Net Worth and Financial Satisfaction as a Function of Household Money Managers' Competencies

The purpose of this study was to test hypotheses derived from the systems theory of family resource management in the area of family financial management. Money managers in 123 households in central Iowa were interviewed during fall 1986. A path analysis model based on multiple regression analyses was tested. The typical household money manager was a married, 49-year-old woman in a two-member household with a median after-tax income of $20,760. Money managers who were more knowledgeable practiced more recommended planning and implementing behaviors than less knowledgeable money managers. Households were more likely to have a higher level of net worth if the money manager used optimum planning practices and were more satisfied if the money manager used recommended implementing practices. Because this study suggests that money managers who use the principles of financial management do achieve greater net worth and satisfaction, educators should target their efforts toward the identified competencies.

Patricia M. Titus, Alyce M. Fanslow, Tahira K. Hira

American families are increasingly encountering financial difficulties. Factors contributing to this problem are the complexity of financial management, the debt loads assumed by households, and the uneven performance of the economy.

Total financial assets of households increased 72 percent during the 5-year period from 1980 to 1985, from $4.5 trillion to $7.7 trillion. However, debt of the household sector also has increased. Consumer credit expanded to $666 billion at the end of 1985, an increase of 77 percent from 1980 to 1985 (Wilson, Folger, Freund, & van der Ven, 1986). Concurrently, the number of bankruptcies also has increased. There were 297,885 non-business bankruptcy petitions commenced in 1985 compared with 182,710 in 1980 (Administrative Office of the United States Courts, 1986). Bankruptcy figures, however, do not tell the whole story. For every bankruptcy, there are hundreds of other families facing serious debt problems (Marlowe, 1981). In addition, families may face financial problems as a result of poverty and unemployment.

The costs associated with financial difficulties are significant for the individuals involved. Personal stress, illness, marital discord, child abuse, and loss of home often co-

Authors' addresses: P. M. Titus, A. M. Fanslow, Dept. of Family and Consumer Sciences Education; and T. K. Hira, Dept. of Family Environment, Iowa State University, Ames, IA 50011.

incide with financial failure (Brenner, 1973; Heck, 1981; Shepard, 1984; Ulrichson & Hira, 1985). The association between financial difficulties and stress-related problems within the family indicates the need to address financial management when designing programs to help families.

**Theoretical Framework**

Before educational strategies related to financial management can be developed to assist families, there is a need to understand the financial management competencies of household money managers and the system in which they make financial decisions. The systems approach to family resource management as conceptualized by Deacon and Firebaugh (1981) offers a framework to describe how money managers plan and implement resources to meet demands. Composed of the inputs of demands and resources, the throughputs of planning and implementing, and the outputs of met demands, used resources, and feedback, this view of management acknowledges the wholeness of decision making. Managerial actions are viewed not as isolated in time but related to the past and future.

Applied to financial management, inputs consist of the demands of goals and events and available human and material resources. Age, education, occupation, and income are sociodemographic variables that may influence financial management practices. Also included are the knowledge and attitudes of the money manager toward financial management. Throughputs consist of the actual financial management practices of the money manager, i.e., the budgeting, record keeping, credit usage, savings, and risk management. How these activities are accomplished affects whether financial goals are met and resources are maximized. Output may be expressed as solvency, net worth, and satisfactions. Feedback is that portion of output (i.e., net worth) that reenters the system as input to affect successive financial decisions.

**Related Literature**

Perusal of the literature shows a paucity of research related to the financial management of households. Abdel-Ghany and Nickols (1984), in a study of the literature from 1972 to 1982, identified only 13 articles in the *Home Economics Research Journal* and the *Journal of Consumer Affairs* that relate to the subject. Most of the research in the area of financial management is descriptive. More is known about who is more likely to have a budget, use credit cards, or save than is known about the relationships between the input variables of knowledge, attitudes, and sociodemographic characteristics; the throughput variables of specific management practices; and the output variables of solvency, net worth, and satisfaction of household money managers. Almost no studies have analyzed the relationships between the input, throughput, and output variables.

Families generally are aware of the importance of financial practices such as savings, written financial goals, and formalized budgets, but few families practice recommended financial management behaviors. Godwin and Carroll (1986) found, on average, fewer than 6 of 18 recommended financial management behaviors to be practiced. The number of years married, completion of a course in consumer education, and occupational status of the wife were found to contribute to financial management attitudes and behavior.

Studies that have examined throughputs have looked primarily at the specific practices of budgeting, savings, and credit. Budgeting is viewed to be a critical financial management practice. Families are more likely to maintain written records of expenditures than formalized budgets that include some future planning (Godwin & Carroll, 1986; Schnittgrund & Baker, 1983; Yankelovich, 1975). Households that implement more formalized budget plans are more likely to be young, married, and well-educated households with high demands on the available resources, i.e., circumstances, household size, and stage of the life cycle (Beutler & Mason, 1987).

Budgeting has been viewed to be especially
important for low-income households. Income, however, seems to have no effect on the extent of budgeting (Beutler & Mason, 1967). Most low-income households practice informal, unwritten budgeting (Mullis & Schnittgrund, 1982). Both budgeting and non-budgeting families believed that few families manage their money well. However, significantly more budgeters believed that greater satisfaction could be achieved through the planning of expenditures.

How a family allocates its limited resources influences its financial well-being. During a particular period, a family may choose to use all of its current income to meet consumption needs and increase its level of living, or it may elect to save some of this current income to increase its net worth and financial security. Household size, income, age of household head, and labor-force characteristics are among the factors found to influence the savings behavior of families (Corrado & Steindel, 1980; Hefferan, 1980). Hefferan (1982) presents a complex picture of household savings whereby the decision to save is influenced by income, and the level of saving is influenced by total assets, housing tenure, and education.

Credit also can be an indicator of financial management or mismanagement. Most credit studies have been descriptive. More is known about who uses credit, how frequently credit is used, what items are purchased with credit, and the knowledge of the costs of using credit than is known about the effect of credit on the financial management outputs of solvency and satisfaction. Practices related to credit-card management were the most significant predictors of household solvency status in a study by Mueller and Hira (1984). The greater the number of credit cards and the larger the amount the household was willing to charge on those cards, the lower was the level of solvency.

Net worth is another important output because it influences savings and consumption as well as other money management behaviors of families. Household size, income, age of household head, education, employment, and homeownership status are among the factors found to influence net worth (Avery, Ellienhausen, Canner, & Gustafson, 1984; Hefferan, 1980; Williams & Manning, 1972).

Achieving satisfaction with the family's financial management can be viewed as a goal. Satisfaction may be achieved through met demands, resources available to the family, and management skills used to meet the demands (Deacon & Firebaugh, 1981). Savings and investment are areas of financial management in which families are relatively dissatisfied (Schnittgrund & Baker, 1983). Dollar (1983) identified four financial practices as significant in predicting satisfaction with financial management practices. Saving was the greatest contributor to satisfaction, followed by comparing expenses, meeting deadlines and appointments on time, and rarely paying finance charges. Households that were more satisfied with their financial management practices had older heads of household, smaller households, fewer persons working outside the home, and higher incomes.

**Purpose**

The purpose of the study was to test a model (Figure 1) developed from the theoretical framework presented in the literature review. Inputs of age, household size, net income, and knowledge; throughputs of plan-

![FIGURE 1](image)
ning and implementing; and outputs of net worth and satisfaction were included in the model. Specifically, the following hypotheses were tested:

1. Age, household size, net income, and knowledge of financial management influence the planning practices of the household money manager.
2. Age, household size, net income, knowledge of financial management, and planning practices affect the implementing practices of the household money manager.
3. Age, household size, net income, knowledge of financial management, and planning and implementing practices of the household money manager contribute to the net worth of the household.
4. Age, household size, net income, knowledge of financial management, planning and implementing practices, and net worth impact on the money manager’s satisfaction.

**METHODOLOGY**

Individuals in 123 households in central Iowa from an area sample of 164 housing units were interviewed during fall 1986. The data were collected by trained interviewers from the individual in the household who identified him/herself as having the major responsibility for the household’s financial management.

The interview schedule had questions related to the money manager’s knowledge of financial management; planning and implementing practices in the areas of record keeping, risk management, credit usage, capital accumulation, and retirement and estate planning; and satisfaction with the financial situation. Information also was obtained on the household’s net income, assets, liabilities, and sociodemographic characteristics.

Descriptive statistics were calculated to obtain preliminary information about the variables. Knowledge, planning, implementing, and satisfaction scales were created by first computing an item-item correlation matrix for the items presumed to be in the scale. Inspection of the matrix resulted in deletion of items not contributing to the respective scales. Indices related to knowledge, planning, implementing, and satisfaction were computed by summing scores of individual items, dividing by the number of items for which responses were obtained, and converting to a scale of 0 to 100. The knowledge index was obtained from 22 true-false items with a computed coefficient alpha of .67. A planning index was computed from 10 items pertaining to planning practices; the reliability (coefficient alpha) was .74. Similarly, the implementing index (alpha = .65) was developed from responses to 14 items. A satisfaction index was derived from 10 Likert-type items on aspects of financial management; the reliability was .85. Net worth was computed by subtracting the total identified liabilities of the household from their identified total assets.

A correlation matrix between all variables was computed to study the intercorrelations of the variables. Computation of the matrix is a preliminary step in model testing because it can demonstrate that relationships exist as hypothesized (Warren, Klonglan, & Faisal, 1977).

The proposed model was tested by using path analysis. Path analysis uses a series of multiple regression analyses to test the relationship among the dependent and independent variables. Each dependent variable is represented by a regression equation consisting of the independent variables hypothesized to influence the dependent variable. The standardized regression coefficients of ordinary regression analysis (betas) are the path coefficients in path analysis (Pedhazur, 1982). The percentage of variance explained ($R^2$) was computed for each regression equation.

The four recursive linear regression equations for the model under consideration were:

$$\text{Planning} = a + \sum_{i=1}^{4} b_i X_i$$
Implementing = a + \sum_{i=1}^{5} b_i X_i \\
Net worth = a + \sum_{i=1}^{6} b_i X_i \\
Satisfaction = a + \sum_{i=1}^{7} b_i X_i \\

where

b_1 = age \\
b_2 = size of household \\
b_3 = net income \\
b_4 = knowledge \\
b_5 = planning \\
b_6 = implementing \\
b_7 = net worth \\

In path analysis, it also is possible to solve reduced-form equations to decompose the total effects into their indirect and direct effects. The total effect of one variable on another indicates how much change in a dependent variable is induced by a given change in an independent variable. Indirect effects are those parts of a variable's total effect which are hypothesized to intervene between the cause and effect of interest. The direct effect of one variable on another is the effect which remains when intervening variables have been held constant (Alwin & Hauser, 1975).

RESULTS AND DISCUSSION

The typical household money manager in the study was a married, 49-year-old female with a twelfth grade education living in a 2.8-member household. The mean after-tax income was $24,506, and the median net worth including real estate was $59,200. Comparable figures from a nationwide sample (U.S. Bureau of the Census, 1986a,b) show mean after-tax income as $21,564 and median net worth as $32,677 in 1984. Adjusted to 1986 dollars, the figures are $22,908 and $35,309, respectively. If one looks at net income, these comparison figures suggest that the sample in this study is representative of money managers in the United States. However, if one looks at net worth, the sample is atypical in that they have a greater net worth than the typical American household.

Results indicated that money managers had a wide range of knowledge about financial management (mean = 66.67 of 100; standard deviation = 12.26). More than 90 percent of the respondents correctly answered the following items:

A person needs a will only if there is a large estate to be left to the heirs. 
To have a good credit rating, one must make purchases on credit and make payments according to the credit contract. 
Insurance is a way to reduce the risk of a financial disaster. 
Life insurance needs vary with age and the size of a family. 
A person is more likely to reach personal financial goals by planning for the future. 
People are more likely to make better financial decisions if they base those decisions on their financial records. 
One should preplan an amount to save or invest each month.

Fewer than 50 percent correctly answered the following items:

Social Security records of earnings should be checked for errors at least every 5 years. 
All credit card companies offer a no-interest plan if you pay your bills in 30 days. 
Marital status can be used by a lending institution in determining whether or not credit is granted. 
There is no federal legislation or regulation dealing with credit card billing errors. 
Term insurance is the best form of life insurance protection available for one's dollar. 
The interest one pays on a home mortgage is directly deductible from the amount of income tax one pays.

Pearson correlations for the variables in the model are shown in Table 1. Inspection shows that, for the most part, correlations that typify hypothesized paths have significant values; e.g., knowledge correlates with planning ($r = .47$), and implementing correlates with net
TABLE 1
Correlations between Input, Throughput, and Output Variables

<table>
<thead>
<tr>
<th>Variables</th>
<th>Age</th>
<th>Household Size</th>
<th>Net Income</th>
<th>Knowledge</th>
<th>Planning</th>
<th>Implementing</th>
<th>Net Worth</th>
<th>Satisfaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Household size</td>
<td>-.51***</td>
<td>-.29***</td>
<td>.34***</td>
<td>-.07***</td>
<td>.31***</td>
<td>-.31***</td>
<td>.06</td>
<td>.32***</td>
</tr>
<tr>
<td>Net income</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Knowledge</td>
<td>-.29***</td>
<td>.12</td>
<td>.34***</td>
<td></td>
<td>.47***</td>
<td>.34***</td>
<td>.21*</td>
<td>.33***</td>
</tr>
<tr>
<td>Planning</td>
<td>.31***</td>
<td>.31***</td>
<td>.30***</td>
<td></td>
<td>.47***</td>
<td>.21*</td>
<td>.16*</td>
<td>.28***</td>
</tr>
<tr>
<td>Implementing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Net worth</td>
<td>.06</td>
<td>.02</td>
<td>.42***</td>
<td>.34***</td>
<td>.25**</td>
<td>.16*</td>
<td>.28***</td>
<td></td>
</tr>
<tr>
<td>Satisfaction</td>
<td>.32***</td>
<td>-.21**</td>
<td>.33***</td>
<td>.25**</td>
<td>.04</td>
<td>-.06</td>
<td>.31***</td>
<td>.40***</td>
</tr>
</tbody>
</table>

*p < .05
**p < .01
***p < .001

worth (r = .28). Hence, path analysis is appropriate for analyzing the variables in the model.

Planning Index
Most household money managers in the sample were not proficient in their overall planning behaviors (mean = 54.12 on a scale of 0 to 100; standard deviation = 26.45). The respondents were strongest in the planning behaviors of resolving arguments positively, estimating household income and expenses, figuring net worth, reviewing spending habits, and having financial goals (Table 2). The practices least likely to be utilized included having a written financial plan and reviewing wills in a timely fashion.

Knowledge of financial management was the largest contributing variable to the planning index (Table 3, beta = .42). Household money managers with more financial knowledge used more planning behaviors than did those money managers with less financial knowledge.

Age also contributed significantly to the money manager's level of financial planning (beta = -.18). The relationship was negative, indicating that younger money managers planned to a greater extent than older managers. The independent variables of household size and net income did not significantly affect financial planning.

Implementing Index
The respondents displayed more optimum implementing behaviors than planning behaviors (mean = 86.03 out of 100; standard deviation = 13.42). Specific implementing behaviors are identified in Table 4. The money managers in the study saved receipts for major purchases, paid bills as due, paid for...

TABLE 2
Use of Planning Behaviors by Money Managers

<table>
<thead>
<tr>
<th>Behaviors in planning index</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resolves arguments over money in positive manner</td>
<td>74</td>
<td>82.2</td>
</tr>
<tr>
<td>Estimates household income and expenses</td>
<td>86</td>
<td>69.9</td>
</tr>
<tr>
<td>Figures net worth</td>
<td>83</td>
<td>67.5</td>
</tr>
<tr>
<td>Reviews and evaluates spending habits</td>
<td>82</td>
<td>66.7</td>
</tr>
<tr>
<td>Has financial goals</td>
<td>78</td>
<td>63.4</td>
</tr>
<tr>
<td>Reviews adequacy of life insurance</td>
<td>68</td>
<td>55.3</td>
</tr>
<tr>
<td>Has plans to achieve goals</td>
<td>67</td>
<td>54.5</td>
</tr>
<tr>
<td>Reviews total financial situation</td>
<td>52</td>
<td>42.3</td>
</tr>
<tr>
<td>Reviews will periodically</td>
<td>40</td>
<td>32.5</td>
</tr>
<tr>
<td>Has written plans as part of financial review</td>
<td>23</td>
<td>18.7</td>
</tr>
</tbody>
</table>

Note. The total N is 90 for the first behavior and 123 for all other behaviors.
yearly expenses out of current income or savings, seldom paid finance charges, and had some liquid assets. The respondents had implemented fewer strategies for planning for disposition of their assets.

Net income was the only input variable in the model that had a significant direct effect on implementing (Table 3, beta = .41). The higher a household’s net income, the greater the use of sound implementing practices.

Knowledge of financial management did not have a significant direct effect on the money manager’s level of implementing. The indirect effect of knowledge via the planning variable combined with its direct effect, however, to create a total effect that was significant (beta = .21).

<table>
<thead>
<tr>
<th>Dependent variable</th>
<th>Independent variable</th>
<th>Total effect</th>
<th>Indirect effect via Planning</th>
<th>Indirect effect via Implementing</th>
<th>Indirect effect via Net worth</th>
<th>Direct effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planning index</td>
<td>Age</td>
<td>-.18*</td>
<td>-0.15</td>
<td>0.05</td>
<td>0.05</td>
<td>-0.18*</td>
</tr>
<tr>
<td></td>
<td>Household size</td>
<td>0.15</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Net income</td>
<td>0.05</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Knowledge</td>
<td>0.42**</td>
<td></td>
<td></td>
<td></td>
<td>0.42**</td>
</tr>
<tr>
<td>Implementing index</td>
<td>Age</td>
<td>0.17</td>
<td>-0.01</td>
<td>0.18</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Household size</td>
<td>-0.05</td>
<td>0.01</td>
<td>-0.06</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Net income</td>
<td>0.41**</td>
<td>0.00</td>
<td>0.41**</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Knowledge</td>
<td>0.21*</td>
<td>0.03</td>
<td>0.19</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Planning index</td>
<td>0.07</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Net Worth index</td>
<td>Age</td>
<td>0.36***</td>
<td>-0.03</td>
<td>0.00</td>
<td>0.39***</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Household size</td>
<td>-0.19*</td>
<td>0.03</td>
<td>0.00</td>
<td>-0.22*</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Net income</td>
<td>0.45***</td>
<td>0.01</td>
<td>0.01</td>
<td>0.43**</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Knowledge</td>
<td>0.14</td>
<td>0.08</td>
<td>0.00</td>
<td>0.06</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Planning index</td>
<td>0.19*</td>
<td>0.00</td>
<td>0.19</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Implementing index</td>
<td>0.03</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Satisfaction index</td>
<td>Age</td>
<td>0.35***</td>
<td>-0.01</td>
<td>0.04</td>
<td>0.07</td>
<td>0.25*</td>
</tr>
<tr>
<td></td>
<td>Household size</td>
<td>-0.26**</td>
<td>0.01</td>
<td>-0.01</td>
<td>-0.04</td>
<td>-0.21*</td>
</tr>
<tr>
<td></td>
<td>Net income</td>
<td>0.37***</td>
<td>0.00</td>
<td>0.08</td>
<td>0.08</td>
<td>0.20</td>
</tr>
<tr>
<td></td>
<td>Knowledge</td>
<td>-0.03</td>
<td>0.02</td>
<td>0.04</td>
<td>0.01</td>
<td>0.09</td>
</tr>
<tr>
<td></td>
<td>Planning index</td>
<td>0.04</td>
<td>0.01</td>
<td>0.03</td>
<td>0.00</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Implementing index</td>
<td>0.21*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Net worth index</td>
<td>0.18</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* p < .05  
** p < .01  
*** p < .001  

As to the total effect of the variables on net worth, no additional variables contributed to explaining net worth. Thus, knowledge and implementing did not demonstrate either a significant direct or indirect effect on net worth.

Satisfaction Index

Satisfaction of household money managers on a scale of 0 to 100 shows a mean of 62.72, a range of 7.57 to 95.95, and a standard devi-
Satisfaction on individual items ranged from a low of 2.85 for satisfaction with the amount currently in savings and with the ability to meet large emergency expenses to a high of 3.91 for satisfaction with overall quality of life, 3.99 for willingness of family members to discuss money matters, and 4.06 for ability to pay back money owed (Table 5).

The variables that significantly impacted satisfaction directly (Table 3) were age (beta = .25), household size (beta = -.21), and implementing behaviors (beta = .20). Households with older money managers, smaller size, and greater use of implementing behaviors were more likely to have members satisfied with their financial status.

Although net income did not directly influence the money manager's level of satisfaction, it did have a significant total effect beyond the .001 level (beta = .37). Inspection of Table 3 suggests not only that net income affects satisfaction, but also that net income effect is moderated by implementing behaviors.

### Systems Approach to Financial Management

This study provides support for a systems approach to family financial management. Results indicate that it is the combined effect of inputs and throughputs that affects the outputs of net worth and satisfaction.

Percentages of variance explained ranged from 25.65 for the implementing index to 36.61 for the net worth index. Using the commonly accepted rule of thumb of 25 percent variance explained for social science studies, it is evident that the variables studied are providing an explanation of the important variables impacting family financial management.

### Implications

Although the sample size is limited, findings probably can be generalized to a broader population because of the similarity of characteristics of the sample to those of broader
populations. The typical household money manager in the study was representative of a broader population in terms of education, household size, and income.

The focus of financial resource management is helping families gain the knowledge and skills to manage their financial resources effectively. This study is significant because it shows that effective financial management strategies as well as increased resources affect a household's net worth and satisfaction. Although the variables of age, household size, and income are not readily affected by individuals outside the household, the planning and implementing practices are behaviors that can be targeted by professionals in the field.

Also important for home economists working with families is the finding that knowledge of financial management contributes to the level of planning and implementing by the household money manager. Thus, a high priority should be placed on providing basic information on record keeping, credit usage, asset accumulation, risk management, and retirement and estate planning.

REFERENCES


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