

Data Mining For Customer Loyalty

By Richard Boire (published in March 2009 issue of Direct Marketing)

What truly constitutes customer loyalty has been an ongoing debate among members of the marketing community. This is not so much about the semantic definition of customer loyalty - most marketers would agree that this behaviour is represented by a strong affinity or attachment to a given company's products or services. The differences arise when marketers attempt to measure or evaluate customer loyalty.

The implications here are that marketers need first to *define* metrics and measures of customer loyalty. Once established, we must then determine if the data is readily available in the current information environment for the creation of these measures.

Is RFM an accurate measure of Customer Loyalty?

The most common approach taken to measure customer loyalty is to look at prior purchase behaviour. One very common, quick and pragmatic way of doing this is through the development of an RFM measure, where:

R = recency of last purchase

F = frequency of purchase within a given period of time, and

M = Monetary Value of all purchase(s).

By combining these measures, RFM indexes or scores can then be produced to generate a relative measure of loyalty for each customer. The higher the score, the greater the relative loyalty of the customer.

Many loyalty experts and pundits will debate this notion as being overly simplistic and not really capturing the true essence of customer loyalty. They argue that there are groups of customers with high RFM scores who are not really loyal and will whimsically switch companies or brands if provided a better offer. Their so-called loyalty is not really due to any attachment or affinity to the company or brand but because switching to another organization for the same products and services simply involves too much effort and/or risk. This actually weak affinity may be quickly be broken if this type of customer is presented with an easy, risk free offer.

But should we really care that some high RFM customers are not really that loyal? Does loyalty really matter if these customers represent (in most cases)

our most profitable customers? Usually, the value that these customers deliver to the organization will result in the creation of “Best Customer” marketing programs targeting this group regardless of the relative strength of their loyalty.

Using Marketing Programs to boost Customer Loyalty in the Short Term

Whether the group is high RFM or high value (or both), the next question is “how can we acquire basic learning about the effects of marketing activities that boost the Customer’s attachment/affinity to an organization’s products/services in order to ultimately increase a Customer’s loyalty/value? One way of evaluating the effects of these programs is to look at Customer behaviour that is truly *incremental* to past performance.

Changes in customer behaviour can be defined in three ways:

- Lift
- Shift
- Retention

Lift behaviour can be described as increased usage of a product or service; *Shift* behaviour represents the acquisition of new customers to a product or service; *Retention* behaviour involves maintaining a Customer’s current activity level with a given product or service. In each case we want to determine that the behaviour is truly incremental as a result of a specific marketing activity. The key in identifying these behaviours (*Lift*, *Shift*, and *Retention*) as being incremental is through the creation of appropriate marketing program testing strategy. Specific groups of Customers are split randomly into test cells and control cells; where test cells represent the group being exposed to the marketing activity and control cells representing the group not exposed to the marketing activity. After the execution of the marketing activity, we can compare the difference in performance between both groups and ultimately determine the incremental created by the marketing stimulus.

The use of RFM allows us to identify groups that may have a better ROI potential. The use of marketing activities against highly profitable groups allows us to proactively impact the behaviour of specific groups of customers. Successful marketing program testing allows us to determine definitively the incremental changes in Customer behaviour caused by marketing programs.

Defining Customer Loyalty over the Long-Term

Whereas previous purchase behaviour may be an adequate measure of Customer loyalty in the short term, there are other non-purchase behavioural indices that must be considered when creating measures of long term loyalty. Three Customer behaviours that might be considered as key information in identifying longer-term loyalty include:

- Overall Marketing Response
- Customer Inquiries
- Customer Complaints

Overall Marketing Response represents the customer's total number of responses to all the marketing campaigns of a given company. A Customer's ongoing willingness to respond to campaigns over time could certainly be construed as measure representative of a Customer's level of engagement with the company. These responses could be related to both purchase and non-purchase activities.

Customer Inquiries generally represent a positive interaction as they reflect the Customer's desire to obtain more information from the company. In this activity there is an implied sense of trust between the customer and the company. This trust factor can only grow as long as the outcome of each inquiry is positive in the mind of the Customer. Conversely, *Customer Complaints* represent a negative interaction between the customer and company. Erosion of trust between the customer and company may occur with each complaint.

As database marketers we want to identify these traits or characteristics from information recorded on a database. Marketing Response can be captured if there is some kind of campaign management system within the organization. With this type of system campaign information and responses to those campaigns are captured at an individual customer level enabling us to identify the overall marketing response history for each customer. A rich source of Customer inquiry information is from a company's website. By examining web logs, we can identify the page views of customers. The page views in most cases represent basic inquiries for information. If customers are exhibiting more page views within a given company's web site, they are generating more inquiries on the products, services, and other information about the company, and arguably have a more heightened interest about the company. In the telemarketing world, both outbound and inbound calls deal with customers who often inquire about other products and services as well as expressing complaints.

How then, do we properly organize this information into meaningful loyalty measures? Internet page views and marketing response history (campaign management system) are well organized as the data is located in structured data

fields. The analyst can simply go to the appropriate field whether it is a page request field on the web log file or the marketing response flag related to some specific campaign. In both cases, this information can be summarized from each of these fields to obtain specific views of customer activity or engagement. However, in the case of a telephone conversation, the information of interest is within the dialogue between the sales or customer service rep and the customer and is essentially contained in an unstructured format. Unstructured data means that we cannot point to one specific field but instead must search through the entire text of the dialogue in order to extract meaningful information. The concept of extracting meaningful data from unstructured data has become a primary focus of data mining research today and is commonly referred to as *text mining*. Through this discipline, conversations, comments and anything that is of a textual nature can now be mined to extract meaningful information. In the case of extracting meaningful measures for customer loyalty, text mining can be used to identify customer complaints or customer interest levels based on the conversations or comments between a customer and sales or customer service rep.

The use of campaign management systems, the internet and text mining provide new ways of creating Customer loyalty measures beyond basic, short term focused purchase behaviour. Taking a longer term perspective on the development of Customer loyalty measurement ensures that broader customer engagement and attachment behaviours are incorporated into these measures. Marketers may be equipped with tools they can use in executing initiatives that grow Customer engagement, and drive long-term customer profitability.