A Comparison of Two Credit Scoring Models: Commercial versus Consumer Education

This study compared a commercial credit scoring model and a consumer education model using data from the 1995 Survey of Consumer Finances. Results from the consumer education model were more informative than the commercial model. Educators could use similar models to design information and programs for credit-constrained consumers.

Wen Yin[1], Purdue University
Sharon A. DeVaney[2], Purdue University

A credit scoring system lists the credit characteristics to be drawn from a credit application. Different point values are assigned to a credit application based on a person's history and credit situation. The point values are added together to arrive at a total score. If the credit score is above a certain level, the application will be accepted; if otherwise, the application will be rejected. A more extensive investigation might be conducted for any applications between the acceptance and rejection levels. The factors used in a typical *credit scoring model are*: years at the same address, years at the same employer, age of principal automobile, housing status, monthly debt payment as percent of gross income, and frequency of wage payment (Cole & Mishler, 1998).

A *consumer education model* might include years at the same employer, age of principal automobile, housing status, age, and frequency of wage payment. But, it could also include gender, race, education, marital status, household size, employment status, occupational status, income, total debt to income ratio, and presence of a checking account and savings account. The 1974 Equal Credit Opportunity Act and its subsequent amendments prohibit discrimination by sex, marital status, race, color, religion, national origin, and age so the commercial credit scoring model should not include these factors. However, a consumer educator could develop educational materials and programs highlighting a broad range of factors. The information should be presented in a manner to help inform consumers about the likelihood of being accepted or rejected for credit based on factors in the models.

When both models were tested using data from the 1995 Survey of Consumer Finances, most of the results were consistent with expectations showing that lenders have found the appropriate predictor variables. In the *commercial scoring model*, respondents who were renters, with less job tenure, with older automobiles, and with higher ratio values for monthly debt payments to income were more likely to be turned down for credit. In the *consumer education credit scoring model*, respondents who were renters, with less job tenure, and with older automobiles were more likely to be turned down for credit. In addition, the *consumer education model* showed that consumers who were white, married, with more education, and in occupations that were non-service related were less likely to be turned down for credit than other similar respondents.

Consumer educators could work with specific groups of consumers to help them improve their likelihood of being accepted for credit. Low income and non-white consumers are likely to be a large component of those who are turned down. This provides an opportunity for educators to help with goal setting, establishing a spending plan, and developing record keeping systems. Information about finding lower interest rates should be included because research has shown that consumers conduct a limited amount of search for information on interest rates.

Reference

Cole, R. & Mishler, L. (1998). Decision making and control. Consumer and business credit management, 11th edition, pp. 167-190.

Endnotes

[1] Wen Yin, Master's student, Consumer Sciences and Retailing

[2] Sharon A. DeVaney, Ph.D., Assistant Professor, Consumer Sciences and Retailing