Techniques in Customer Analytics

Josep Curto Díaz, Adjunct Professor[a]

[a]IE Business School, Madrid, 28006, Spain, jcurto@faculty.ie.edu

This technical note introduces several summary tables that match uses cases and techniques. Take this as a reference. Some of the techniques only work when we have a contractual setting scenario.

customer analytics | use cases | techniques

Strategy and Type of Analysis. As we already know, organizations can considerer different strategies for their customers. Depending on the strategy, we can implement different analysis. The following table is just a sample of some of them:

Strategy	Type of analysis
Customer understanding	Homogeneous and heterogeneous **clustering**, Demographic (and others) profiling, trends and patterns,...
Customer acquisition	Propensity analysis, factor analysis, affinity models,...
Customer Loyalty and profitability	Propensity analysis, cross-selling and up-selling analysis, **affinity analysis**, Social Analytics, Sentiment Analytics, **RFM Modeling**, Price elasticity, **customer satisfaction analysis**,...
Customer retention	**Churn Analysis**, Response models, What-if Analysis,...
Efficiency	Marketing Mix models, customer journey analysis, customer location & device usage analysis,..

Understanding your customer. What does it mean 'understanding your customer'? Basically, we can use different **perspectives** to gain knowledge about them (and therefore, there are specific analysis for each one of the perspectives):

- **Behavioral perspective**: Punctuality (payment). Risk Index. Purchasing patterns. **Affinity analysis**. Propensity analysis. Punctuality profiling. Risk profiling. Event patterns.
- **Profitability perspective**: Current profitability. Future profitability. Wallet share. Profitability Profiling. Profitability Conversion.
- **Lifecycle perspective**: **CLV**. CLV profiling
- **Loyalty perspective**: **Recency**. **Frequency**. **Monetary value**. **Churn**. Acquisition. Retention. Increase. **RFM profiles**. Retention profiles. Growth profiles.
- **Interest perspective**: Response rate. Response modeling. Response analysis. Response profiles
- **Campaign perspective**: Response rate. ROI. Estimated value added. Lifting. Effectiveness of events. Profitability Cannibalization. Events Cannibalization. Event profitability. Cross-channel effectiveness.

Knowledge. Other relevant aspects that we may be interested about our customer are: punctuality, risk index and profiling, purchasing and event patterns, and affinity and propensivity analysis. This table compares the analysis, method, technique and capabilities. It is not an exhaustive summary.

Analysis	Method	Techniques	Capabilities
Punctuality	Querys, Reporting	Structured Procedures	Business Intelligence
Risk index	Querys, Reporting	Structured Procedures	Business Intelligence
Purchasing patterns	Querys, Reporting, Predictive Analysis	OLAP, Clustering	Business Intelligence, Analytics
Affinity Analysis	Descriptive Analysis	Basket Case Analysis	Business Analytics
Propensivity Analysis	Descriptive Analysis	Affinity Analysis	Business Analytics
Punctuality Profiling	Descriptive Analysis	Decision Trees, Induction Rules	Business Analytics
Risk Profiling	Predictive Analysis	Multi-regression	Business Analytics
Events patterns	Predictive Analysis	OLAP, Associacion Rules	Business Analytics

Profitability. For profitability, we can analyze current, potential and future probilitability as well as profile and conversion. This table compares the analysis, method, technique and capabilities. It is not an exhaustive summary.

Analysis	Method	Techniques	Capabilities
Current Profitability	Querys, Reporting	Structured Procedures	Business Intelligence
Potential Profitability	Predictive Analysis	Multi-regression	Business Analytics
Future Profitability	Predictive Analysis	Neural Networks	Business Analytics
Profitability Profile	Predictive Analysis	Decision Trees, Induction Rules	Business Analytics
Profitability Conversion	Predictive Analysis	Lineal regression, Logistic regression	Business Analytics
Wallet share	Predictive Analysis	Lineal regression, Logistic regression	Business Analytics

Lifecycle. Beyond the customer journey, Customer Lifetime Value (CLV) is one of the preferred analysis.

Analysis	Method	Techniques	Capabilities
CLV	Predictive Analysis	Statistics	Business Analytics
Potential CLV	Predictive Analysis	Multi-regression	Business Analytics
CLV Profiling	Predictive Analysis	Supervised Clustering	Business Analytics

Loyalty. For loyalty, we can consider many different analysis. For example,(1) based on monetary value - such as RFM -, (2) based on our customer strategy - such as retention -.

Analysis	Method	Techniques	Capabilities
RFM	Querys / Reporting	Structured Procedures	Business Intelligence
Churn	Predictive Analysis	Decision Trees, Clasificación	Business Analytics
Acquisition	Querys / Reporting	Structured Procedures	Business Intelligence
Retention	Querys / Reporting	Structured Procedures	Business Intelligence
Growth	Querys / Reporting	Structured Procedures	Business Intelligence
RFM profiling	Predictive Analysis	Decision Trees, Induction Rules	Business Analytics
Acquisition Modeling	Predictive Analysis	Neural Networks	Business Analytics
Retention profiling	Predictive Analysis	Decision Trees, Induction Rules	Business Analytics
Growth profiling	Predictive Analysis	Decision Trees, Induction Rules	Business Analytics
Loyalty convertion	Predictive Analysis	Neural Networks	Business Analytics

Interest. Interest refers to customer signals. Basically, how customer response to our actions (campaigns, discounts, etc.).

Analysis	Method	Techniques	Capabilities
Response	Predictive Analysis	Neural Networks	Business Analytics
Response Modeling	Predictive Analysis	Neural Networks	Business Analytics
Response Analysis	Predictive Analysis	Neural Networks	Business Analytics
Response Profiling	Predictive Analysis	Decision Trees	Induction Rules

Campaigns. For campaigns, it is relevant to analyze: response, ROI, cannibalization, profitability and effectivity.

Analysis	Method	Techniques	Capabilities
Response Index	Predictive Analysis	Statistics	Business Analytics
ROI	Querys / Reporting	Structured Procedures	Business Intelligence
Expected Value-added	Predictive Analysis	regression	Business Analytics
Up-Selling	Querys / Reporting	Structured Procedures	Business Intelligence
Profitability	Querys / Reporting	Structured Procedures	Business Intelligence
Cannibalization			

Analysis	Method	Techniques	Capabilities
Sales Canibalization	Querys / Reporting	Structured Procedures	Business Intelligence
Event Profitability	Querys / Reporting	Structured Procedures	Business Intelligence
Cross-Channel Effectivity	Querys / Reporting	Structured Procedures	Business Intelligence
Channel Effectivity	Querys / Reporting	Structured Procedures	Business Intelligence

References

- Peter Verhoef, Edwin Kooge, Natasha Walk. (2016) Creating Value with Big Data Analytics. Routeledge
- Peter Fader. (2012) Customer Centricity. Wharton Executive Essentials