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Customer relationship management

1.1 Introduction

Henkel, a European multinational corporation that operates in three business areas (home care, personal care, and adhesive technologies), also operates in a highly competitive, fast-moving consumer-goods industry that also has a global outreach. Some of the key operational challenges include low product margins on its products and a lack of direct customer contact, among other region-specific challenges. Henkel has managed to overcome these challenges by implementing customer relationship management(CRM) practices. Management at Henkel realized the importance of identifying and understanding the needs of individual high-value customers, in order to target, establish, develop, and retain long-lasting relationships with customers. Through these practices, Henkel has actively pursued the development of strong relationships with its customers, and at the same time increased its profitability [1].

Just like Henkel, many corporations are increasingly adopting CRM as a means to forge their competitive advantage – the ability to understand individual customer needs, and therefore to manage their marketing efforts more efficiently. Such firms are also under tremendous pressure to adjust quickly to rapid changes in the marketplace with regard to the customer, technology and marketing functions. Customers are becoming not only more value-conscious, but also less loyal and less tolerant of low service levels. Consequently, markets are becoming more fragmented, making differentiation more difficult and competition more intense. These changes are driving companies to be customer-centric, and shifting their marketing functions from product-based to customer-based ones. At the same time, the exponential growth in data storage technology has made it possible for firms to process a much more

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substantial amount of customer-level information. All of these changes have had a significant influence on the rapid growth, increasing the awareness and adoption of CRM worldwide.

While most firms recognize the benefits of adopting CRM practices, not all firms have been successful in their CRM implementations. We believe that having the right approach to CRM planning is critical to a firm's success. Over the years, while technology has played a key role in the success of CRM implementation, it is but one component of CRM implementation. An important part of CRM is identifying the different types of customers and then developing specific strategies for interacting with each customer. Examples of such strategies are developing better relationships with *profitable* customers, not *loyal* customers. That means locating and attracting customers who will be profitable, and finding appropriate strategies for unprofitable customers, which could mean eventually terminating the relationship with customers who are causing the firm to lose money.

In this book, we discuss CRM and its related strategies from a modeling perspective, with a specific focus on methodologies that can be used to obtain insights on customer metrics within a company's own customer database. To help understand the discussion on CRM models and methodologies, we start this first chapter by providing an overview of CRM and its components. First, we present a formal definition of CRM and discuss the relevant concepts in CRM, such as customer value and customer databases. Next, we explain what is required to implement CRM strategies from a manager's perspective. In essence, managers ultimately want to evaluate their firms' marketing performances based on quantifiable indicators called customer metrics. Managers usually have to go through several data-processing steps before being able to generate the customer metrics they want. In this section, we focus on the database sources, the impact of technology on the implementation process of CRM, as well as providing a list of common customer metrics used to evaluate managerial performance. Finally, we introduce the role of analytical methodologies to help managers with the necessary levers/drivers to maximize the performance metrics.

1.2 What is CRM?

As the conceptualizations of CRM have evolved significantly, there are various definitions of CRM depending on the perspectives looked at. An important concept in CRM is *customer value*. Customer value is essentially the financial value of the customer relationship to the firm. It can be expressed in terms of contribution margin or net profit. Customer value is widely used by firms to evaluate their marketing efforts. However, it is a general term which does not refer to any specific time or duration. A better term that gives managers an idea of how the value of a client has evolved over time is c*ustomer lifetime value* (CLV). CLV refers to the net economic value of a customer to a firm over his/her entire lifetime (three years in most cases – but it can depend on the length of the average purchase cycle of customers) with the company [2].

By definition, CRM refers to the practice of collecting, storing, and analyzing customer-level information, and incorporating the results into the decision-making process of a firm [3]. This also involves automating, enhancing, and integrating core business processes such as production, operations, sales, marketing, and finance, among others. The power of CRM lies in its adaptability to further the performance of any individual activity of the business, or even the entire business as a whole.

Companies are now beginning to design and implement CRM initiatives from a CLV perspective so that it becomes easier for them to measure the impact of CRM activities. Apart from evaluating the value of customers, such an approach to CRM activities also provides a basis for the competitive advantage of a firm: the customer-centric organization. By improving customer satisfaction, and customer loyalty, CRM helps firms acquire and retain profitable customers, and reactivate dormant customers. The ultimate goal of CRM is to maximize the lifetime value of each individual customer to the firm, thereby increasing firm profitability. In this regard, most of the CRM initiatives can be attributed to one of the following four categories:

1. *Customer acquisition.* Customer acquisition is the process of acquiring new customers, the foundation step of the whole CRM process.

2. *Customer retention.* Customer retention is the process of keeping and developing relationships with the customers after the company acquires them.

3. *Customer churn.* Customer churn, sometimes referred to as customer attrition, is the process of managing the rate of existing customers leaving a firm.

4. *Customer win-back.* Customer win-back is the process of reacquiring the customers that have left a firm through customer churn.

Now that we have reviewed the reason for adopting CRM practices, in the next section we will discuss the essential inputs needed for any CRM implementation.

1.3 What is needed to implement CRM strategies?

The implementation of a CRM strategy is an ongoing process of developing and executing a series of small projects aimed at satisfying the business needs and enhancing the value proposition to customers. In this section, we focus on three essential ingredients needed to implement CRM strategies from a modeling perspective: database, technology, and metrics.

1.3.1 Database

The database is the core of any CRM planning. Companies gather information to store, analyze, and make marketing decisions based on the results of data analysis. This section provides a basic overview of the categories of databases and the sources from which data can be collected.

1.3.1.1 Categories of databases

There are several types of databases and various ways to categorize them. This can be done according to firms' main business function, information contents, underlying marketing activities, or database technology. As the focus of this book is on data modeling, we look at the following two types of databases in detail: the transaction-related database and the customer database.

- *Transaction-related database.* This database refers to all the information associated with the transactions that customers have made. Examples of this type of information are:
  - What transactions have the customers conducted?
  - What type of product was purchased?
  - How frequent is this type of product purchased by the customer?
  - How much was spent in the transaction?
- *Customer database.* This database is essentially a collection of information about a firm's customers. In general, the following information may be included in customer databases:
  - Basic information: name, address, ZIP (post) code, and telephone number.
  - Demographic information: age, gender, marital status, education, number of people in household, income, and so on.
  - Psychographic information: values, activities, interests, preferences, and so on.
  - Other relevant information: inquiries and referrals, satisfaction, loyalty.

Over a period of time, databases will begin to comprise prospects who have yet to be acquired, along with active and inactive customers. Information on prospects and active and inactive customers are useful to marketers and should be included in customer databases. While data from active customers help marketers learn what has been done well, data from inactive customers help marketers to identify what needs to be improved, and data from prospects who were not acquired show the effectiveness of acquisition efforts and the type of customer the firm has a hard time acquiring. For inactive customers, the following additional information would be important to document:

- How long have the customers been inactive?
- How long have they been active?
- What was their purchasing pattern when they were active?

- How much did they spend?
- How were they initially acquired?
- Why are they inactive?

For prospects who were not acquired, the following information would be important to document:

- How much was spent on the prospects?
- Is the profile of the prospects that were not acquired different from the profile of prospects that were acquired?
- What types of prospects should the company target in the future?
- Why did these prospects choose not to adopt?

1.3.1.2 Sources of databases

Managers acquire databases from two main sources: primary data sources and secondary data sources. Figure 1.1 shows a concise summary of available data sources as primary and secondary data sources.

Primary data are original data collected firsthand by the focal firm that are not available or cannot be derived from any other sources. Primary data collection is usually conducted in-house in the forms of experiments or survey methods such as questionnaires, interviews, or observations. Although primary data collection is a costly and time-consuming process, it is sometimes necessary for managers to obtain primary data if the required data cannot be obtained elsewhere or if the

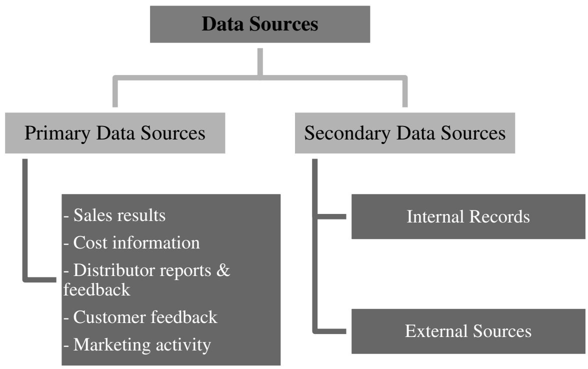

Figure 1.1 Sources of data. (Adapted from Aaker, D. A., Kumar, V., Day, G., and Leone, R. P. (2010) Marketing Research, *10th Edition. John Wiley & Sons, Inc., Hoboken, NJ.)*

reliability of those data cannot be determined even when they can be obtained from other sources.

On the other hand, secondary data are data that have already been made available or published in any form. There are two types of secondary data sources: internal records and external sources. Information from internal records is the primary information that the firm obtains directly from its daily business operations (e.g., sales results, cost information, etc.), from customer feedback, or from its marketing activities. This internal information usually comes from various departments within the firm, such as the internal marketing research department, sales analysis group, accounting department, or corporate strategic planning unit. Information from external sources is the secondary information obtained from non-internal sources. There are three main external sources:

1. *Published data sources.* These data are made available in either electronic or printed form from official sources such as government organizations, trade associations, periodicals, newspapers, books, annual reports, and private studies.

2. *Standardized sources of marketing data sources.* Besides published data sources, managers can look at information available from a wide variety of sources from retail stores, warehouses, scanner-based systems, and so on that help provide the managers with a full picture of the market situation of a product category or brand.

3. *Internet.* The Internet is an important and significant source of secondary information. Given the rapid growth of social media activities, managers are interested in both official and non-official information obtained from customers' activities on the Internet, such as customer feedback, reviews about the firm's products and services, etc.

The use of databases for collecting, storing, and analyzing customer data has been crucial for innovations in the CRM process. Nevertheless, technology improvements have been a key driver in making database innovations and other CRM processes accessible, user-friendly, and affordable for firms.

1.3.2 Technology

An important factor that drives CRM development in its current stage is the rapid growth of technology. CRM implementation thus has evolved into a user-friendly, flexible, low-cost, and high-tech process. In particular, the three main components of CRM technologies, namely, customer touch points, CRM applications, and data storage technology, have gone through significant improvements. Customer touch points have moved away from the traditional face-to-face interaction between customers and salespeople. With the introduction of Voice over Internet Protocol (VoIP) technology, speech recognition technology, and social networking applications, interactions with customers can be in various forms of Web-based (e-mail, web sites, Facebook, Twitter, etc.) and phone-based (telesales, automatic voice recognition systems, etc.) interactions rather than a physical interpersonal interaction. Further, with the widespread use of the Internet and the growth of PDAs and smart phones, CRM applications are now offered in many forms, such as traditional ERP (Enterprise Resource Planning) systems and mobile or Web-based online portals.

All these developments and enhancements have two key implications for CRM analysts in the area of modeling and data analysis. First, as more data become available, the ways of obtaining them have also increased tremendously. This has given rise to creative ways of collecting customer data and adding more data points about a particular customer, thereby creating a more complete picture of the customer. Second, while massive databases add to the knowledge and resource pool of the organization, they also pose significant modeling challenges regarding the use of appropriate data to glean relevant managerial insights.

1.3.3 Metrics

The old adage 'You cannot manage what you cannot measure' is most appropriate where metrics are concerned. Metrics help companies track and assess their performance and, more importantly, evaluate the returns on their CRM initiatives. In the process of implementing CRM, managers have to deal with a huge amount of data with the ultimate goal of evaluating managerial performances based on the value that each individual customer brings to the firm. In order to record and quantify those evaluations, managers need a set of indicators that measure customer values. Metrics perform this role.

The benefits of developing and using metrics are significant to companies. Some of the key benefits that accrue to the firm are: (a) tighter control over business processes and CRM activities, (b) means to measure changes in revenues, costs, and profits, (c) benchmarks and targets to attain certain levels of performance, (d) measures on return on investment (ROI), (e) aid in the acquisition and retention, preventing churn, and assisting win-back of profitable customers, and (f) realigning marketing resources to maximize customer value.

There are two broad categories of metrics, brand-level and customer-level. Brand-level metrics are metrics that measure the brand's competitiveness in the market, such as market share, customer equity, sales growth, and so on. Customer-level metrics break down those brand-level metrics to the individual customer, such as acquisition cost per customer, size of wallet, and so on. When combined, brand-level and customer-level metrics give managers a complete picture of how the firm or the brand fares in the market, as well as how its customer needs differ on an individual level, and how to leverage these differences to enhance the overall competitiveness of the firm.

Table 1.1 presents some commonly used metrics at both brand-level and customer-level. At this stage, the table is meant to provide a general view of the types of CRM metrics available. In the subsequent chapters, we will delve further with detailed discussions about these metrics.

Table 1.1 Popular CRM metrics.

Metric	Definition	Use of metric
1. Market share	The percentage of a firm's sales to the sales of all firms in a given market	Brand-level
2. Sales growth	The increase or decrease in sales volume or sale value in a given period compared to that in the previous period	Brand-level
3. Acquisition rate	The proportion of prospects converted to customers	Brand-level
4. Acquisition cost	The acquisition spending of a focal firm per prospect acquired	Brand-level and customer-level
5. Retention rate	The average likelihood that a customer *makes a repurchase* from the focal firm in period t, given that this customer has purchased in the last period $t - 1$	Brand-level and customer-level
6. Defection rate	The average likelihood that a customer *defects* from the focal firm in period t, given that this customer has purchased in the last period $t - 1$	Brand-level and customer-level
7. Survival rate	The ratio of customers who continue to remain as customers (survive) until a period t from the beginning of observing these customers	Brand-level
8. Average lifetime duration	The average duration customers continue to remain as customers	Brand-level
9. P-active	The probability of a customer making a repurchase (being active) in a given period	Customer-level
10. Win-back rate	The ratio of acquisition of customers who had been lost in an earlier period	Brand-level
11. Share-of-wallet	The ratio of total sales of all customers of the focal firm in a product category to the total spending of those customers in the product category across all different firms	Brand-level and customer-level
12. Size of wallet	The total spending of a customer on a product category across all different firms	Customer-level
13. Share of category requirement	The ratio of the sales volumes of a particular product category of the focal firm or brand to the total sales volumes of the product category in the market Also considered the market share of a firm or a brand with respect to a particular product category	Brand-level and customer-level

(*Continued*)

Table 1.1 (*Continued*).

Metric	Definition	Use of metric
14. Past customer value	The gross contribution of a customer when adjusted for the time value of money	Customer-level
15. RFM value	RFM stands for Recency, Frequency, and Monetary value: – Recency indicates the most recent purchase date of a customer – Frequency measures how often a customer purchases from the firm – Monetary value measures the average per transaction spending of a customer	Customer-level
16. Customer lifetime value	The total discounted contribution margins of a customer (excess of recurring revenues over recurring costs to the focal firm) over a specific time period	Customer-level
17. Customer equity	The total lifetime value of all customers of the focal firm	Brand-level

The important thing for a company to remember is that determining which metric(s) to measure and manage should depend on how each metric relates to the desired short-term or long-term outcome. If the metric(s) chosen cannot be quantifiably related to desired outcome measures such as profitability and shareholder value, the metric(s) are not generally worth measuring and managing.

1.4 Analytical methods

Data, technology, and performance metrics combine to provide interesting insights into both the brand and the customer. However, in order to maximize the performance metrics, one has to understand the drivers/levers affecting them. For example, if a firm wants to maximize CLV, one proven strategy is to optimally allocate the marketing resources to each customer. However, this would not be possible if there were no statistical model created to link marketing activities to CLV. Thus, statistical models provide the necessary function of creating the linkage between performance metrics and the possible drivers/levers. In this book, we create many linkages through statistical models to help acquire, retain, and win back profitable customers as well as identifying customer propensity to churn. With the advent of higher computing power, the use of statistical tools is becoming a common phenomenon in all organizations.

1.5 Conclusion

Up till now we have seen the basics of CRM and the role of databases, technology, and metrics in implementing CRM initiatives. While the connection between the components for ensuring CRM success is fairly straightforward, the challenge for marketers is in generating the metrics. With advances in data collection and database technologies, identifying the correct approach to employ for generating metrics could determine the success or failure of a CRM campaign. So how can marketers generate metrics that can help them in managerial decision making?

Using statistical methods and models, it is possible to reduce volumes of data to easy-to-use metrics that can help in evaluating business performance. The following chapters discuss in detail various statistical methods used in designing CRM campaigns involving customer acquisition, customer retention, preventing customer churn, and customer win-back. The models discussed in these chapters to address specific marketing challenges can then be used in comprehensive metrics to measure marketing and business performance.

References

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