated information technology solutions (Pang & Lee, 2008). Through SMM, companies can identify brand advocates (Booth & Matic 2011) and Gruhl and Libe-Nowell (2004) emphasize that blog analysis in particular offers an excellent tool for evaluating the effectiveness and health of a firm's image. However not the volume of the social media buzz, nor the usefulness of SMM software in practice has not been studied by the past studies.

Properly done, SMM can be an effective tool for the management of marketing communications and customer relationships, because a prominent company will feature in blogs daily, regardless of whether the company itself is an active blogger (Wyld 2008). Kärkkäinen et al. (2011) point out that the constantly growing number of collaborative web tools and applications accelerates knowledge creation and eases the invocation of the distributed knowledge within and outside the company.

Winer (2009) states that blogs and other SM applications based on user generated content are largely beyond of the firm's control. SMM software does not move the control back to the firm, but it might facilitate identifying discussions around a certain topic. By doing that it might help the company to observe what is happening around their business, and so provide knowledge with which to plan and target their digital marketing communication tactics more accurately.

It is often said that for a company engaging with SM, listening is even more important than talking (Wyld, 2008). After well-defined objectives and goal setting, which is the first phase of social media marketing (Powel et al. 2011; Thomas & Barlow 2011; Blanchard 2011; Turner & Shah 2011; Sterne 2010; Delahaye Paine 2011), listening

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is the second step towards social media marketing measurement. In other words, SM listening should always come before actions (Booth & Matic 2011), and SMM is one solution to listen to stakeholders more carefully.

SMM may be used in research and development in many ways (Kärkkäinen et al. 2011). Using SMM allows a company to gather information that would previously have required surveys—the most popular method to study WOM to date (Godes & Mayzlin 2004)—interviews and making inferences (Töllinen & Karjaluoto 2011). It could be argued that automated monitoring is a more objective tool for the measurement and analysis of WOM than surveys and interviews, because when asked for an opinion, people tend to construct it more than they might when not observed.

### 2.2 The Challenges of Social Media Monitoring

By its very nature, SMM is a very different technique to customer-oriented qualitative research. SMM cannot replace a person researcher; to create deep-understanding, traditional person-controlled research is required (Branthwaite & Patterson 2011).

One much-discussed challenge in SMM is sentiment analysis (Sponder 2011; Branthwaite and Patterson, 2011; Pang and Lee, 2008). Here the term sentiment analysis is used to signify the technological solutions for capturing the valence of eWOM, because it best describes the nature of valence which essentially concerns the sentiment behind the eWOM (i.e. its positive or negative tone). The measurement of sentiment is difficult, because people express themselves in various ways when discussing different topics. Slang, cultural context, sarcasm and ambiguous words are extremely challenging to identify through automated analysis (2011; Branthwaite & Patterson 2011). Furthermore, the name of a company might pose more challenges to sentiment analysis: For example, the monitoring software might not automatically understand that the brand name may also have other meanings, as in the case of Apple and a comment like “I hate the taste of apple”. In scientific research, for example Godes and Mayzlin (2004) exclude the valence measurement in their study by arguing that it is not practical to implement at reasonable cost. On the other hand, Bautin et al. (2008) demonstrate that international text-analysis may work without problems with respect to varying languages and news sources.

Godes and Mayzlin (2004) point out that online word-of-mouth is difficult to observe, because the information is often changed in private discussions. However, since 2004, web analyzing tools (e.g. Google Analytics, Google Adwords) and SMM software (e.g. Radian6, Meltwater Buzz, IBM Coremetrics) have developed tremendously. Certainly, some of the barriers around eWOM privacy have fallen, although it is still impossible to monitor some SM platforms like LinkedIn.

Another problem that can be linked to SMM is caused by the issues related to summarizing the information gathered and analyzed, because it is difficult to unify the stars, grades and percentages with free-form text and determine the overall sentiment of eWOM (Hennig-Thurau et al. 2010). Godez and Mayzlin (2004) discuss the same problem with a broader question: “what aspect of these conversations should one measure?”

## 3. Methodology

We see our study as interpretive sense-making research (Welch et al. 2011), because we seek to interpret the SMM phenomenon and we want to understand case firms' subjective opinions on SMM. We are not trying to generalize the results, but to explore and particularize the possibilities of SMM. Our study is descriptive case study, which is inductive in nature, because with the theoretical discussion based on previous marketing literature and empirical data from two case companies, we offer a deeper understanding of SMM. In other words we are not trying to generate a new theory, but to formalize a proposition, how the SM buzz could be deployed in the B2B sector.

### 3.1 Case Companies

The empirical data is collected from two B2B companies operating in the manufacturing industry. They are large-sized with an annual turnover of billions of Euros and with thousands of employees. Both companies are quoted on the OMX Helsinki 25.

### 3.2 Data Collection and Analysis

First we conducted qualitative theme interviews within the case companies. After the interviews, we wanted to study if companies' experiences and opinions about SMM and the company-related buzz on SM aligned, so we started a two month monitoring period on SM around them.

#### 3.2.1 Interviews

With qualitative data we examine *how* B2B companies experience the buzz on SM around them. The interview data was gathered through eight semi-structured interviews of managerial-level marketers. The interviewees were selected with purposeful sampling; so that the marketers selected possessed the best knowledge of SMM issues. Interviews were taped, transcribed into written form and finally, coded under specific themes in order to facilitate the analysis and interpretation of the results.

#### 3.2.2 Monitoring Data

With quantitative data we examine *how* people talk about B2B companies, products and industry (volumes, sentiments) and where the discussions take place (the media spread). As a research approach, SMM is observational, passive and quantitative (Branthwaite & Patterson 2011). According to Dowling and Weeks (2011), there are three types of media analysis: 1) salience and sentiment analysis 2) theme and contradiction analysis 3) problem and solution media analysis. In this paper we focus on salience (counting the number of times the case firms are mentioned in selected media) and sentiment (noting whether the buzz is positive, neutral or negative).

To gather buzz data, we used SMM software "Z" from one of the biggest companies in the SMM business. The software collects data from blogs, microblogs, social networks, video sites and open discussion boards. The data collection was an automated 24-hour operational process. Although monitoring is possible in several

languages, in this research we focused only on English. After two months the data collected were transferred onto Microsoft Excel spreadsheets to aid descriptive statistical analysis that targeted identifying the volume, media spread and sentiments of the buzz.

### 4. Findings

#### 4.1 Interview Results

Both case companies use either complimentary or commercial SMM software to automatically explore the online news and discussions relating to the company, although not all interviewees were aware of this (Table 1, R1). Using SMM software and analyzing the information generated is not considered to be a huge burden due to the limited number of mentions that the software reports. Indeed, interviewees were unanimous in thinking that there were not many discussions of their company or its products (Table 1, R2); they did, however, believe that there was likely to be more discussion on related industries, although the opinions did differ significantly. It was suggested that the volume of buzz around a company and its products depends greatly on the industry it operates in, and that in some businesses that volume is even too large to handle (Table 1, R3).

The greatest opportunities offered by SMM software the interviewees perceived related to listening and participating in online conversations. Through monitoring, case companies are able to discover what customers really think about the company and its products, to discuss with customers and to react and correct misunderstandings. Consequently, SMM software is also found to be an important tool for crisis management (Table 1, R4). Overall, SMM is considered important now and it is believed that it will only gain in importance, as the coming generations are expected to participate more actively in online discussions (Table 1, R5).

Despite the noted benefits, there are various challenges that undermine the perceived usefulness of SMM software. Most importantly, informants from both companies find that their customers (users of the products) do not discuss the company's products or services on SM. Instead, the online discussions featuring the company name are largely neutral news-like comments or investor speculations (Table 1, R6). In addition, it is challenging to find relevant news and discussions that do not mention the name of the company, which might be the more beneficial references (Table 1, R7).

When it comes to measuring the brand strength through the volume and valence of eWOM, the experiences have been largely negative; the information generated by SMM software has turned out to be untrustworthy and sometimes even misleading (Table 1, R8). Another problem mentioned by the interviewees concerned the fact that SMM software cannot track those discussions that require participants to log into a site, and finally, one interviewee noted that their company name had several meanings, which made it difficult to monitor and filter out irrelevant online content (Table 1, R9).

In general, interviewees are not very satisfied with the information generated by current software products (Table 1, R10). However, it is noteworthy that neither of the companies has invested in the most advanced SMM software, equivalent to that we

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had access to for the data gathering part of this study, so we can only speculate on how companies might have seen the opportunities and challenges presented by more sophisticated SMM software.

**Table 1: Results of Interviews**

Result	Interviewee	Comment
R1	James	"Social media applications offer pretty good monitoring tools in themselves which are available for everyone. In practice, we read through every mention of our company which is captured by our systems."
	Linda	"As far as I know, we are not monitoring customer opinions online."
R2	James	"Monitoring is possible without huge effort due to the small amount of mentions about us."
	Patricia	"We are not actively discussed online, especially when it comes to business-related issues."
	Elizabeth	"This is my personal view, but I think that our product is simply not the kind of social object which could have buzz around it."
R3	John	"Certainly our industry is discussed, even though I don't have deeper knowledge about that."
	Patricia	"Our industry is not discussed actively on social media I would say, not to my knowledge."
	James	"We do try to monitor the industry discussions. If you think about the themes that concern our industry, the volume of the discussions becomes so large that it cannot be interfered except in the most important cases."
R4	Barbara	"Yes, we do follow the conversations on these, and that is actually what you have to do if you are on Facebook and Twitter to be able to be out in time to impact the discussion as such, so that the discussion does not go really badly or if they have misinterpreted something."
	Mary	"We have discussed that at some point our company is very likely to encounter some sort of a crisis, as it happens to all firms. The online discussion is neutral now, but when it becomes negative, we want to be ready to respond."
R5	Barbara	"I think that social media is the kind of media that the younger generation is using and I can imagine that as yet most of our customers do not belong to that generation, but it's coming."
R6	Patricia	"I am not sure, if any our customers publish their opinions about our products on social media sites. Those insights reach us through other channels... I think that we are mainly discussed in investor relation speculation."
	Mary	"We are being talked about in a neutral way. Most of the mentions concern sharing news regarding a new CEO, a substantial contract or something like that."
	Elizabeth	"This is my personal opinion, but I don't think that our product is the kind of a social object that has buzz around it."
R7	Mary	"Well, we can at least to some extent monitor the discussions where we are being talked about by name, but I think the interesting ones are those which concern a specific theme related to our business, but where our name is not mentioned, because that is where the potential customers are. That is what is difficult."
R8	Mary	"These tools are quite nice, but you can never be sure that the data is correct. There is always something weird in it."
R9	James	"One more notion is that none of the monitoring tools has access for example to LinkedIn groups that require an access to be able to read the content. The same applies to Facebook, so you cannot monitor everything."
	Elizabeth	"There is a popular school somewhere in Asia that has the same name as our company does, so it messes up our monitoring results all the time."
R10	James	"We use multiple tools to monitor online discussions, but there is no 'silver bullet' for this task."
	Elizabeth	"We have social media monitoring software, but I don't think it's sufficient, the data gathered are quite superficial."

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## 4.2 Monitoring Results

The monitoring data (Table 2) reveals that both case companies and their products are popular topics on SM. The average number of daily mentions regarding company X and its products is 22 and regarding company Y the number is 40. Most of the discussions happen on blogs, and the least used platform is Wikipedia. Social networking sites like Facebook, reflect just 2% or 3% percent of the total eWOM volume. However, when we investigated the blog data more accurately, we found that some publications which are published on well known blog publication platforms (e.g. Wordpress) are categorized by the monitoring program as blog posts, even though they are some other form, like news. This happens because the monitoring software identifies the media type on the basis of publication platform, not on the basis of the content.

**Table 2: Volume and media spread of eWOM (25 August – 25 October 2011)**

Company	Media	# of mentions	% of total mentions
Company X	Blogs	656	48 %
	Microblogs	493	36 %
	Message Boards	115	8 %
	Videos	50	4 %
	Social Network	25	2 %
	Comments	19	1 %
	Wikipedia	0	0 %
	TOTAL	1358	100 %
Company Y	Microblogs	1065	43 %
	Blogs	1055	42 %
	Videos	190	8 %
	Message Boards	93	4 %
	Social Network	86	3 %
	Wikipedia	2	0 %
	TOTAL	2491	100 %

The monitoring data establishes that B2B firms are discussed rather a lot on SM. Here we studied two companies from a specific industry sector and when only two companies generate over sixty mentions on social media sites per day, it is easy to conclude that the total volume of the buzz related to the selected industry sector would be very large.

The monitoring data (table 3) indicates that sentiment analysis is a major challenge for SMM software. According to the data the software recognizes less than 10% of the buzz as positive or negative content. Undoubtedly some buzz is actually neutral, but a manual data classification conducted reveals that most of the neutral content is positive or negative eWOM that remains uncategorized.



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**Table 3: Sentiment of eWOM (25 August – 25 October 2011)**

Company	Sentiment	# of mentions	% of total mentions
Company X	Neutral	1242	91 %
	Positive	96	7 %
	Negative	20	1 %
	TOTAL	1358	100 %
Company Y	Neutral	2333	94 %
	Positive	123	5 %
	Negative	35	1 %
	TOTAL	2491	100 %

Manual data analysis also reveals that the software does not understand contexts. As an example one YouTube video was categorized as a positive content, but in fact it was a strongly negative critique of the company's products. The error arose owing to the use of a sarcastic title.

### 5. Conclusions

According to Sponder (2011) companies should pay attention to SMM opportunities. The results of this paper indicate that B2B companies are clearly interested in SMM, but practices to utilize software are totally disorganized and the knowledge fragmented among the people involved. On the basis of this paper, companies are still learning the SM environment and have not yet leveraged the full potential of the SMM software.

Marketing literature has long presented a change occurring in the communications model from one-to-many towards many-to-many communications where customers are seen as active contributors of marketing messages (e.g. Hoffman & Novak 1996; Hennig-Thurau et al. 2010). Opposing to this view, the interview results of this study suggest that B2B companies perceive their customers to be very passive in terms of their online activities; people have not been found to be eager to participate in online conversations to discuss or share eWOM about case companies' business-related issues.

Interestingly, opinions regarding the volume of industry-related buzz vary strongly. On the basis of our monitoring results, companies do not see the big picture of the buzz around their industry nor around their brand and products. The monitoring data reveals that, as Wyld (2008) proposes, a prominent company (such as the case companies here) will feature in blogs on a daily basis. So there is far more eWOM around both the B2B sector and our case companies, than those companies are aware of.

We suggest SMM should be a 'listening tool' for marketing departments, because in SM marketing, listening must always come before actions (Booth & Matic 2011; Powel et al. 2011; Thomas & Barlow 2011; Blanchard 2011; Turner & Shah 2011; Sterne 2010; Delahaye Paine, 2011). However, we discovered that 24/7 monitoring is rather pointless, because of the enormous amount of data and because analysis of sentiment is ineffective. Marketers must have a good idea of what they are looking

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for with SMM software, and in addition they should compare the collected data to some previous data. If that process were adopted, SMM software could be used like a search engine.

We find that SMM software does not tell the whole truth about eWOM, because of privacy matters and the closed interfaces of some social media platforms. According to our monitoring data, the SM networking sites generate only 2-3% of the total eWOM. This result can be questioned, because our interview results highlight LinkedIn as one of the most important platforms for B2B eWOM. In addition, Facebook is the biggest SM networking site, as determined by the number of users (eBizMBA2011; Wikipedia 2011), so we suppose that it is also a significant platform for eWOM even in a B2B context.

Observations in previous literature (Sponder 2011; Branthwaite & Patterson 2011; Pang & Lee 2008) and the experiences of our interviewees confirm the issues regarding sentiment analysis. Sentiment analysis is still an insurmountable challenge even with the market-leading software.

In summary, our research suggests SMM does help marketers to gain insights into what customers think about the company and its products, and to determine at least to some degree the awareness and persuasiveness of eWOM (Pang & Lee 2008). On the basis of this study, we state that SMM can be used as a reasonable tool to be deployed alongside the more traditional news monitoring software. With the knowledge gathered from different applications, companies may evaluate the effectiveness and health of a firm's image (Gruhl & Libe-Nowell 2004), plan their digital marketing communications more precisely and piece together their presence in the digital world.

### **5.1 Limitations and Future Directions**

Despite its contributions to the existing knowledge regarding SMM in the B2B sector, the study has several limitations that must be acknowledged. The first stems from testing only one monitoring software product. Moreover, we included only content written in English which may slightly affect the research results.

The third important limitation derives from investigating only two companies. Both case companies operate in manufacturing, and we believe that the results may vary in different B2B industry sectors. More specifically, we assume that the volume of the buzz around a company may be strongly influenced by the product category in question. A broader research is needed to verify the results of this study concerning the whole B2B sector.

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