

## Chapter 7

# The Strategic Importance of Data Mining Analysis for Customer-Centric Marketing Strategies

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### ABSTRACT

*The main challenge for companies is to identify accurate models and methods to predict winning competitive strategies. Data mining is becoming an astonishing approach for data analysis because the meaningful knowledge is often hidden in enormous databases, and most traditional statistical methods could fail to uncover such knowledge. An efficient development of the customer relationship management and the data mining is the vital resource to collect and to manage this knowledge. The purpose of this chapter is to demonstrate the strong relationship between data mining and customer relationship management in order to forecast customer-centric marketing strategies. The last part of this chapter shows the results of an empirical study related to the identification of the main marketing and financial activities that could be leading customers in a credit-risk state. This study focuses the attention on the logistic regression model and on the criteria based on the loss function.*

### INTRODUCTION

The development of the Internet and the World Wide Web has completely changed the way marketing is done. They have made the process of collecting data easier, adding to volume of data available to business. Companies have realized

that the knowledge in this enormous database is the key to supporting the various business decisions, in particular for the marketing function. Bueren, Schierholz, Kolbe, and Brenner (2004) define knowledge as a strategic intangible resource at the base of the competitive advantages. Besides, the most important type of knowledge would

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appear to be customer knowledge. An efficient utilization of customer knowledge determines the development of firms. This is particularly true in marketing area because of the proliferation of customer data collect in the huge databases.

Customer data can be gathered through information systems and stored in a marketing database. Normally, these include contact data, interaction data, purchasing data, payment data, and customer feedback (Wrycza, 2010). Most companies have Information Technology (IT) tools as Customer Relationship Management (CRM), Contact Service, Enterprise Resource Planning (ERP), and E-Business System for collecting customer data at every possible customer contact point (Rollins & Halimen, 2005). These touch points include customer purchases, customer financial state payment, interaction or market research studies, sales force contacts, service and support calls, Web sites visits, and satisfaction surveys (Kotler & Armstrong, 2010). In this chapter, it is important to underline that CRM is considered not only as technology but also as managerial approach. In literature, there is no universally accepted definition of CRM (Ling & Yen, 2001; Ngai, 2005). Swift (2001) defines CRM as an “enterprise approach to understanding and influencing customer behavior through meaningful communication in order to improve customer acquisition, customer retention, customer loyalty, and customer profitability” (p. 12). In fact, current competitive challenges induced by globalization and advance in information technology have forces companies to focus on managing CRM and in particular customer satisfaction, in order to optimize the future marketing investments and to increase the company’s profitability. At this stage, it is clear that the relation between CRM and Data Mining is strong and fundamental to predict customer-centric marketing strategies. To do this, businesses must analyze the data collected in huge databases in a short time and in a significant way. Good judgment, intuition, and an awareness of the state of the economy may give

a manager a rough idea or “feeling” of what is likely to happen in the future. According to Daniel Kahneman (2011), it is obvious as qualitative approaches are not enough for predicting accurate and significant marketing performance in today global business. In this scenario, a new generation of statistical models is required to analyze vast amount of data collected in enormous databases. The main problem for companies is to understand which raw data could be contains competitive information thus relevant knowledge for getting strategic decision. However, often this potential competitive knowledge remains stored in dormant databases without to create new customer value for enterprises. For this reason, Data Mining (DM) has become an astonish approach in order to discover hidden knowledge in huge databases. In the literature, DM is considered the process of discovering meaningful new correlations, patterns, and trends by sifting through large amount of data stored in repositories, using pattern recognition technologies as well as statistical and mathematical techniques (Larose, 2010). There are two main reasons why organisations have not tapped the information. First, information is sometimes poorly managed. Second, many firms are either not aware that it is possible to use powerful statistical data processing tools or do not know how to use them. The need to do this has led to a rapid expansion in the use of business intelligence tools including data mining models. According to Belbaly, Benbya, and Meissonier (2007) they are fundamental to convert raw data into information and to integrate this information throughout the enterprise to develop knowledge useful in decision-making process. “Customer information is obtained through filtering, integrating, extracting, or formatting customer data. Transforming customer data into customer information, organizations use various information systems. The most importance of them is CRM, Business Intelligence, and Customer Intelligence System” (Buchnowska, 2011). In fact, today the applications of data mining in CRM are an

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