Introduction to Marketing Models

Marketing and Marketing Models

Marketing is a managerial process by which exchanges are brought about in an economy to satisfy the needs and wants of individuals and organizations.
Examples of Marketing Activities (Efforts)

Conglomerate uses marketing insights and techniques:

- to choose who to sell to (to target a segment of the market)
- to design its physical product offerings
- to set prices
- to position its products relative to those of competitors
- to develop support service
- and the distribution channels to deliver its products to customers
- to make targeted customers aware of its products through:
  advertising, promotion and personal selling.

This Course

- This course is about the use of decision models for making marketing decisions.
How Does This Course Differ from Other Marketing Courses?

- Integrates marketing concepts and practice.
- Emphasizes learning by doing.
- Provides software tools to apply marketing concepts to real decision situations.

Marketing Engineering

Marketing engineering is the art and science of developing and using interactive, customizable, computer-decision models for analyzing, planning, and implementing marketing tactics and strategies.
What is a Model?

A model is a stylized representation of reality that is easier to deal with and explore for a specific purpose than reality itself.

It is helpful to think about models in terms of:

Methodology and Purpose.

In terms of methodology we have the following types:

- Verbal
- Box and Arrow
- Mathematical
- Graphical
An Example of a Verbal Model

Sales of a new product often start slowly as "innovators" in the population adopt the product. The innovators influence "imitators," leading to accelerated sales growth. As more people in the population purchase the product, sales continue to increase but sales growth slows down.

Boxes and Arrows Model
ME Basics

Graphical Model

Cumulative Sales of a Product

Time

Fixed Potential

Mathematical Model

\[ \frac{dx}{dt} = (a + bx)(N - x) \]

where:

- \( x_t \) = Total number of people who have adopted product by time \( t \) (number of purchases by \( t \))
- \( N \) = Market potential (population size)
- \( a, b \) = Constants to be determined. The actual path of the curve will depend on these constants
Purpose

In terms of purpose we will focus on two types of models:

* **Measurement** and *Decision Support Models*

- The purpose of measurement models is to measure the demand for a product as a function of various independent variables.

  \[
  \text{Sales} = a(1-e^{-bx})
  \]

- The purpose of decision support models is to help marketing managers make decisions.

Descriptive and Normative Models

* **Descriptive (and Predictive) decision model**:

  Address the question, What will happen if we do X?

  - ASSESSOR model.

* **Normative decision model**:

  Address the question, What is our best course of action in a given situation?

  - CONJOINT ANALYSIS models to identify the best new product to satisfy a target segment of customers.
Why Don’t More Managers Use Decision Models?

- Mental models are often good enough.
- Models are incomplete.
- Models require precision.
- Models emphasize analysis; Managers prefer actions.
- They haven’t been exposed to Marketing Engineering.

Marketing Engineering Software

- Excel Models
- Non-Excel Models
- Non-Excel Models by Commercial Vendors
## Marketing Engineering Software

### Excel Models

- Abdudg
- Advisor
- Assessor
- Callplan
- Choice-based segmentation
- Competitive advertising
- Competitive bidding
- Conglomerate, Inc.
- Promotional analysis
- GE: Portfolio analysis
- Generalized Bass Model
- Learning curve pricing
- PIMS: Strategy model
- Promotional spending analysis
- Sales resource allocation model
- Value-in-use pricing
- Visual response modeling
- Yield management for hotels

### Non-Excel Models

- ADCAD: Ad copy design
- Cluster Analysis
- Conjoint Analysis
- Multinomial logit analysis
- Positioning Analysis

### Non-Excel Models by Commercial Vendors

- Analytic hierarchy process
- Decision tree analysis
- Geodemographic site planning
- Neural net for forecasting