

A Customer Intelligence Model: A New Approach to Gain Customer Insight

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To gain insight into which are your customers' needs and wants, you must understand their behavior patterns. Your customer database probably consists of heterogeneous segments. (The simplest segmentation structure is the two-group: The best and the worst.) Once the customer universe structure is known, as determined by marketing segmentation modeling, a Customer Intelligence Model (CIM) is built to target your segments. CIM, a most popular, effective analytic workpiece used to provide the information necessary to be familiar with the character of, and propensities for customers' needs and wants. Note: Market segmentation of a customer universe renders k segments, where k typically assumes 3 - 5 segments.

The attainment to a productive CIM effort falls within identifying – data mining to uncover – the nonintuitive, complex patterns (relationships) among customer variables that predictively relate to each segment. The customer variables (aka candidate predictor variables in a modeling and mining setting) include the *usual suspects* measuring customers' attitudes, behavior, profitability, risk, and so on. Once the set of k segment-specific CIMs are built and validated, management advances as per any model-based procedure: Management selects any or all k CIMs based on its a priori marketing strategy, and uses the CIM results about the sought-after segment-specific customers' needs and wants.

The purpose of this article is to present a new approach for building CIMs. The everyday traditional statistical regression model uses the once-regarded, major development in statistics – the *null hypothesis significance testing* (NHST) paradigm of *fitting the data* to a pre-specified model. Most recently, NHST is in a perplexing, troublesome academic hotly debate, questioning the logic of NHST itself. [1] The central and foundational part of the debate is that the underlying assumption of NHST is untenable, especially for today's big data. The afflicted NHST paradigm is like fitting *square* data into a *round* model. In a sharply delineated contrast, the new *model-free* model paradigm is *the data defines the model*. Model-free models offer the potential of being more accurate and reliable than the two-century old regression model (conceived, developed and experimented within the small-data setting of the day) without theoretical and practical burdens on the modeler. [Qs 2 & 3] The latter point relates not only to the referenced questions, but the fact that model-free models have a prominent and distinctive built-in data-mining capability. While on the contrary, statistical modelers are on their own when carrying out the necessary data mining from a list of homemade-programs, user-group open source programs, and third-party software. I present a financial services case study using the CIM approach, in which the regression model and the model-free GenIQ Model [2], [3] are compared and contrasted.