Chapter 7

Using Sentiment Analysis for Evaluating e-WOM:
A Data Mining Approach for Marketing Decision Making

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ABSTRACT

Electronic word of mouth is one of the keys elements for marketing decision making. e-WOM has been focus of marketing research as technology and social media become larger part of consumers' lives. This study set out to examine e-wom concept with sentiment analysis methodology in service industry context. The structure of study is twofold including theoretical backgound of related concepts and application section. Theoretical background section contains electronic word of mouth, new consumer and sentiment analysis concepts, and included selected studies for sentiment analysis. The application section which this study has focus on includes a three-stage plan for sentiment analysis practices. Each stage has three different scenarios. One algorithm and one real-life application for each stage are included. Nine scenarios for different service organizations imply that sentiment analysis supported with other methodologies can contribute to understanding of electronic word of mouth.

INTRODUCTION

Communication is the key element of the social being for humankind from the beginning. Exchanging ideas, goods or services, helping to others are always parts of people's lives for ages. As roots of marketing and sales are based on the social exchange theory, communication is still affecting people even the forms

of communication changes with increasing technology and communication mediums. A pre-historic age man could exchange goods for the needs before the invention of money. This man and his society lived in a village and they talked to each other about goods/services like the other things they live. Appearing of some "good" sellers in that village is ineviatable. Therefore, this could be a basic form of word of mouth in a historical view. People lives in societies, interacts with each other, no matter communication mediums or exchanging ways change.

Digitalization is a crucial part of people in last of the 20th and 21st century, as habits and behaviors are transferred to digital norms and time passed on online increases. According to We Are Social (2018) 7.593 billion of world population has 53% internet user rate (4.021 billion) and 42% active social media user rate (3.196 billion). That pre-historic man is telling experiences to his neighbor with the messenger on a mobile phone, writes reviews about the treadmill he buys online from another seller which is from another part of the country, chooses the restaurant he wants to go out with his girlfriend by examining the rating scores of local restaurants online. In sum digitalization and communication have strong relationships for people.

Next part of change is taking place for the business side. Thousands of "pre-historic man with digital technology" live online and affect each other for purchasing decisions, in terms of "action and reaction" approach, there must be some reaction on the business side. Marketing and communication plans include not the only company to the customer (one way) communication, but also the customer to the company and customer-to-customer communications, as the nature of communication has changed with web 2.0 technologies. According to Mangold and Faulds (2009), social media has two promotional roles in the marketplace. First one relates to the company to customer communication, while the second role includes communication of consumers to each other. Companies have to take actions regarding changes for the business side.

Word of mouth, a sub-concept of communication is also affected by changes from technology. E-wom concept has a growing interest in marketing and communication contexts, regarding social media and web 2.0 mediums. Review sites, pages of places online are popular for decision making of people. Negative or positive comments written by previous buyers can affect people's decision. According to Nielsen (2015) survey, 83% of participants completely or somewhat trust recommendations of friends or family. It is obvious that successful brands are conscious of digitalization and creates their plans regarding new customers. For e-wom concept, there are three elements to take into for understanding communication. The first element is related to "What" question which refers to the content of the communication. What customers write about your service? What they emphasize, what they do not mind? are the starting questions. The second element is related to "How" question which refers to style or form of communication. How do customers respond to your new service launch? How they do like or do not like your service? How is the mood of customers; happy, angry, excited or hateful? are the questions. The third element is related to "When?" question which refers to the time period of e-wom communication. How long do your customers' reviews take for your new service? Is there any seasonality for your brand? are the starting questions. Beyond these elements there are also customers and communication mediums to consider which are part of the main marketing plan. This study focuses on communication elements of e-wom concept for the brand side.

Previous studies for sentiment analysis concept cover several contexts including emphasizing methodology (Wilson et al., 2005; Pak &Paroubek, 2010; Liu, 2010, Taboada et al., 2011; Dragoni et al., 2018) or contexts (Kucuktunc et al., 2012; Ghiassi et al., 2013; Wen et al., 2014).

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