

Credit Card Customer Segmentation

Essential first step for a profitable credit card customer portfolio

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You may contact the authors of this white paper through info@fortewares.com. Additional information and documents can be found at www.fortewares.com.

Forte Consultancy Group

Forte Consultancy Group is the umbrella group for Forte Consultancy, Forte Wares and Forte Experts brands. The group is committed to delivering end-to-end solutions and services in analytics driven business management field - ranging from consultancy services to software and specialist insourcing. Additional information can be found at www.forteconsultancy.com.

"Credit cards aren't banking - they're information"

Richard Fairbank, Founder of Capital One

300 billion credit card transactions are expected to take place each year by 2018, creating 300 billion opportunities to understand customers better.

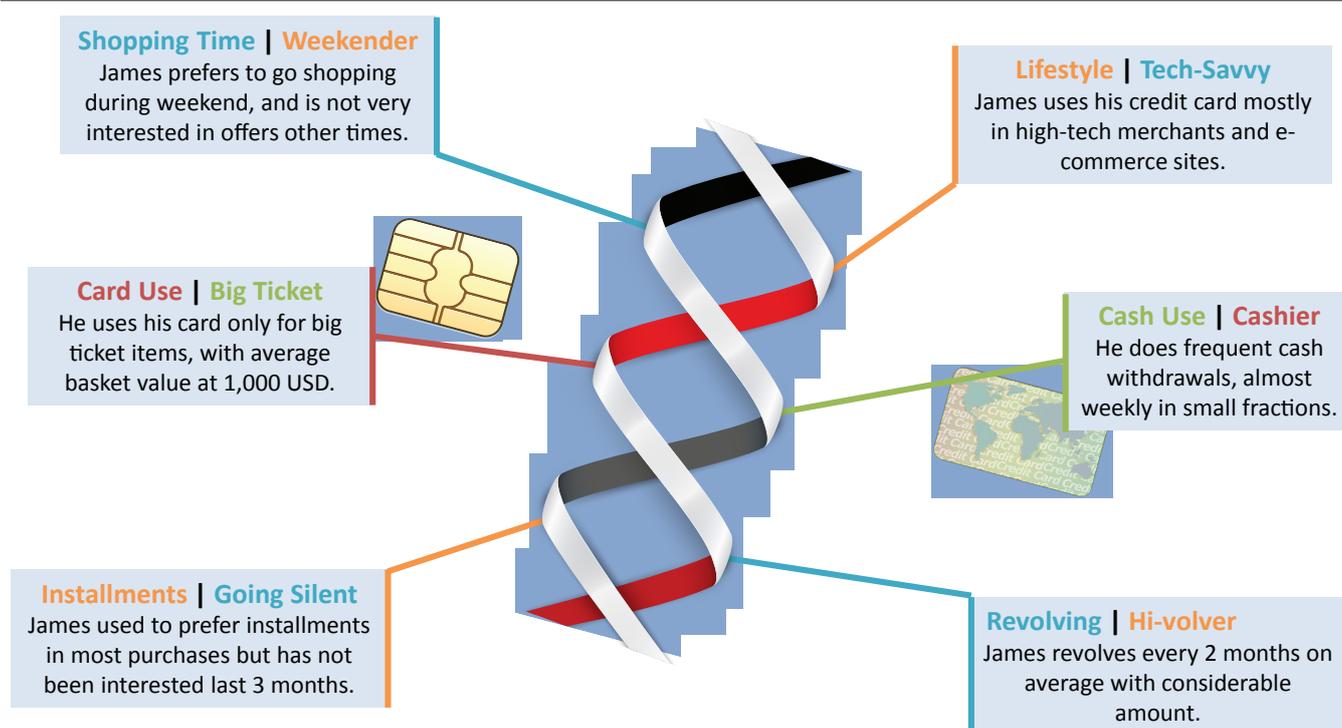
Unfortunately, many banks remain ignorant of this wealth of information at their disposal, and they opt for mass marketing and costly ATL advertising.

Customer segmentation is one of the most fundamental building blocks in getting to know customers. It is essential for industries where customer interaction is frequent and varied, as each interaction provides insight into opportunities and risks for every individual. The credit card industry is on par with telecommunications, e-commerce, and retail from this perspective, and the industry gains significant ROI from segmentation

initiatives. Surprisingly, all around the world, there are many banks still not taking advantage of this opportunity, frequently due to a lack of tools or in-house resources to process and digest big data sources, sitting on top of a gold mine that erodes each day when left untouched.

Introducing Micro-Segmentation

Customer segmentation can be defined as the



action of grouping similar customers into categories with the objective of customizing offerings and actions based on their profiles. The output is a list of customers, each tagged with segment flags using a segmentation 'model'. The complexity of these models can range from a simple set of business rules - such as customers who haven't used their cards last year - to sophisticated data mining codes.

In the early days, most companies had only 1 segmentation model that was based on customer demographics, value, behavior, needs, or a mix of these. While these models served early marketing needs well, as the sophistication of products and the number of customers is increasing, more comprehensive approaches are being sought after and are emerging - such as micro-segmentation and segment of one.

Today, leading organizations usually maintain and manage many segmentation models rather than only one - up to 10-20 across the enterprise. This 'micro-segmentation' approach looks at customers' profiles from many different perspectives and groups them under different categories according to each perspective.

An example credit card micro-segmentation model could group customers based on their preferences for shopping time, resulting in segments such as weekend shoppers and late-nighters, whereas another model could look into lifestyle perspective and identify segments such as fashionistas and tech-savvy shoppers. In addition to delivering finer details on specific customer behavior, these models

also provide vast targeting opportunities when crossed with each other, e.g., targeting fashionistas who are also weekend shoppers for a weekend fashion show.

Uses in Credit Card Marketing

Although credit card customer segmentation can be used within most departments, such as risk, operations, sales, and customer service, more often than not, marketing teams reap the most benefits out of it.

Within credit card marketing, customer segmentation can be used across the board for customer value and lifecycle management, including but not limited to:

- I. Increasing the share of wallet and becoming the primary card via identification of high-potential cardholders
- II. Encouraging cross-sales of secondary cards and other banking products based on comprehensive customer understanding
- III. Selectively upgrading card limits and tiers for maximum return on risk
- IV. Retaining the most valuable customers by accurately evaluating customer value and attrition risk
- V. Maximizing profitability from payment operations, and migrating customers to more profitable payment products and interaction channels
- VI. Guaranteeing long-term satisfaction and loyalty by increasing relevance in communications and offers.

Customer segmentation also acts as a building block for predictive analytics, as well as for

campaign management and monitoring activities, providing a granular view of different customer profiles that have the potential to act and react differently.

Cardholder Behavioral Segments

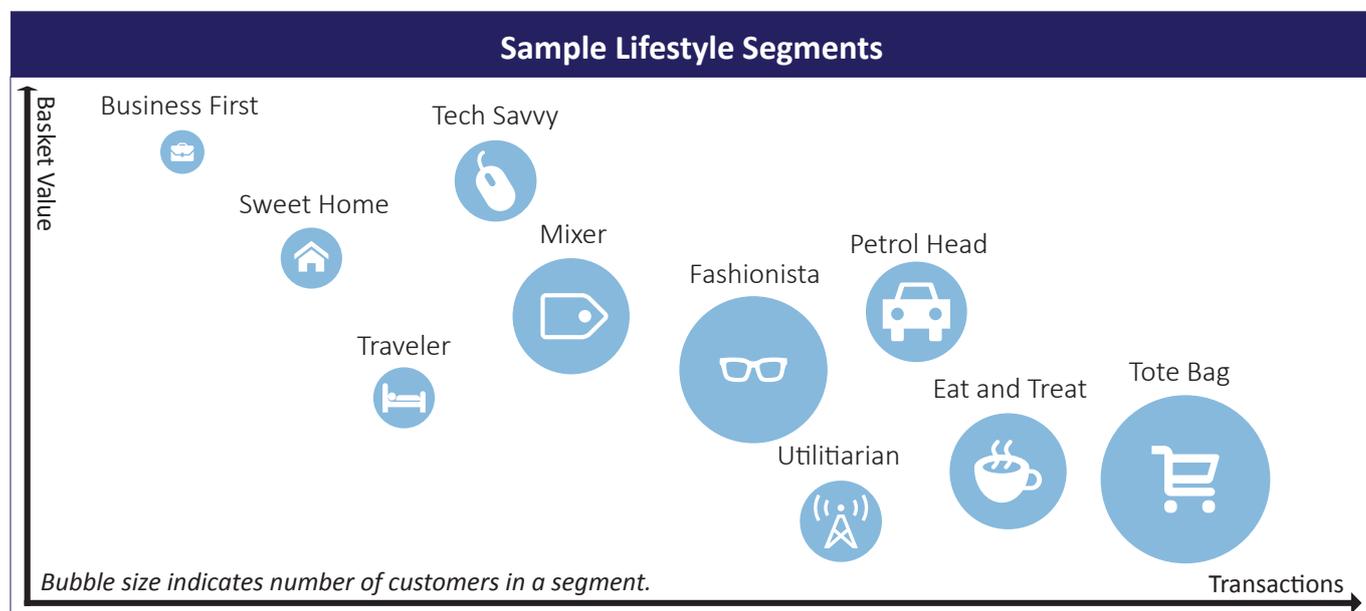
Credit card data are rich in terms of both volume and variety, providing insights into both customer shopping and payment preferences. As a result, apart from the traditional customer demographics and value segmentations, credit card data requires customer behavior to be analyzed from many perspectives. This is why the micro-segmentation approach is relevant for the

credit card industry and frequently used.

Every market and customer portfolio is different due to similarities in the nature of the transaction and statement data as well as in common product characteristics. However, there are some behavioral micro-segmentation models that can address the requirements of most card providers. Eight of these frequently used models that utilize the basic transaction and statement data to full extent are listed below.

In addition to analyzing credit card behavior, it is also vital to have a comprehensive behavioral view of customers at the bank level, analyzing asset, credit, and other

Behavior Segments	Model Scope	Sample Segment
 Lifestyle	Customer's spend preferences across merchant categories	Fashionista: Highest spender in textile and accessories MCC
 Ownership	Tenure, number and types of cards owned by customer	Cardholic: 3+ cards of different types and tiers
 Purchase RFM	Recency, frequency and monetary value of purchases	Big Ticket: Using card only for transactions above \$500
 Cash RFM	Recency, frequency and monetary value of cash withdrawals	One and Gone: Used card for cash only once in a lifetime
 Usage Time	Customer's spend preferences across hours and days	Red Eye: Using card after 12 PM most of the time
 Usage Variety	Variety of spend, in terms of location and basket value	Multi Nations: Used card in 3+ countries last 12 months
 Installment	Customer's preferences for using installments	Basic Splitter: Uses installment in even small amounts
 Revolving	Timeliness of payments and revolve behavior	Volverine: Frequently revolving but always paying in the end



product behavior. From the credit card business perspective, this view provides an understanding of cannibalization effects, true customer potential, and opportunities for cross-sales of card products to non-cardholders.

Getting Started

Customer segmentation, which is similar to other customer analytics activities, is a cyclical process that requires continuous management and fine-tuning in order to adapt to changes in data sources, business models, and customer portfolios. Each of these cycles follows these key steps:

Step 1. Set the Scope: Every segmentation study should start with a definition of business expectations from the outputs and use cases as well as basic customer definitions (i.e. who is an active customer, a new customer, or even a customer) to set a proper scope and direction. Many companies fall into the trap of skipping this step and jumping into data

mining with both feet, and those companies ultimately end up duplicating their work or finding themselves with irrelevant outputs.

Step 2. Prepare the Data: Customer segmentation modeling, when done at the micro level, requires preparation of hundreds, and in some cases thousands, of variables describing each and every customer. As a consequence, this is usually the most time-consuming step, taking up to 70-80% of the time. It is, therefore, imperative to make use of any automation tools and techniques possible at this step in order to have enough time and resources dedicated to more value-added steps. Such automation also minimizes the risk of human error in this process, which is the primary root cause for failures in modeling.

Step 3. Understand the Data: Before going into the data mining step, it is critical for the analysts to gain a deep understanding of the data, in terms of availability, quality, and

distribution, through preliminary analysis. This analysis not only provides insights into what to expect during modeling, but it also provides opportunities to discover anomalies, skewed distributions, and so on, which should be addressed for reliable and stable segments.

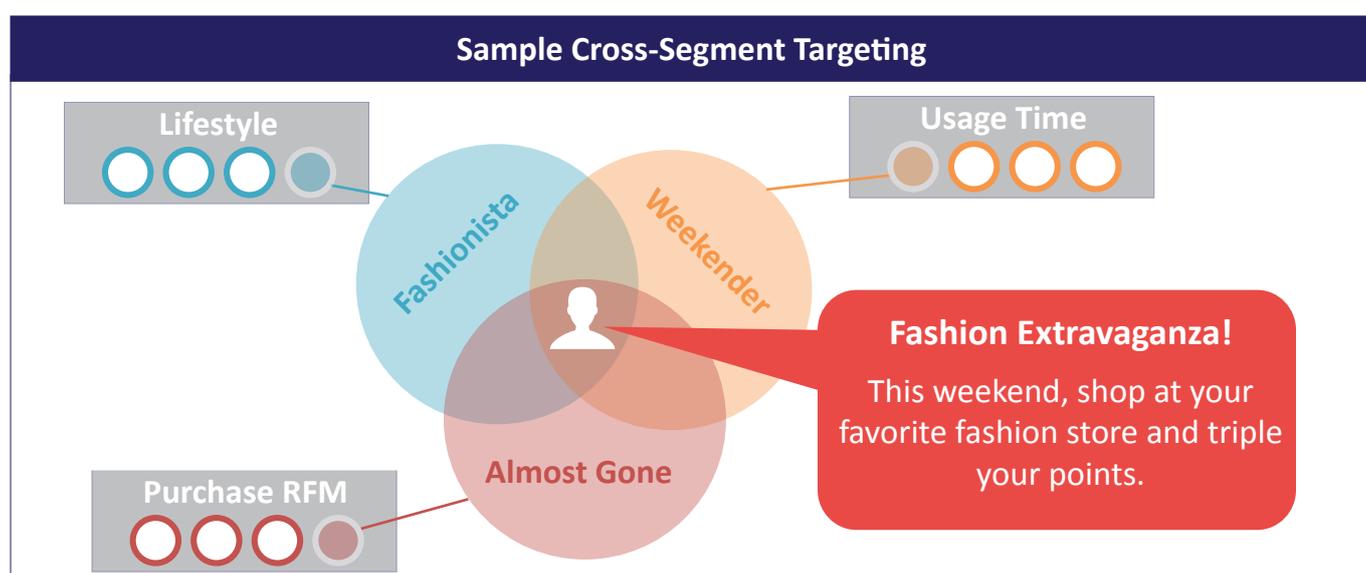
Step 4. Mine the Data: Using tools and algorithms available (such as K-Means, SOM, and Kohonen), alternative segmentation models should be developed. As segmentation results depend on both the inputs and the algorithms used, it is important to test alternative combinations to determine a statistically solid and business-wise meaningful set of segments. The most important but often-ignored step at this stage is incorporation of business inputs from end-users of segments into data mining activities; these can range from collecting initial hypotheses on possible segments to prioritizing specific variables and manually selecting some of the segments.

Step 5. Profile and Utilize: Once segments are

identified, they should be profiled for a more detailed understanding of the customer composition, loyalty, and risk within each segment, looking into various factors such as demographics, attrition likelihood, default risk, and cross-product utilization.

In addition to profiles, segments should be studied for their migration throughout time in order to gain an understanding of how stable the segments are and which ones should be more proactively managed for increasing risk. Segment migration analysis should then become a continuous monitoring tool, observing change with each scoring cycle.

Last, but not least, an understanding of opportunities and risks from all the analyses should be translated into business strategies and actions. While each of micro-segmentation models can be used solely for these purposes, pairing and crossing them with each other provides endless opportunities for targeting and getting to the bottom of what makes each customer tick.



About QIWare

QIWare (Quick Insights Ware) is an agile analytics solution that delivers a complete suite of capabilities to support an end-to-end data mining cycle. QIWare simplifies data preparation and modeling while increasing business productivity, minimizing human error, and significantly improving usability. QIWare helps companies in:

- Effective segment management
- Proactive customer retention
- Customer value maximization
- Targeted cross / up-sales
- Profitable risk prevention.

About Credit Cards ReadyWare

With ReadyWare, which was built on top of QIWare, card providers almost instantly obtain a complete view of their customers' portfolios, e.g., which of their customers are big-ticket weekend purchasers who have tech-savvy lifestyles and more than a 70% likelihood of becoming silent over the next 3 months so that the card providers can retain them with their exclusive discount on latest handset hitting the markets next month.

Credit Cards ReadyWare addresses the most common customer value management challenges in cards business – from segment management to value retention and growth. ReadyWare is based on Forte Consultancy Group's cards analytics practices across leading providers around the world and, yet, is 100% flexible for customizations.

For more information on how our ReadyWare can help you with segmenting your cardholders or with additional customer analytics challenges, please visit www.fortewares.com or email us at info@fortewares.com.