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Constance Y. Kratzer, Ph.D
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Edited by
Constance Y. Kratzer, Ph.D.
Department of Housing, Interior Design and Resource Management
Virginia Polytechnic Institute and State University
Blacksburg, VA 24061-0424
RELATIONSHIP BETWEEN BORROWING PRACTICES AND FINANCIAL DIFFICULTIES AMONG RURAL HOUSEHOLDS
Tahira K. Hira, Iowa State University
HeeSeon Noh, Ph.D. Candidate, Seoul National University
Mary Winter, Iowa State University

ABSTRACT

This study explores the relationship of borrowing practices, specifically the type of borrowing source, to the existence of financial difficulties. Results demonstrate that size of total debt, the sources of debt, and debt repayment patterns are significant predictors of financial difficulties. This study shows that respondents who borrowed from family members and friends were more likely to report financial difficulties than those who did not borrow from these two sources. In addition, respondents who frequently made minimum payments on their charge accounts were more likely to report a high level of financial difficulties. When assessing an individual's total debt burden, counselors and credit grantors may find it useful to explore if the individual was borrowing from friends or family, and also carefully examine their repayment pattern on existing charge accounts.

Introduction

A growing number of households, including average Americans, are experiencing financial difficulties arising from too much borrowing. Problems are frequently the result of easy access to credit, an unrealistic assessment of one's present and future income, and failure to recognize the extent of credit costs involved in the use of credit (Ritzer, 1995).

Personal and social costs associated with financial difficulties are numerous. Stress, illness, marital discord, and child abuse often coincide with financial difficulties. The association between financial difficulties and stress-related problems within the family indicates the need to address consumer credit management and control when designing educational and counseling programs to help families (Brenner, 1973; Shepard, 1984; Ulrichson & Hira, 1985).

Previous studies have explored the relationship between (a) socioeconomic characteristics and level of borrowing (Bloom & Steen, 1987; Pearce, 1985); and (b) level of borrowing, borrowing practices, and economic well-being of the household (Hira & Mueller, 1987; Bailey, 1987). The purpose of this study is to ascertain the impact of type of borrowing source and repayment pattern, along with socioeconomic characteristics, on households' level of financial difficulties.
The Conceptual Framework

Deacon and Firebaugh's family resource management model (1988) provides the conceptual framework for this study. This model focuses on the family as a system with two major subsystems, namely, personal and managerial. The individual personal system is composed of two major subsystems: developmental and values. In the managerial system, individuals and families strive to accomplish their goals by the acquisition and use of resources.

Inputs in this model are composed of demands and resources. Demands are either goals or events requiring action. Resources are "means that provide the characteristics capable of meeting the demand placed upon the family by goals and events" (p. 16). Throughput for management is made up of planning and implementing those plans. Outputs are demand responses and resource changes that result from transformations inside the boundaries of the managerial system in response to demand and resource inputs. A change in material resources represents "a shift in the stock of available means for meeting demands, whether the effect of the resource use has occurred within the household or through interchange with the external environment" (p. 117).

Applying Deacon and Firebaugh's family resource management model, socioeconomic characteristics were used as indicators of resource inputs. Resources are, in part, a function of age, sex, marital status, education, race, and employment status. Economic resources are represented by variables such as total assets, total household income, and total debts reflecting the family's cash flow and net worth position. The type of credit sources, the number of credit sources, and debt repayment pattern were also used as inputs because at specific stages of the family life cycle, credit presents a way of extending economic resources to meet demands, however specific.

It is hypothesized that: (a) there is no relationship between respondent's age, gender, marital status, employment status, race, household size, and presence of financial difficulties and (b) type of source of credit and repayment pattern on charge accounts are significantly related to presence of financial difficulties.

Previous Studies

Previous studies have included race, age, education, marital status, employment status, and household size as independent variables when predicting total debt. Similarly, household income has been frequently used as the predictor of household debt (Villegas, 1990; Choe & Johnson, 1992; Deluca & Bowers, 1985; Titus, Fanslow, & Hira, 1989; Sumarwan &
Hira, 1992). Mugenda, Hira, and Fanslow (1990) reported that married, female, money managers who lived in small households reported greater satisfaction with their quality of life than money managers who lived in larger households, were male, and were not married.

Some studies have measured household debt as total amount of consumer debt held by all members of the household (Villegas, 1990; Wasberg et al., 1992). These studies did not include mortgage debt in the calculation of total household debt. Canner and Lueckett (1991) suggest that the exclusion of mortgage debt from total household debt may not reflect the true financial situation of the household.

Titus et al. (1989) found that households with older money managers and those in small households were more likely to be satisfied with their financial status. Shepard (1984) reported that the credit ratio of consumer installment and non-installment credit to personal disposable income was a significant factor in explaining financial failures among consumers. Hira and Mueller (1987), using the family resource management model, analyzed the relationship between money management practices and household solvency status. They reported that the number of credit cards used by all members of the household and the amount of money the manager would feel comfortable owing on all credit cards at one time were significantly related to solvency status. They concluded that the manner in which the respondents used credit cards may have led to higher debt, and consequently, to a higher debt-to-income ratio.

Wilhelm, Iams, and Ridley (1987) reported that, when struck with financial difficulties caused by unemployment, families reacted by implementing changes in their consumption management. Among consumption management strategies, credit used to cope with financial difficulties was the strongest predictor of economic satisfaction. However, the less the family borrowed, the more likely both husbands and wives were to express satisfaction with their economic situation.

The literature indicates that the role of credit usage in financial management can be both positive and negative. On the one hand, credit usage can help families smooth out the rough spots in income flow. On the other, overuse of credit can be a recipe for financial disaster. This study explores issues related to credit usage and financial difficulty in more detail than in previous research.

Procedures

The sample. The data for this study were obtained as part of regional project NC-182, "Family Resource Utilization as a Factor in Determining Economic Well-Being of Rural Families." Eight states were involved in this project:
Minnesota, Arizona, Iowa, Michigan, Illinois, Kansas, Indiana, and California. Each state selected two rural counties for the study. Rural counties were identified as those in which 20 percent or more of employed persons were involved in agriculture, livestock, forestry, mining, and/or fishing. The sample was obtained with a commercial mailing list. The mail survey for the data was completed with money managers in the spring of 1988. Surveys were mailed to 900 residents of the two counties selected from each state. Response rates for individual states ranged from 30.2% to 56.3% with an overall response rate of 36.3%. The final sample consisted of 2,510 usable returns completed by the money manager in the households. Data used in this study were self-reported by the financial manager in each household and the respondents were the self-designated money managers, the persons in the household who usually handled the finances.

The Variables. The variables included: (a) sociodemographic characteristics - age, sex, household size, education, marital status, and employment status; (b) economic characteristics: household income, household debt, and household assets; (c) credit practices: type of credit sources, the number of credit sources, debt repayment pattern; and (d) outcome variable: existence of financial difficulties.

Sex of money manager was coded as male (0), female (1). Age was a continuous variable defined as age in years at the time of the survey. Marital status included three categories - married, separated, widowed or divorced and never married. Education of the money manager was defined as years of schooling.

Household income was defined as total annual income before taxes from all sources and was classified into fifteen different categories from (1) less than $5,000, to (15) $100,000 and over. Total assets included the estimated value of all financial and non-financial assets. Fifteen categories were also used to measure level of assets from (1) less than $999 to (15) $200,000 or more. Household debts consisted of all debts, including mortgage and consumer debts. The approximate total value of the overall household debts was estimated by the money manager and was measured by using fifteen categories from (1) $0, no debt to (15) $200,000 or more. Total household income, household debts and household assets variables were recoded to the midpoint of the category for the regression analyses.

Six different types of credit sources were identified, and were coded as: credit card = 1, bank = 2, credit union = 3, finance company = 4, friends = 5, and family members = 6. Two credit practices were: (1) total number of credit sources from which respondents borrowed, and (2) pattern of
repayment on charge accounts. For pattern of payment, respondents were asked how often they made only the minimum payments on charge accounts. Responses to this item were measured on a five-point scale: (1) never, (2) seldom, (3) occasionally, (4) most of the time, or (5) always.

The financial difficulties variable was treated as an outcome or a dependent variable. Similar measures have been used by other researchers. Lorenz, Conger, Simon, & Whitbeck (1991) measured financial difficulties by answers to questions (a) are you having problems paying bills? and (b) are you having problems making ends meet? Financial difficulties in this study were measured by the money manager's responses to eight different items. Respondents were asked ``Have you recently had any of the following problems? Select all that apply.'' The answers were coded No = (0), and Yes = (1).

1. got behind on the rent or house payment,
2. did not have enough money for dentist, doctor, or medicine,
3. did not have enough money to pay for health insurance,
4. could afford the upkeep of cars,
5. could afford to pay for utilities,
6. could afford to buy adequate insurance,
7. could not afford to buy new shoes or clothes,
8. could not afford to save to have something to fall back on.

Responses to the eight variables were then summed to make an index of financial difficulties. The score on that index ranged from 0 to 8.

**Statistical Analyses.** Descriptive analysis included frequency distributions. Pearson product-moment correlation analysis was used to investigate the relationships among input and output variables. Hierarchical regression analysis was used to identify factors significantly associated with level of household financial difficulties (Agresti & Finlay, 1986). Socioeconomic and demographic variables were entered first, followed by dummy variables representing the different sources of credit. The number of different credit sources used was entered in the third step, and a dummy variable indicating that the respondent usually paid only the minimum amount on charge cards was entered in the fourth step. After each addition, the overall model was examined to ascertain whether the added variables contributed significantly to the prediction of experiencing financial difficulties.

**Results**

The average money manager was white (92%), female (51%), mean age was 51 years, married (72%), member of a two-person household (52%), had 12 years of schooling (55%), and was
employed full time (59%). The median categories of household income, household assets, and household debt were $20,000-24,999, $15,000-19,999, and $10,000-29,999 respectively. The most frequently used sources of credit were credit cards (61%) and banks (58%). A small proportion of respondents (18%) "usually" made only minimum payments on their charge accounts. Based on these findings, it may be concluded that this population reflected the middle stage of the family life cycle; they were likely to be financially stable and had the qualifications to secure bank loans and credit cards.

Slightly over one-fourth of the respondents (28%) had not experienced any financial difficulties. One-third of the households had experienced medium to high levels of financial difficulties (score on financial difficulties was between 4 to 8), and the rest had experienced low levels of financial difficulties.

**Significant Predictors of Financial Difficulties.** Table 1 presents the results of four regression models to identify significant determinants of financial difficulties. Of the ten socioeconomic variables included in model #1, six were significantly associated with financial difficulties (at $P < .05$ or lower). These were age, education, household size, household income, debts, and assets. Together these variables explained 21% of variation in the level of financial difficulties ($R$-square = 0.21, $F$ significant of the $P < .0001$ level). Age and education have negative signs, indicating that younger respondents and those who came from larger households were more likely to experience financial difficulties. Household size was positively and significantly related to presence of financial difficulties. Larger households were likely to have a high level of financial difficulties. These findings are consistent with the life cycle hypothesis. Two of the three economic variables, household income and assets, were significant but negatively related to level of financial difficulties. Respondents with a high level of income and assets were likely to have low level of financial difficulties. On the other hand, those who had a high level of debts experienced a high level of difficulties.

By adding sources of credit to independent variables listed in model #2, the explanation power of the model increased to 25% ($R$-square 0.25, $F$ significant at $P < .0001$ level). From among the six sources of credit, three were significant (at $P < .05$ or lower) in explaining the level of financial difficulties. The relationship between borrowing from a family member and friends and level of difficulties is positive, indicating that those who borrowed from a friend or a family member were likely to report high levels of financial difficulties. On the other hand, the relationship between credit card borrowing and level of financial
difficulties is negative. It may be postulated that credit card borrowing is common among those who are not experiencing financial difficulties. It is possible that individuals who were experiencing financial difficulties were high risk people, and friends and family were more willing than commercial lenders to extend loans to such individuals.

Table 1. Regression analysis of financial difficulties

<table>
<thead>
<tr>
<th>Variables</th>
<th>Model #1</th>
<th>Model #2</th>
<th>Model #3</th>
<th>Model #4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sig T</td>
<td>Sig T</td>
<td>Sig T</td>
<td>Sig T</td>
</tr>
<tr>
<td></td>
<td>P ≤</td>
<td>P ≤</td>
<td>P ≤</td>
<td>P ≤</td>
</tr>
<tr>
<td>Age</td>
<td>-0.03</td>
<td>0.47</td>
<td>-0.52</td>
<td>0.30</td>
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<tr>
<td>Race</td>
<td>-0.18</td>
<td>-0.10</td>
<td>-0.10</td>
<td>-0.05</td>
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<tr>
<td>Sex</td>
<td>0.74</td>
<td>0.18</td>
<td>0.18</td>
<td>0.39</td>
</tr>
<tr>
<td>Education</td>
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<td>-0.01</td>
<td>-0.01</td>
<td>-0.10</td>
</tr>
<tr>
<td>Household size</td>
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<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
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<tr>
<td>Marital status</td>
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<td>-0.48</td>
<td>-0.45</td>
<td>-0.40</td>
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<td>Employment status</td>
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<td>-0.96</td>
<td>0.98</td>
<td>-0.83</td>
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<tr>
<td>Household income</td>
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<td>-0.00</td>
<td>-0.00</td>
<td>-0.00</td>
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<tr>
<td>Household debt</td>
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<td>0.00</td>
<td>0.00</td>
<td>0.04</td>
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<td>Household assets</td>
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<td>-0.00</td>
<td>-0.00</td>
<td>-0.00</td>
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<tr>
<td>Credit from:</td>
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<td></td>
<td></td>
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<tr>
<td>friends</td>
<td>0.03</td>
<td>0.02</td>
<td>0.05</td>
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<tr>
<td>credit union</td>
<td>-0.092</td>
<td>0.14</td>
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<tr>
<td>finance company</td>
<td>0.08</td>
<td>0.05</td>
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<tr>
<td>bank</td>
<td>0.13</td>
<td>0.08</td>
<td>0.16</td>
<td></td>
</tr>
<tr>
<td>credit card</td>
<td>-0.00</td>
<td>0.87</td>
<td>-0.74</td>
<td></td>
</tr>
<tr>
<td>family</td>
<td>0.00</td>
<td>0.00</td>
<td>0.01</td>
<td></td>
</tr>
<tr>
<td>Number of credit sources</td>
<td></td>
<td>-0.13</td>
<td>-0.13</td>
<td></td>
</tr>
<tr>
<td>Minimum payment on charge accounts</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>R-square</td>
<td>0.21</td>
<td>0.25</td>
<td>0.25</td>
<td>0.38</td>
</tr>
<tr>
<td>F</td>
<td>44.11</td>
<td>35.54</td>
<td>33.62</td>
<td>50.29</td>
</tr>
<tr>
<td>Sig F</td>
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<tr>
<td>Degrees of freedom</td>
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<td></td>
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<td>16</td>
<td>17</td>
<td>20</td>
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<td>Residual</td>
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<td>1662</td>
<td>1661</td>
<td>1658</td>
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<td>Partial F-test value</td>
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<td>2.21</td>
<td>83.14</td>
<td></td>
</tr>
<tr>
<td>F-critical value at</td>
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<td>2.09</td>
<td>3.84</td>
<td>2.60</td>
</tr>
<tr>
<td></td>
<td>0.01</td>
<td>2.80</td>
<td>6.64</td>
<td>3.78</td>
</tr>
</tbody>
</table>

A minus sign indicates that the beta coefficient is negative; the two-tailed p-value is reported.
The variable "number of credit sources" was not significantly associated with the level of financial difficulties and overall predictability of the model did not change with that addition (R-squares for both models #2 and #3 are the same: .25). However, inclusion of the financial practice variable in model #4 increased the R-square value to 0.38. These results indicate that the respondents who frequently made only minimum payments on charge accounts were likely to experience financial difficulties.

Conclusion and Implications

This study is different from others in recognizing the role of family members and friends as a source of credit. This study is also unique in measuring the level of financial difficulties by an index rather than measuring one item only. Results show that people who had financial difficulties more frequently borrowed from family members and friends. It was also found that individuals who usually made minimum payments on charge accounts were more likely to be facing financial difficulties. It is likely that, when people are facing financial difficulties, credit is available to them only from personal contacts. Because of their financial difficulties they do not qualify to receive credit from commercial sources.

Previous studies have shown that the number of credit sources is a significant predictor of financial difficulties (Hira & Mueller, 1987). Results of this study did not confirm that finding. It could be because each study used a different measure of financial difficulty, e.g., Hira and Mueller (1987) used an insolvency ratio as a measure of "financial difficulty." Another interpretation of the fact that there was no relationship between the number of sources and the presence of financial difficulties is that the type of credit use is more important than the number of sources. When variables indicating whether a specific source was used are included in the equation, the number of sources is not significant. It is also possible that these results are only unique to rural households as these results provide insight into borrowing practices of rural households. However, when assessing total debt burden and its consequences for a household's health, it may be useful to explore carefully the extent of borrowing from family and friends even when dealing with non-rural households.

Credit grantors may benefit from knowing about their clients' borrowing behavior, including other sources to whom they owe money, and their current repayment pattern. If one was to only look for loans from commercial sources, it may be that the true nature of total debt will not be revealed. When credit is extended without knowing the total picture, it will not only mean increased chances of default, but it
may also further add to the level of financial difficulties for the client.

The current environment is characterized by aggressive advertisements, the easy availability of credit, and social pressures for spending beyond means. Individuals may want to use some techniques to assess their own borrowing behavior. Self monitoring may reveal signs of trouble at early stages. If one finds that his/her borrowing has been extended to the point where friends and family are being asked for loans; and if repayment behavior consists of minimum payment only; it is an indication that steps should be taken to correct the situation.

This study has focused on only one credit use practice: pattern of repayment on charge accounts. Counselors, educators and others working with individuals and families may want to identify and include other practices, as well. For example, it will be useful to observe other signs such as: is credit being used to meet day-to-day expenses, the total amount charged on credit cards, size of monthly unpaid balance on credit cards, proportion of the family's net income used for monthly debt payments, and refinancing efforts to lower monthly payments by extending its term. For advisors and counselors, it is important to identify and understand the significant personal factors that contribute to financial difficulties. Giving consideration to family background, personality and emotional motives for overspending and too much borrowing may be helpful in developing approaches to developing solutions to clients' financial difficulties.

Even though the sample used in this study was randomly selected and was large, it consisted of only rural households; furthermore, the mean age of this group was 51 years. It is important to use great caution in generalizing results to other groups. A sample involving a greater variety of respondent's ages, and a mixture of both rural and urban households would enable future researchers to generalize the results more broadly.

References


