## Problem description - Database Marketing at Charles book club

This example is taken from the book *Data mining for business analytic concepts, techniques, and applications in Microsoft Office Excel with XLMiner* by Shmueli, Bruce and Patel. The book is available online from UB.

Charles Book Club (CBC) was established in December 1986 on the premise that a book club could differentiate itself through a deep understanding of its customer base and by delivering uniquely tailored offerings. CBC focused on selling specialty books by direct marketing through a variety of channels, including media advertising (TV, magazines, newspapers) and mailing. CBC is strictly a distributor and does not publish any of the books that it sells. In line with its commitment to understanding its customer base, CBC built and maintained a detailed database about its club members. Upon enrollment, readers were required to fill out an insert and mail it to CBC. Through this process, CBC created an active database of 500,000 readers; most were acquired through advertising in specialty magazines.

**The Problem** CBC sent mailings to its club members each month containing the latest offerings. On the surface, CBC appeared very successful: mailing volume was increasing, book selection was diversifying and growing, and their customer database was increasing. However, their bottom-line profits were falling. The decreasing profits led CBC to revisit their original plan of using database marketing to improve mailing yields and to stay profitable.

**A Possible Solution** CBC embraced the idea of deriving intelligence from their data to allow them to know their customers better and enable multiple targeted campaigns where each target audience would receive appropriate mailings. CBC's management decided to focus its efforts on the most profitable customers and prospects, and to design targeted marketing strategies to best reach them. The two processes they had in place were:

1. Customer acquisition:

* New members would be acquired by advertising in specialty magazines, newspapers, and on TV.
* Direct mailing and telemarketing would contact existing club members.
* Every new book would be offered to club members before general advertising.

2. Data collection:

* All customer responses would be recorded and maintained in the database.
* Any information not being collected that is critical would be requested from the customer.

For each new title, they decided to use a two-step approach:

1. Conduct a market test involving a random sample of 4000 customers from the database to enable analysis of customer responses. The analysis would create and calibrate response models for the current book offering.
2. Based on the response models, compute a score for each customer in the database. Use this score and a cutoff value to extract a target customer list for direct mail promotion.

Targeting promotions was considered to be of prime importance. Other opportunities to create successful marketing campaigns based on customer behavior data (returns, inactivity, complaints, compliments, etc.) would be addressed by CBC at a later stage.

**Art History of Florence** A new title, *The Art History of Florence*, is ready for release. CBC sent a test mailing to a random sample of 4000 customers from its customer base. The data set include if they buy the book and past purchase data.

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| **Variable Name** | **Description** |
| ID. | Identification number |
| Gender | 0=Male1=Female |
| M | Monetary—Total money spent on books |
| R | Recency—Months since last purchase |
| F | Frequency—Total number of purchases |
| FirstPurch | Months since first purchase |
| ChildBks | Number of purchases from the category child books |
| YouthBks | Number of purchases from the category youth books |
| CookBks | Number of purchases from the category cookbooks |
| DoItYBks | Number of purchases from the category do-it-yourself books |
| RefBks | Number of purchases from the category reference books (atlases, encyclopedias, dictionaries) |
| ArtBks | Number of purchases from the category art books |
| GeogBks | Number of purchases from the category geography books |
| ItalCook | Number of purchases of book title *Secrets of Italian Cooking* |
| ItalAtlas | Number of purchases of book title *Historical Atlas of Italy* |
| ItalArt | Number of purchases of book title *Italian Art* |
| Florence | 1 if The Art History of florence was bought; = 0 if not |