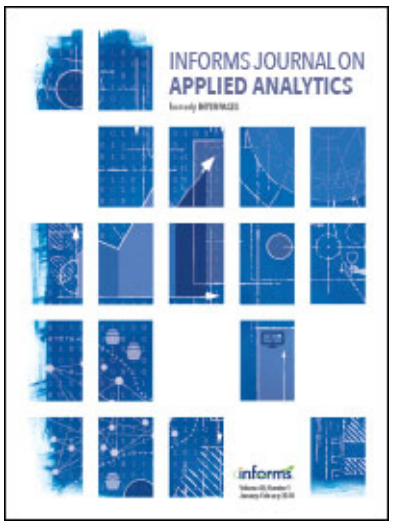

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Practice Abstract

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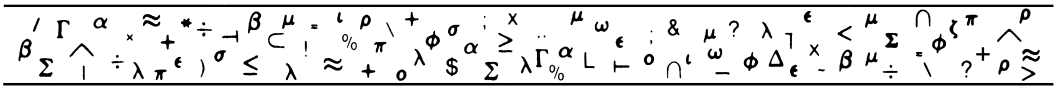

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Evaluating Customer Acquisition at American Express Using Multiple Objectives

American Express built a model to evaluate prospective individual customers in terms of their possible contributions to both future profits and market share. The application of this model coincided with an increase in market share after a 10-year period of market-share decline.

Since the late 1980s, American Express has devoted large efforts to building and using decision tools in marketing and managing its credit and charge-card products. A set of statistical and operations research models, applied in customer-acquisition processes, helped American Express decide who to offer what product. Prior to 1995, these models were designed to maximize the expected contribution to the net present value of the profits contributed by a prospective customer. In 1995, American Express decided to expand its acquisition models to include the contribution that prospective customers would make to market share. That effort consisted of four steps: (1) creating and assessing a multiple-objective utility function for the company's card business, the Consumer Card Service Group (CCSG) in particular; (2) deriving from this business-level utility function a consistent process-level utility function specifically to use in acquiring customers; (3) revising

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the acquisition model to incorporate market share in its evaluation of prospective customers; and (4) implementing the model.

We developed the multiple-objective utility function for the CCSG working with several senior executives of the company and members of the customer acquisition team. We created a means-end objective network and used it to select four objectives, for which an additive utility function would be appropriate [Keeney 1992]. These objectives concerned short-term cash flow, market share for charge cards (that is, cards that should be paid off monthly), market share for credit cards (that is, cards that include credit), and profitability over time. Next, we assessed weighting factors and component utility functions for ranges of billions of dollars and millions of customers. After individual assessments for several senior executives, we held a joint meeting to discuss differences and select an operating business-level utility function.

Customer acquisition is a critical process in the card business, but the scope of decisions in this area is naturally of less magnitude than billions of dollars and millions of customers. We needed to create a utility function for new business development that was consistent with the business-level utility function and adaptive to the overall performance of CCSG on its four objectives. We defined the acquisition utility function to have four objectives, with each contributing to its corresponding objective in the CCSG utility function. We represented this utility function as an additive utility function with weights calculated from the relative slopes of the CCSG utility function at the current operating status of CCSG in terms of its objectives.

The revised new-business model estimates the contribution of a prospective customer with each particular American Express product to the four acquisition objectives and compares the total contribution to not offering any product. Several variables are incorporated in this model, including economic and demographic information about the prospective customer and information about the current economy and possible changes. We use this information to estimate the likelihood that a prospective customer would become a customer, the amount of use of the product, and the likelihood of defaulting on debts or terminating use of the product at different times in the future.

American Express implemented this revised acquisition model that included market share in late 1995 and 1996 and used it to evaluate over 50 million prospective customers. During the first six months of 1997, American Express Company's share of the domestic credit-card market increased, whereas it had lost market share over the previous 10-year period [Frank 1997]. Using the CCSG utility function, we found that the implied value (that is, utility) of the market-share increase was greater than the value of an increase in profit of $400 million. Many factors can influence changes in market share, including the fortunes of the economy and actions of competitors, but including an explicit focus on market share in new business development may have helped significantly.

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