The State of Electronic Word-Of-Mouth Research: A Literature Analysis

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THE STATE OF ELECTRONIC WORD-OF-MOUTH RESEARCH:  
A LITERATURE ANALYSIS

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Abstract

This study evaluates the current status of electronic word-of-mouth (eWOM) research through an exhaustive literature review of relevant articles. We have identified a total of 83 eWOM research articles published from 2001 through 2010. Published research into eWOM first appeared in peer-reviewed journals about ten years ago, and research has been steadily increasing. Among research topic area, the impact of eWOM communication was the most researched topic in the last decade. We also found that individual and message were the two mostly used unit of analysis in eWOM studies. Survey, secondary data analysis, and mathematical modeling were the three main streams of research method. Finally, we found diverse theoretical approaches in understanding eWOM communication. We conclude this paper by identifying important trends in the eWOM literature to provide future research directions.

Keywords: Electronic word of mouth (eWOM), online consumer review, e-Marketing, literature analysis
1 INTRODUCTION

Electronic word-of-mouth (eWOM) communication refers to any positive or negative statement made by potential, actual, and former customers about a product or a company via the Internet (Hennig-Thurau et al., 2004). The advances of the Internet offer a fertile ground for electronic word-of-mouth (eWOM) communication. More and more consumers use Web 2.0 tools (e.g., online discussion forums, consumer review sites, weblogs, social network sites, and else) to exchange product information (Cheung, et al., 2008). eWOM has undoubtedly been a powerful marketing force, and its significance has not gone unnoticed by the academic community. We witness that eWOM communication has become an emerging research area with an increasing number of publications per year. The eWOM research articles appear in a variety of journals in the fields of information systems, marketing, management, computer sciences, and psychology. Clearly, the importance of eWOM as a focused area of research interest within the academic community is strong and growing.

As the field becomes mature, we observe an increasing number of systematic examinations of the IS literature for subfields of the discipline, including electronic commerce (Lee et al., 2007; Shaw, 1999), electronic customer relationship management (Romano and Fjermestad, 2001/02; 2003), group support systems (Fjermestad and Hiltz, 1998/99; Arnott and Pervan, 2005), online consumer behaviour (Cheung et al., 2005) and user satisfaction (Au et al., 2002). A number of scholars in the field (Alavi and Carlson, 1992) have already argued that it is important to have a benchmark from which to track the status of an emerging discipline that is based on published research articles rather than conventional wisdom. Thus, the purpose of the current study is threefold. First, we provide a systematic and exhaustive review of eWOM research, with a particular focus on how eWOM research has evolved in terms of content, quantity, publication outlets, methodological and theoretical approaches. Second, we identify important trends and potential research opportunities in eWOM literature. Finally, we provide future research directions in this research area.

2 A STRUCTURED RESEARCH APPROACH

In this section, we provide an overview of our research approach in search and review of eWOM studies.

2.1 Identification of Relevant Academic Journals and Electronic Databases

Relevant academic and peer reviewed journals that are related to scope of eWOM are identified by using two methods. First, we conducted a systematic electronic search using a number of index databases including Academic Search Premier (EBSCO), ABI/INFORM Global (ProQuest), Social Science Citation Index (SSCI), Science Citation Index (SCI), PsycINFO, CSA Illumina, Education Resources Center (ERIC), and Emerald. The research team did the search based on keywords included “electronic word-of-mouth”, “ewom”, “online reviews”, “online recommendations”, “marketing buzz”, and “online consumer reviews”. Second, we reviewed ten journals (including five IS and Electronic Commerce specific Journals and five Marketing Journals) manually to ensure that no major eWOM articles were ignored. These IS journals were, MIS Quarterly, Information Systems Research, Journal of Management Information Systems, Journal of Association of Information Systems, and International Journal of Electronic Commerce. We then extended our search to the top five marketing journals (Hult et al., 2009) including Journal of Marketing, Journal of Marketing Research, and Journal of Consumer Research, Marketing Science, and Journal of Academy of Marketing Science.

2.2 Search Process

The searches on electronic word-of-mouth (eWOM) and related topics produced 390 articles in total. Following the guidelines of the conventional systematic review methodology, which is strongly
recommended in writing sound IS literature reviews (Webster and Watson, 2002), inclusion and exclusion criteria were applied to the 390 studies by two independent researchers. These were done to ensure that the sample of articles used for analysis was appropriate for the current research. The inclusion criteria included the following: (1) publication was academic and peer reviewed in nature; (2) eWOM is the main focus of investigation in the paper; (3) publication dealt with investigation of eWOM in business-to-consumer settings. The exclusion criteria were applied to: (1) publication dealt with investigation of eWOM in the form of recommendation agent (system agent); (2) eWOM that are not related to consumer products and services. Three hundred and seven articles were excluded from the analysis because they failed to meet the criteria stipulated given the design of the current research. To conclude, 83 articles were identified at the end of the reviewing and screening process.

2.3 Classification of Articles

Two researchers classified and analyzed the articles independently in accordance with the following procedures. Two researchers performed a content analysis on the abstract citations to classify the primary topic area for each of the identified eWOM articles. The topic areas for classification include the followings: (1) Impact (human factor), (2) spreading (human factor), (3) eWOM messages, (4) strategy, (5) research framework, (6) market, and (7) social network analysis. In addition, the two researchers further classified the identified articles based on the unit of analysis, research method, and theoretical framework. The classification scheme of both unit of analysis and research method is based on the work of Lee et al. (2007). The reliability of the article classification was assessed by the inter-judge reliability (the percentage agreement statistics). In this study, the inter-judge reliability of the coding is over 95%.

3 LITERATURE ANALYSIS RESULTS

In this section, we summarize the evolution of eWOM research in terms of the amount and publication outlets of eWOM research articles. We further analyze the eWOM research articles by their topic area, unit of analysis, research method, and research framework.

3.1 A Brief eWOM Research Timeline

In the last decade, we witnessed a significant amount of studies on eWOM communication and identified a total of 83 eWOM research articles published from 2001 through 2010 (until March 2010). Figure 1 summarizes the number of peer-reviewed eWOM research articles by category and year. Published research into eWOM first appeared in peer-reviewed journals about ten years ago, and research has been steadily increasing. 4 research articles were published in 2001 and they were all published in marketing journals. There was a sudden increase in the total number of eWOM publications in 2006, and the number of eWOM research articles published in MIS jumped significantly in 2008. In summary, there were 42 articles published in marketing journals, 31 articles published in MIS journals, and 10 articles published in others.

![Figure 1. Number of published articles (by category and year)](image)
3.2 Topic Area

The three most researched eWOM topic areas were impact, market, and spreading. These three topic areas account for approximately 70 percent of all eWOM research published between 2001 and 2010. The most researched eWOM topic area was impact, with 36 percent of all articles. Prior eWOM studies with a primary focus on the impact examined eWOM as a process of personal influence, in which communications between a communicator (sender) and a receiver can change the receiver’s attitude and purchasing decision (Kiecker and Cowles, 2001; Park and Kim, 2008; Park and Lee, 2008). Market (16 percent of all articles) and spreading (15 percent of all articles) are other two popular topic areas among eWOM research. Prior eWOM studies on market typically examined the impact of eWOM with the market-level parameters, including online book sales (Chevalier and Mayzlin, 2006), box office receipts (Duan et al., 2008), game sales (Zhu and Zhang, 2010), as well as firm profits and consumer surplus (Dellarocas 2006). There was also a significant amount of studies on spreading of eWOM. The most prominent study of eWOM communication motives is by Hennig-Thurau et al. (2004). They built on Balasubramanian and Mahajan’s framework (2001) and identified five main motivational categories of positive eWOM communication.

We further explored the topic areas by their publication outlets. As shown in Table 1, among articles published in marketing journals, 31 percent focused on the impact and 17 percent examined the spreading of eWOM. There were significant proportions of studies examined the strategy, research framework, and market of eWOM (each contributes 14 percent). Among articles published in MIS journals, the impact of eWOM (42 percent) was the most popular research topic area, followed by market (19 percent) and spreading (16 percent).

<table>
<thead>
<tr>
<th>Topic Area</th>
<th>Impact</th>
<th>Spreading</th>
<th>Message</th>
<th>Strategy</th>
<th>Framework</th>
<th>Market</th>
<th>Social network</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marketing</td>
<td>13(31%)</td>
<td>7(17%)</td>
<td>4(10%)</td>
<td>6(14%)</td>
<td>6(14%)</td>
<td>6(14%)</td>
<td>0(0%)</td>
<td>42</td>
</tr>
<tr>
<td>MIS</td>
<td>13(42%)</td>
<td>5(16%)</td>
<td>3(10%)</td>
<td>4(13%)</td>
<td>0(0%)</td>
<td>6(19%)</td>
<td>0(0%)</td>
<td>31</td>
</tr>
<tr>
<td>Others</td>
<td>4(40%)</td>
<td>0(0%)</td>
<td>2(20%)</td>
<td>1(10%)</td>
<td>1(10%)</td>
<td>1(10%)</td>
<td>1(10%)</td>
<td>10</td>
</tr>
<tr>
<td>Total</td>
<td>30(36%)</td>
<td>12(14%)</td>
<td>9(11%)</td>
<td>11(13%)</td>
<td>7(8%)</td>
<td>13(16%)</td>
<td>1(1%)</td>
<td>83</td>
</tr>
</tbody>
</table>

Table 1. Published eWOM studies by topic area and category

3.3 Unit of Analysis

Among existing eWOM studies, individual was the most widely used unit of analysis, with 46 percent of all articles. As shown in Table 2, prior studies with topic areas related to the impact of eWOM and the spreading of eWOM mostly adopted individual-level analysis. For example, some researchers examined how individual perception on informational and normative variables affects his/her decision to adopt eWOM messages (Cheung et al., 2008; Cheung et al., 2009; Doh and Hwang, 2009; Kumar and Benbasat, 2006). Other researchers explored the various motivations of individual consumers to engage in eWOM spreading (Amblee and Bui, 2008; Phelps et al., 2004; Hennig-Thurau et al.,2004; Sun et al., 2006).

<table>
<thead>
<tr>
<th>Unit of Analysis</th>
<th>Topic Area</th>
<th>Impact</th>
<th>Spreading</th>
<th>Message</th>
<th>Strategy</th>
<th>Framework</th>
<th>Market</th>
<th>Social network</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual</td>
<td>26</td>
<td>11</td>
<td>9</td>
<td>6</td>
<td>3</td>
<td>12</td>
<td>1</td>
<td>1</td>
<td>40</td>
</tr>
<tr>
<td>Message</td>
<td>3</td>
<td>1</td>
<td>9</td>
<td>6</td>
<td>3</td>
<td>12</td>
<td>1</td>
<td>1</td>
<td>34</td>
</tr>
<tr>
<td>Market</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>NIL</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Technology</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Organization</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Product &amp; Service</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Network</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Total</td>
<td>32</td>
<td>13</td>
<td>9</td>
<td>11</td>
<td>7</td>
<td>14</td>
<td>1</td>
<td>1</td>
<td>87</td>
</tr>
</tbody>
</table>

Table 2. Published eWOM studies by topic area and unit of analysis
3.4 Research Method

Figure 2 illustrates eWOM research articles by the research method. It is interesting to find that both secondary data analysis and surveys dominated the research methods in eWOM studies.

![Figure 2: Percentage of articles in research method](image)

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eWOM communication is mostly in the form of online consumer review, and is persistence and accessible. Most of the text-based information presented on the Internet could be archived and thus would be made available for an indefinite period of time. A lot of researchers made use of the unique nature of eWOM messages in their investigation of the impact of eWOM communication. For example, they extracted panel data (e.g., the rate and the valence of consumer reviews) directly from product review websites to examine the impact of eWOM messages on product sales (Chevalier and Mayzlin, 2006; Clemons et al., 2006; Dellarocas et al., 2007; Duan et al., 2008). Most of these studies were also complemented with the mathematical modelling. Researchers first built a mathematical model to describe the eWOM phenomenon, and then empirically validated the model using the secondary data extracted directly from eWOM platforms (Zhu and Zhang, 2010). Survey was also another common research method in eWOM studies. There were also a significant number of studies using survey method to explore the impact of eWOM communication, as well as the motives of spreading eWOM (Awad and Ragowsky, 2008; Bickart and Schindler, 2001; Hung and Li, 2007; Sun et al., 2006).

3.5 Theoretical Framework

As part of our analysis, we identified the theories and research frameworks that were used by the authors of the 83 identified eWOM articles. It is surprising to find that there is no single theory dominating the eWOM research. Researchers used very diverse theoretical frameworks in examining eWOM communication. Also, we noticed that over one-third of studies did not have any theoretical foundation.

4 CONCLUSION AND FUTURE RESEARCH DIRECTIONS

Through collection and analysis of the literature on eWOM published over the past ten years, this study has examined the current status of eWOM research. The literature analysis revealed that a significant amount of eWOM articles has been published in both Marketing and MIS journals. It is certainly encouraging for researchers interested in eWOM studies, as we have noticed an increasing number of eWOM articles published in core journals of both Marketing (Journal of Marketing, Journal of Marketing Research, and Marketing Science) and MIS disciplines (Information Systems Research, Journal of Management Information Systems, and MIS Quarterly). This is clearly indicative of the importance of eWOM phenomenon to academics. The analysis also revealed that marketing publication outlets publish more diverse research area in eWOM. However, it is interesting to find that among those eWOM articles published in top-tier marketing journals, only one article focused on the impact of eWOM communication. A majority of them examined the market-level variables and investigated how eWOM communication affects product sales. On the other hand, MIS publication outlets seem dominate by the research on the impact of eWOM communication, but their
eWOM articles published in top-tier MIS journals were more diversified (See Table 3). This implies that there are ample publication opportunities in the area of eWOM.

As shown in Table 3, a majority of eWOM articles in top-tier journals adopted secondary panel data and mathematical modelling. Researchers are strongly recommended to adopt diverse methodological approaches so as to provide a more comprehensive understanding of the eWOM phenomenon. Finally, researchers adopted very different research frameworks in examining the eWOM phenomenon. In addition, over one-third of existing studies are not theoretically oriented. There is a need for a cumulative tradition of research in the area of eWOM communication and researchers are strongly recommended to start building their own theories for eWOM phenomenon.

<table>
<thead>
<tr>
<th>Year</th>
<th>Journal</th>
<th>Author</th>
<th>Title</th>
<th>Topic Area</th>
<th>Unit of Analysis</th>
<th>Research Method</th>
<th>Research Framework</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>Journal of Marketing</td>
<td>Chevalier &amp; Mayzlin.</td>
<td>The Effect of Word of Mouth on Sales: Online Book Reviews</td>
<td>Market</td>
<td>Message</td>
<td>Panel data Mathematical Modelling</td>
<td>NIL</td>
</tr>
<tr>
<td>2009</td>
<td>Journal of Marketing</td>
<td>Huang, Lurie, &amp; Mitra</td>
<td>Searching for Experience on the Web: An Empirical Examination of Consumer Behavior for Search and Experience Goods</td>
<td>Impact</td>
<td>Individual</td>
<td>Lab Experiment</td>
<td>NIL</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year</th>
<th>Journal</th>
<th>Author</th>
<th>Title</th>
<th>Topic Area</th>
<th>Unit of Analysis</th>
<th>Research Method</th>
<th>Research Framework</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>Information Systems Research</td>
<td>Gu, B. et. al.</td>
<td>Competition Among Virtual Communities and User Valuation: The Case of Investing-Related Communities</td>
<td>Strategy</td>
<td>Message</td>
<td>Panel data Mathematical Modelling</td>
<td>Network economics; Social Influence Theory; IT diffusion and adoption</td>
</tr>
<tr>
<td>2008</td>
<td>Information Systems Research</td>
<td>Bampo, et. al.</td>
<td>The Effects of the Social Structure of Digital Networks on Viral Marketing Performance</td>
<td>Message</td>
<td>Technology</td>
<td>Mathematical Modelling Computer Stimulation</td>
<td>NIL</td>
</tr>
</tbody>
</table>
Some limitations should be noted in this literature analysis. First, the results and analysis presented in this study were limited to the pools of journals that satisfied our selection criteria. In addition, some articles may have been missed or overlooked due to their availability in electronic databases. Third, the classification theme of the topic areas was based on an earlier study conducted by the authors. It would be useful to extend the current study and include additional classification schemes.

To conclude, the current study provides an interesting look at an emerging research area in business disciplines. The literature analysis reveals that research on eWOM communication is young but is growing rapidly in the recent years. Although the current study suffers from some limitations, it provides an overview of the current status of eWOM research and identifies a number of opportunities for additional introspective research on eWOM communication.

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