Perceived Saving Motives and Hierarchical Financial Needs

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Data from the 1986 Survey of Consumer Finances were used to analyze perceived saving motives. The results of Chi-square tests indicated that perceived saving motives were different in terms of the household's home ownership, marital status, number of children, life cycle stage, employment status, income, asset and debt categories, net worth, and the head's gender and education. Differences found in perceived saving motives suggested some hierarchical associations among various financial needs perceived by the consumers. Findings have implications for financial counseling and planning practitioners and educators.

KEY WORDS: *financial needs, saving motives*

Financial goals are the long-term objectives that your financial planning and management efforts are intended to attain (Garman & Forgue, 1991, p. 60). Since household life cycle stage, financial resources possessions, and other household characteristics differ, family financial goals will not be the same for all kinds of families (Garman & Forgue, 1994, pp. 68-72). In most cases, if households intend to achieve their financial goals, they have to save. Thus, behind financial goals are saving motives. Research about family saving motives will help family financial counseling and planning practitioners and educators better understand household financial goal-setting behavior, and better serve their clients and students. Even though studies of savings behavior can be found in economic, sociological, and human ecology literature, research directly investigating consumer saving motives is rare, with a few exceptions (Claycamp, 1963; Davis & Schumm, 1987).

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The purpose of this study is to explore consumer saving motives by examining reported reasons for saving. The research questions are:

What are saving motives perceived by consumers?

How do these saving motives vary when household characteristics differ?

Are there associations between these saving motives?

The rest of this paper will review the related literature and introduce Maslow's Human Needs Theory as the conceptual framework. Then, research methodology, findings, and discussions will follow. Finally, implications of the results for financial counseling and planning practitioners, educators, and researchers will be explored.

Literature Review

The related literature has three categories: empirical research on savings, economic analyses of saving behavior, and research on savings behavior incorporating psychological theories. Special attention will be paid to the investigation of saving motives when the literature is reviewed.

Empirical Research on Saving Behavior

Several studies empirically examined household savings behavior. A study conducted thirty years ago directly examined the saving motives and their impact on saving behavior (Claycamp, 1963). Even though the data used in that study were not representative of the population at large and had a strong upper-income and high-asset-ownership bias, this was the only study that empirically examined the effects of saving motives. The seven saving motive variables employed were saving for old age, inheritance for children, education for children, paying off debt, major purchase, an emergency, and short-term saving motives. Claycamp (1963) found that only one motive, saving for a purchase, had negative effects on the ratio of variable-dollar assets to all assets. Hefferan (1982), using data from the 1972-1973 Consumer Expenditure Survey, found that the decision to save and the level of saving are influenced by income, wealth, and family characteristics and that saving patterns vary among different types of families. Saving motives were not explicitly investigated, but the author assumed that the basic decision to save, as well as the decision related to level of saving, are related to income and income needs, wealth, and family variables. Davis and Schumm (1987) investigated savings behavior and satisfaction with savings of low- and high-income households using data collected from 13 states in 1977-1978. They found that above the threshold level ($9,000), savings rose very rapidly as income increased. Among couples whose incomes were above the threshold, satisfaction with savings was primarily a function of income, savings, and family size, while level of savings was primarily a function of income, education, family size, and home ownership. Motivation to save was associated with both savings and satisfaction with savings in terms of a significant quadratic relationship. In their study, motivation to save was measured by two variables. One was a 7-point Likert scale, "importance of saving." Another was a categorical variable regarding financial security concern relative to eight other concerns. While the Davis and Schumm study was one of a few studies that directly investigated saving motives, it only examined saving motives in general. The fourth study (Johnson & Widdows, 1985) did not explicitly investigate saving motives, but empirically examined emergency fund levels of households. Using data from the 1977 and 1983 Surveys of Consumer Finances, they found that the majority of families had low levels of emergency funds, and that household emergency funds varied when household incomes and life cycle stages differed. If household emergency funds implied a "saving for emergency" motive, their findings suggested that many households might lack this motive. Therefore, whether or not a household has this saving motive may be determined by family income and life cycle variables.

Economic Models of Saving Behavior

In economic literature, saving motives have always been treated as an assumption rather than an empirically investigated subject. In the life-cycle hypothesis, it was assumed that the saving motive is only for retirement (Modigliani, 1986). In the permanent income hypothesis, a bequest motive was implied (Bryant, 1990; Friedman, 1957). The intergenerational hypothesis identified the saving behavior emphasizing the well being of children (Barro, 1978; Kurz, 1984). Savings for emergency and uncertainty of income flow, life span or health expenditure were also considered as saving motives (Hanna, Chang, Fan & Bae, 1993; Kotlikoff, 1989). Limitations of all these economic models are that they always consider only one motive when modeling saving behavior, and ignore the population heterogeneity. As Kurz (1985, p.325) commented, "... there is extensive heterogeneity of preferences across the population. This is the reason why polar hypotheses about behavior, which are assumed to apply uniformly, tend to be rejected by the data."

Models of Saving Behavior Incorporating Psychological Theories
Recently, some researchers incorporated psychological theories into their research agenda to investigate family saving behavior. Incorporating the prospect theory in psychology into the utility model, Shefrin and Thaler (1988) proposed a behavioral life-cycle hypothesis. This hypothesis suggested that consumers have different propensities to save in different categories of accounts, which implies various saving motives. Another psychological theory, Maslow's (1954) human needs theory was utilized in the following two studies. The behavioral life cycle hypothesis implies that consumers may save in different account categories for different goals, but fails to point out the reason why consumers behave in this way. Maslow's theory suggests that people would generate higher levels of needs when lower levels of needs are met. Xiao and Olson (1993) incorporated Maslow's theory and the behavioral life-cycle hypothesis to study associations among components of household assets. They found that families treated their various asset categories in different ways, and consumer's saving behavior in three asset categories provided the evidence displaying the hierarchy of the financial needs. Based on Maslow's theory of needs hierarchy, Xiao and Anderson (1993) investigated the relationship between household asset shares and income groups and found three distinctive behavioral patterns. They interpreted these patterns as reflections of "deficit needs," "growth needs," and the combination, suggested by the Maslow theory. The latter two studies implied that families have different saving motives, and they save in different account categories for meeting different needs, or achieving different financial goals.

Summary of the Literature Review
The literature review suggests that families have different saving motives, and they save for different financial goals. Family financial resources and other household characteristics might influence saving motives since these factors influenced saving levels as empirical studies showed. No empirical research has been conducted to determine what are these saving motives and what are variances of saving motives when household characteristics differ. This study attempts to fill this research gap.

Conceptual Framework

The conceptual framework of this paper is Maslow's human needs theory. The human needs theory has increasingly drawn the attention of professionals in family economics and family studies, while it has been extensively cited in organizational behavior literature (Alderfer, 1972; 1989; Gordon, 1987). This theory was considered relevant for the study of family financial concerns and productivity (Williams, Lown, Haldeman, Garman, Fletcher & Cramer, 1990). Poduska (1992) used Maslow's hierarchy of needs to address family money matters and marriage issues. In this study, two major assumptions of Maslow's theory employed are that human needs are hierarchical, and that human needs move onto a higher-level need after the lower-level need has been met (Maslow, 1954).

Using a psychological theory to address family financial matters, further assumptions should be made. First, motivations for current and future consumption are defined as financial needs. Second, these financial needs are the reflection of human needs. Third, financial needs for current consumption are considered as lower-level needs, and needs for future consumption as higher-level ones. Fourth, these financial needs will show similar patterns as those of human needs as theorized by Maslow. Fifth, in the context of family finance, major motivators for higher levels of needs are the status of "richness" that can be measured by income and wealth variables.

Using this framework, associations between saving motives and financial needs can be described as follows. Family financial needs are motivated by family "richness" status. When families have limited resources, they seek to meet lower level needs, such as needs for survival and security. When family financial resources increase, and lower level financial needs are met, households will expand to higher level needs. Thus, family financial needs are hierarchical. If saving motives perceived by consumers reflect family financial needs, we should observe the same patterns among perceived saving motives. Thus, the framework based on Maslow's theory will help understand and interpret findings of this study.

Methodology

Data

Data used in this study were from the 1986 Survey of Consumer Finances. The survey was sponsored by the Federal Reserve Board and several other federal agencies. The data were collected by the Survey Research Center of the University of Michigan. This data set offers a nationwide representative sample, with a sample size of 2,822 (Avery, Elliehausen & Kennickell, 1987). One unique feature of this data set, which is especially helpful for this study, is the inclusion of information regarding perceived saving motives.

Perceived Saving Motives

The dependent variables were perceived saving motives. In the original survey questionnaire, the respondents were asked to answer an open-ended question "What were the household's most important reasons for saving?" Based on respondents' answers, three variables indicating the most important saving reasons were coded and included in the data set. For each variable, 35 categories of saving reasons were recorded (Avery & Elliehausen, 1988). Based on these categories, the perceived saving motives were recoded into six dummy variables. The following are the variable names and definitions:

DAILY:	saving for daily expenses;
PURCHASE:	saving for purchase plans, such as for self-education, travel, wedding, second home, home improvement, and so forth;
EMERGENCY:	saving for emergency;
RETIRE:	saving for retirement;
CHILD:	saving for children or grandchildren;
GROW:	saving for better life, advancing standard of living, or other intangible reasons.

For example, if a respondent mentioned "save for daily expenses," DAILY would be coded as 1. Otherwise, it would be 0.

Household Characteristics Variables

Several household characteristic variables were included to explore differences in "perceived saving motives." These variables were household head's gender, home ownership, marital status, education, number of children at home, life cycle stage, employer, labor force status, paper assets, real assets, credit card debts, real debts, and net worth. The definitions, breakdowns and descriptive statistics of these variables can be found in the Appendices A and B. Two strategies were used to form variable groupings. First, the attributes used by the researchers who sponsored the data collection were utilized (Avery & Kennickell, 1988). One example was the life cycle variable. Second, income, asset, and debt variables were originally planned to be divided into three categories, high 25%, middle 50%, and low 25%, for the convenience of comparison. However, more than 25% of the sample had zero value in the credit card debts and real debt variables, and there were not clear cut off points at 25 and 75 percentiles in the income variable, which resulted in the categories used in the present study. Since all variables are categorical, Chi-square tests were employed to explore differences of perceived saving motives in terms of the aforementioned household characteristics. Both weighted and unweighted samples were used for the analyses, which generated similar results[1]. In this paper, results with the weighted samples are reported. The results using unweighted samples can be found elsewhere (Xiao & Noring, 1993).

Findings

Perceived Saving Motives

Ninety-two percent of the respondents reported at least one saving motive (Table 1). Specifically, 35% reported one, 37% reported two, and 19% reported three saving motives. Among these saving motives, most frequently mentioned were saving for "emergency" (44% of the respondents reported), "purchase" (33%), and "retirement" (32%). Other reported saving motives included for "children" (19%), "growth" (17%), and "daily expense" (9%).

Table 1
Distribution of Savings Motives Reported (n=2822).

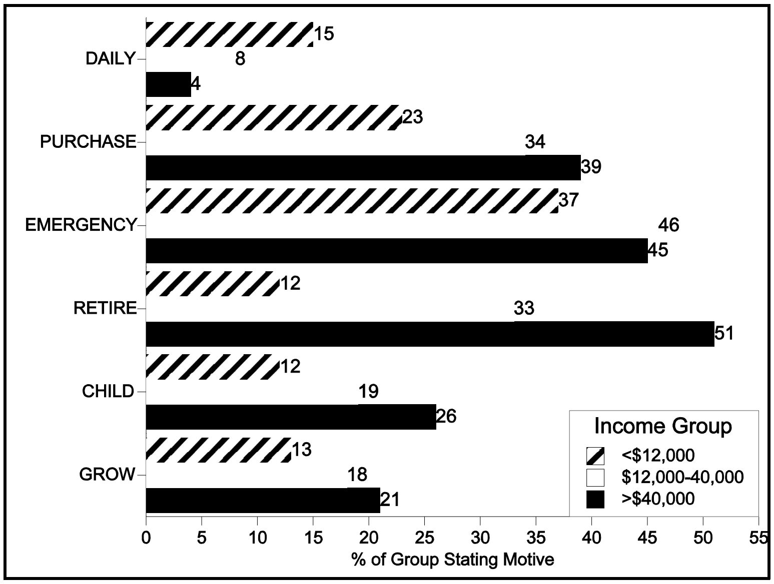
Reported at Least One Savings Motive	92%
Reported One Savings Motive	35
Reported Two Savings Motives	37
Reported Three Savings Motives	19
Type of Motive Reported	
Emergency	44%
Purchases	33
Retirement	32
Children	17
Growth	17
Daily Expenses	9

Effect of Income

The three income groups studied were low (under $12,000 per year); middle income ($12,000 to $40,000); and high income (above

$40,000.) Income showed substantial influences on perceived saving motives (Figure 1 on page 32). In comparing the three income groups, low income households were more likely to report saving for "daily expenses," middle income households more likely to report saving for "emergency," and high income households more likely to report saving for "purchase," "retirement," "children," and "growth."

Figure 1.
Percent of Households with Particular Perceived Saving Motives, by Income Group (n=2822).

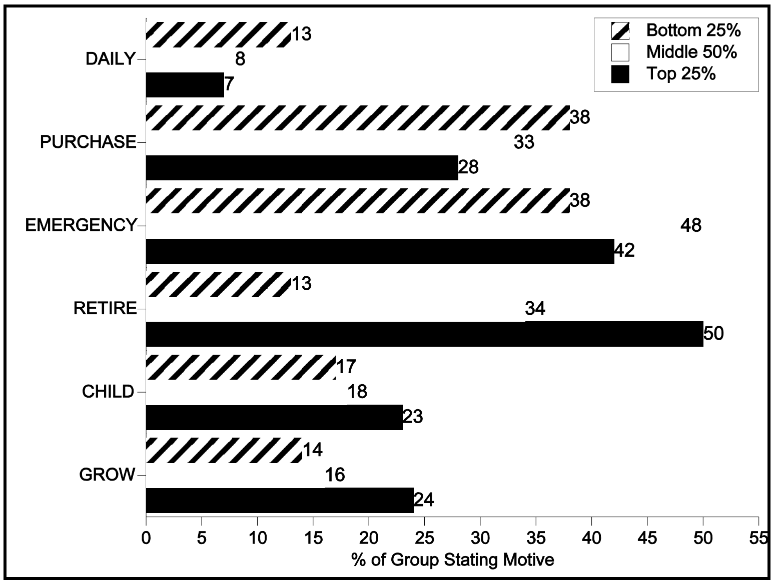


Effects of Wealth Variables

Effects of three wealth variables: net worth, paper assets and real assets, showed similar patterns as those of income, except for saving for "purchase." For example, in terms of net worth, the lowest 25% of households were more likely to report saving for "daily expenses" and for "purchase," the middle 50% more likely to report saving for "emergency," and the top 25% more likely to report saving for "retirement," "children," and "growth" (Figure 2 on page 33).

The other two wealth variables, real assets and paper assets, displayed the same pattern, except for saving for "purchase." The lowest 25% in net worth were more likely to report saving for "purchase" (Figure 2), while the middle 50% in paper assets most likely to report saving for purchase (Table available from first author.)

Figure 2.
Percent of Households with Particular Perceived Saving Motives, by Net Worth Group (n=2822).



Saving Motives and Financial Resources
Effects of family financial resources discussed above on perceived saving motives suggested an interesting association between these two sets of variables. When families had limited resources, such as being in the low income group, or in the lowest quartile of net worth, they were more likely to report to saving for "daily expenses" (Figures 1 and 2). When family resources increase, such as being in the middle income group, or in the middle 50% category of net worth, they were more likely to report to save for "emergency" (Figures 1 and 2). When families were in the high income group, or in the top 25% category of net worth, they were more likely to report saving for "retirement,

children, and/or growth" (Figures 1 and 2). This finding may be interpreted as an indication of hierarchical needs reflected by perceived saving motives. When family financial resources increase, their needs expand from "daily expenses" to "emergency" to "retirement, children, and growth." Saving for "purchase" showed a mixed pattern and need further research to explore its meaning in terms of perceived financial needs.

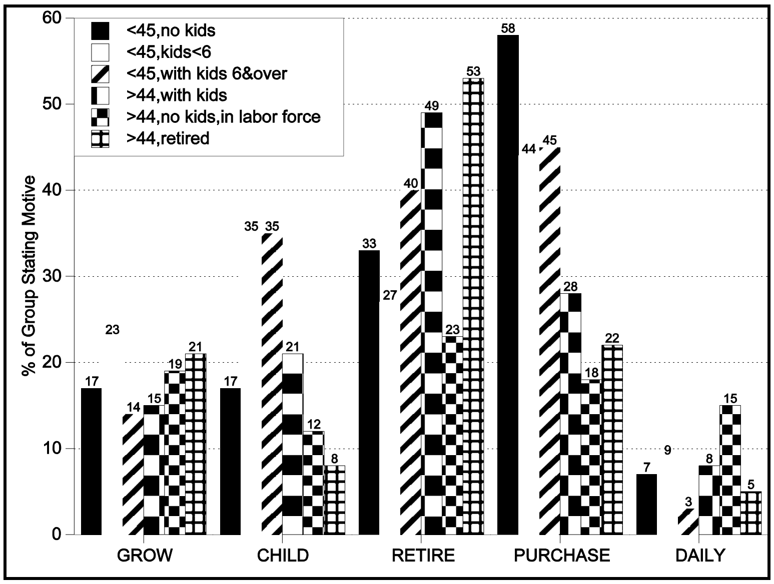
Effects of Life Cycle Variables

Life cycle variables showed different effects on perceived saving motives (Table 2 on page 37, Figure 3 on page 35). Both married and single heads were more likely to report saving for "purchase" when they were under 45 and without children. Married heads at 45 or older, without children and in the labor force, or single heads at any age with children were more likely to report saving for "daily expenses." Single heads at any age with children were less likely to report saving for "emergency", but the life cycle variable did not show effects on the reporting of this reason in the married group. Single heads at 45 or older and in the labor force were more likely to report saving for "retirement", while, surprisingly, married heads who retired were more likely to report the same reason. One possible explanation is that married heads at this stage did not prepare enough resources for their retirement, so that they would attempt to save more after retirement. Married heads under 45 with children were more likely to report saving for "children," contrasting another counter-intuitive fact that single heads who had no children and retired were more likely to say so. Perhaps, single heads at this stage would like to transfer their savings to their relatives even though they did not have their own children. Further research is needed to explore the meanings of these unusual patterns.

Effects of Other Household Characteristic Variables

Families without credit card debts and/or real debts were more likely to report saving for "daily expenses," while families in the high "credit card debts" and high "real debts" categories were more likely to report saving for "purchase, emergency, retirement, and children." Self-employed heads were more likely to report saving for daily expenses than were those with other occupations (tables available from first author.) The higher the head's educational level, the more likely to report saving for "purchase, retirement, child, and growth." Male heads were more likely to report saving for "retirement, children, and growth," while female heads were more likely to report saving for "daily expense." "Retirement and children" reasons were more likely to be reported by married heads, and the "daily expense" reason was more likely to be reported by single heads. Home owners were more likely to perceive "retirement and children" motives, but non-homeowners were more likely to report the "purchase" reason. Compared to childless heads, heads with children were more likely to report saving for "purchase" and "children."

Figure 3.
Saving Motives, by Family Life Cycle Stage, Married Heads.



Summary of Findings
To a great degree, household characteristics showed differences in perceived saving motives. All "who is more likely to report what saving reasons" patterns are presented in Table 3 on page 38.

Discussion

If perceived saving motives can be viewed as indicators of financial needs perceived by consumers, results of this study can be summarized into three points: (1) families have multiple financial needs; (2) family financial needs are diverse when household characteristics differ; and (3) these needs are hierarchical along with the increase of family financial resources.

Multiple Financial Needs

Numerous family finance textbooks teach that families need to set multiple financial goals, manage financial tasks, face financial challenges, or handle financial problems. For example, Garman and Forgue (1994) set five lifetime financial objectives for households (p.18), and detailed various financial tasks, challenges, and problems at different life cycle stages (pp. 68-72), which imply the multiple financial needs of households. Results from national surveys also indicated that consumers often report more than one saving reasons (see frequencies of perceived saving motives, Avery and Kennickell, 1988), in which reported saving reasons are viewed as perceived financial needs. In this study, 56% of the respondents reported two or three saving reasons, offering support of the above notion. A theory addressing family saving behavior should take into account this fact. A major limitation of many existing economic models is that they are based on a single saving motive. The model of saving behavior would be more realistic if more than one motive were considered.

Diverse Financial Needs

Family financial needs vary when household characteristics differ. In this study, family financial resource variables, income, paper assets, real assets, and net worth, showed substantial effects on perceived saving motives, which is consistent with previous studies of family savings (Claycamp, 1963; Davis & Schumm, 1987; Hefferan, 1982; Johnson & Widdows, 1985). Some other characteristics, head's education, gender, marital status, employment, and home ownership showed the same effect patterns as those of the resource variables, which implies associations of these variables and the resource variables. Life cycle variables and debt variables displayed more complicated patterns which suggest diverse financial needs when family life cycle stages, family compositions, or debt structures differ.

Hierarchical Financial Needs

Findings of this study also suggest some hierarchical associations among family financial needs. As reported in the "Findings" section, cross-tabulations between "perceived saving motives" and resource variables (income, paper assets, real assets, and net worth) showed very similar patterns. When families have more financial resources, their perceived saving motives expand from "daily expense" to "emergency" to "retirement, children, and growth." It seems that "daily expenses" is at the lowest level of financial needs, "emergency" is at the intermediate level, and "retirement, children, and growth" are at the highest level. When families increase their financial resources (income, assets, and net worth), they are likely to move onto more and higher level needs, which is predicted by Maslow's (1954) theory. It is possible that there may be hierarchical associations between saving motives for "retirement, children, and growth". Because of the limitation of methodology, the hierarchy between levels of needs expressed as saving for "retirement, children, and growth" has not been explored in this study.

Table 2.
Perceived Saving Motives by Life Cycle Variables

	DAILY	EMERGENCY	PURCHASE	RETIRE	CHILD	GROW
Total	9%	44%	33%	32%	19%	17%
Life cycle of Married Head (n=1907)						
<45, no kid	7	----	58	33	17	17
<45, w/kids,<6	9	----	44	27	35	23
<45, w/kids 6&over	3	----	45	40	35	14
>44, w/ kids	8	----	28	49	21	15
>44, no kids, in labor force	15	----	18	23	12	19
>44, no kids, retired	5	----	22	53	8	21
χ^2 (d.f.=5)	34	----	133	99	128	15
Life cycle of Single Head (n=915)						
<45, no kid	4	51	40	24	6	26
Any age, w/ kids	17	37	24	13	11	14
$45, no kids, in labor force	8	51	17	39	7	11
$45,no kids, retired	17	46	36	22	25	13
χ^2 (d.f.=3)	25	13	28	36	46	21

Only results statistically significant at the five percent level or better are presented.

Results of this study challenge existing economic models of saving. In conventional economic saving models, usually a single saving motive is considered or implied (see Chapter 4, Bryant, 1990). A more valid economic saving model should take multiple saving motives into account. A possible direction would be an approach used by Shefrin and Thaler (1988), which incorporated psychological theories into the utility model. Lancaster's (1966) characteristic model may also be helpful when investigating associations between multiple saving motives and various saving instruments.

Table 3
Who is More Likely to Save for What Reasons: Summary of Findings

Saving For	Characteristics of Household Heads
Daily expense	low income, female, single, low education level, no child or has more than three children, retired, self-employed, not in labor force, low value of paper assets, low value of real assets, no credit card debts, low value of real estate debts and net worth.
Emergency	middle income, black, has 1-3 children, younger than 45, single in labor force, middle value of paper assets, real estate assets and debts, and net worth, high credit card debts.
Purchase	middle income, non-homeowner, some college, has more than 3 children, younger than 45 with no child, work for government, education, or military institutions, in labor force, middle value of paper assets, low value of real estate assets and net worth, high credit card debts.
Retirement	high income, male, homeowner, married, high educational level, has 1-3 children, age 45 or older with children (for married), age 45 or older with no child (for single), work for government, education, and military institutions, in labor force, high value of paper assets, real estate assets and debts, credit card debts, and net worth.
Children	high income, male, homeowner, married, high educational level, has more than 3 children, younger than 45 with children (for married), any age with children (for single), married couple both in labor force, high value of paper assets, real estate assets and debts, and net worth.
Growth	high income, male, high educational level, no child (for all sample), age 45 or older with no child (for married), younger than 45 with no kid (for single), high value of paper assets, real estate assets and debts, and net worth, low credit card debts.

Incorporating psychological discoveries of human nature into economic models of saving will expand the explaining power of these models, but not necessarily increase the simplicity and elegancy of them. As

Thaler (1992, p.198) states, "rational models tend to be simple and elegant with precise predictions, while behavioral models tend to be complicated, and messy, with much vaguer predictions." This study did not have the goal of developing a formal behavioral saving model, but only to accumulate empirical evidence that may be used to construct more valid saving models.

Implications

Implications For Practitioners

Practitioners in financial counseling and planning can use the results of this study when working with their clients. Table 3 summarizes the findings of "who is more likely to report what saving reasons." This table is based on a nationwide representative sample, which can be viewed as a profile of typical families with certain household characteristics and several financial needs. The table can help practitioners understand their clients' needs as well as identify some unusual and unique ones. For example, according to this study, a low income household head is less likely to report saving for "retirement, children, or growth." If you do have this kind of client, you may view him or her as a unique case, compared to the typical case described in Table 3.

Table 3 also gives clues about the future financial needs when the clients' income and wealth, as well as other household characteristics change. According to the results of this study, when family's financial resources increase from "middle class" to "the rich" group, the likelihood of reporting saving for "retirement, children, and growth" would increase. On the other hand, if a family's resources decrease from "middle class" to "the poor" group, its head would be more likely to think about saving for "daily expense." Financial counseling and planning practitioners can formulate effective strategies in advance to help clients when the change of clients' financial statuses are predicted.

According to the results of this study, financial planners should be aware of saving needs of people in different economic categories. In order to best serve potential clients, one needs to suggest savings instruments that would most closely reflect the level of savings desired and thus clients would perhaps more readily accept financial plans than those that are not related to one's immediate savings goals. With this awareness in the mind of financial planners, greater trust between planners and clients may be fostered.

Implications For Educators

For educators, the results of this study can be incorporated into family finance curricula, and used when educating future financial planners and consultants. Educators should be aware of an unusual feature of the study that it represents a national sample with a broad range of facts, such as a number of saving motives and percentages of various perceived saving motives, which is hard to gain from small scale surveys.

The results of this study could be used to develop case studies used for financial planning and counseling courses. This study provided some information as to what types of households are most likely to report each saving reason (Table 3). The information could be used to develop various family financial scenarios and discuss coping strategies. For example, a case study could be designed for a single headed family with low income emphasizing saving for meeting daily expenses.

In addition, using the research findings, educators at colleges or cooperative extension education can help family finance students and household financial managers understand variances of financial needs among households with different socio-economic characteristics and the hierarchy of family financial needs. To families at different life cycle stages or with different compositions, financial needs may be diverse and have numerous scenarios. Educators should show household heads that their financial needs are multiple, diverse, and hierarchical, and that setting priorities among these needs is necessary. By doing so, the results of this study could be used as reference points.

Limitations

Because of the following limitations of this study, caution is needed when the results are used. Since this study is preliminary in exploring family saving motives and financial needs, only bivariate analyses were conducted. Effects of some variables on perceived saving motives might disappear when multivariate analyses are conducted.

This study uses Maslow's theory as the framework to understand saving motives perceived by consumers. Since Maslow's theory is a psychological theory, and also a controversial one, applying it to the context of family finance might causes problems of invalid constructs, measurement, and controversial assumptions.

Implications for Further Research

In further research, multivariate analyses could be conducted so that the effect of one variable can be explored when other variables are controlled. In addition, a more sophisticated research design can be developed to investigate the characteristics of family financial needs in "deficit" and "growth" categories. Maslow's theory predicts that these two types of needs have distinct characteristics (Alderfer, 1989). A third direction for further research is to examine the associations of saving motives and saving behavior, which is especially important to both practitioners and researchers. Some evidence from an sample of people aged 55 or older showed that reported saving motives did not predict the saving behavior well, but they might be viewed as indicators of financial needs perceived by the consumers (Xiao & Malroutu, 1994).

Appendix A

Descriptive Statistics of Household Characteristics (unless specified, n=2822)

Annual Income	
<$20,000	34%
$20,000-$50,000	40
>$50,000	26
Race (n=2682)	
white	85
black	11
other	4
Gender of Head	
male	78
female	22
Home Ownership	
owner	77
nonowner	23
Married Status of Head	
single	32
married	68
Head's Schooling Years	
1-8	10
9-12	41
13-15	20
>15	29
Life cycle of Married Head (n=1907)	
<45, no child	7
<45, with children <6	18
<45, with children $6	16
$45, with children	23
$45,no child, in labor force	13
$45,no child, retired	23
Life cycle of Single Head (n=915)	
<45, no child	24
any age,with children	33
$45, no child,in labor force	14
$45, no child,retired	29
Number of Children at Home	
0	52
1-3	45
>3	3
Employer of Head (n=1877)	
govt., ed., military	18
private sector	65
self-employed	17
Employment Status of Married Couple	

(n=1907)	
both not in labor force	15
one spouse in labor force	37
both in labor force	48
Employment Status of Single Head (n=915)	
not in labor force	42
in labor force	58
Real Debts	
<$1543	50
$1543-$33,578	25
>$33,578	25
Net Worth	
<$21,528	25
$21,528-$217,151	50
>$217,151	25
Paper Assets	
<$2,171	25
$2,171-$61,800	50
>$61,800	25
Real Assets	
<$24,707	25
$24,707-$172,799	50
>172,799	25
Credit Card Debts	
0	57
$1-$600	18
>$600	25

Appendix B

Descriptive Statistics and Definitions of Household Assets and Debts Categories (n=2822)

	Mean	Median
Paper assets	435,254	14,000
Real assets	477,655	70,568
Credit card debts	672	0
Real debts	48,272	1,543
Net worth	855,617	68,955

Definition:

Paper assets	Total value of checking accounts, savings accounts, certificates of deposits, money market accounts, cash value of life insurance, retirement accounts, various savings plans, bonds, stocks, and other paper assets.
Real assets	Current market value of the home, other properties, businesses, and vehicles.
Real debts	Sum of mortgages on the principal residence and on other properties.
Credit card debts	Value of credit card debts.
Net worth	Difference of value of total assets and value of total debts.

Endnote

1. *Weights used for Chi-square tests were adjusted in the following way:*
   W_{adj}=WN/(Sum of W)
   where, W_{adj}=adjusted weights, W=the weights, C1012, provided by the original data set, representing the 1986 composite weight for the entire 1986 sample (Avery & Kennickell, 1988), N=2822, the sample size used in the analyses.

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