Chapter 12
Improving Customer Experience Using Sentiment Analysis in E-Commerce

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ABSTRACT
In today’s world, millions of online users post their opinions on product features, services, quality, benefits and other values of the products. These opinions or sentiment data generated via different communication mediums often include vital data points that can be fruitful for businesses in understanding customer experiences, products quality and services. The E-commerce companies considered social media platform for new product launch, promotion of products and features or establishing a successful business to customer relationship which produces great results. Analytics on this Social media data helps in identifying the customers in the right demographic, psychographic and lifestyle group. This chapter identifying important characteristics of customer reviews which help businesses houses to improve their marketing strategies.

INTRODUCTION
E-commerce is a new platform for shopping and marketing medium for products and services. It can help to realize sustainable progress for humans and the environment. Due to the increase of Internet access and usage in households and companies, E-commerce has grown rapidly in recent years. People use the web for many reasons like online shopping, entertainment, personal communication, and so on.

E-commerce, which includes business to business (B2B) which means cutting costs in transactions between businesses and, business to consumer (B2C) which reflects sales of goods and services. E-Commerce is carried out on the Internet and has become the lifeline for the phenomenal growth of the Internet industry.

DOI: 10.4018/978-1-5225-0997-4.ch012
It brings a new platform for a new product launch with huge information that is not possible in a physical store in front of a massive audience which participates and provides reliable feedbacks which can be used in the improvement of marketing strategy.

To increase the efficiency and reliability towards sales, most E-commerce providers encourage users to comment on their products and services. People are now expressing their opinions, attitudes and feelings in these E-commerce websites in the form of customer reviews or online reviews. Through these reviews, users express their opinions on whatever they feel and these reviews provided by e-commerce companies are widely read are others. Hence, for the decision, making it becomes difficult for the customers as well as retailers to read all the reviews. In business, a long-term relationship strategy is to keep customers satisfied by considering customer reviews (feedbacks) and experiences. These reviews help in improving product quality and usability for potential customers.

The rise of the Internet technology has resulted in a variety of new information which helps online retailers improve their marketing efforts and distinguish themselves from competitors to gain customers’ business. Various technologies such as Natural Language Processing, Recommendation system, and Text mining techniques are used to shape the shopping experience, according to consumers’ personal preferences (Jain & Kumar, 2015a).

The explosion of these customer reviews presents a challenge for retailers and manufacturers of analysis and discovers useful information which helps in improving customer experience is explained by Mattosinho (2010). On the other side, mining and summarizing opinions from the text about specific entities and their aspects can help consumers decide what to purchase.

According to Liu (2012), Sentiment analysis is the process to extract the opinions or sentiments from customer reviews placed on blogs, forums, shopping websites etc. It is used to identify and extract subjective information contains in the text, such as opinions and feelings. The work of Gowtamreddy (2014) explained that an opinion expressed by customers helped manufacturers to improve their products or services. Potential customers also used these opinions for purchase decisions making. According to Alghamdi (2013), accurate understanding of these sentiments or opinions expressed in social media websites could bring tremendous business opportunities and help in decision making.

One of the importance’s of these sentiments is to identify important aspects of your products or services by tracking regularly or for a particular time period about your brand or product across any channel. Social media such as Tweets, blog posts, YouTube videos, News stories, Facebook posts also help in knowing, how people feel about your brand. A typical sentiment analysis model is given in Figure 1.

**IMPORTANCE OF CUSTOMERS’ REVIEWS**

The amount of unstructured data produced by customers in E-commerce websites increased dramatically during the phase known as Web 2.0. Customers’ opinions represent a valuable and important type of information which should not be neglected or ignored by the e-commerce industry. From the customer perspective, considering others users’ opinions before purchasing a product is a common behavior long on the Internet. According to Liu(2010), various survey agencies claimed that 70-90% customers buying decisions are influenced by online reviews through this E-commerce websites customer has access to thousands of opinions, which significantly improves decision making. This feature shows that customer reviews are the proven sales drivers.