

The Effect of Family Life Cycle and Financial Management Practices on Household Saving Patterns

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Abstract : Using the 1995 Survey of Consumer Finances, this study investigates how family life-cycle stages and financial management practices affect household saving. First findings are that household income and householder's education, race and ethnicity have significant effects on saving. Second, regarding the effect of the family life-cycle stages, younger married couples without children, middle pre-retired households without dependent children, and older households without dependent children are more likely to save than other similar households in the life-cycle stage of younger single households. Third, households with longer financial planning horizons, saving goals for retirement, purchase of durable goods and emergency goods, and low credit card debt are more likely to save. Based on the results, implications for financial management education and public policy are suggested.

Key Words : family life cycle, financial management practices, household saving patterns.

I. INTRODUCTION

Virtually everyone agrees that households would be better off with higher savings rates. At the macro level, a country's savings are the ultimate source of its investment, and investment is the ultimate source of jobs, economic growth, and rising living standards (Seligman, 1984). For an individual family, savings represent an increase in asset accumulation which can be used to meet household financial goals (Chang, 1994). In other words, future goals can be reached by running a positive surplus in household budgeting (i.e. keeping expenditures below income). The proportion of households in Korea which

spend more than their income has increased during the last decade. In 1990 about 22.4 % of households living in an urban area spent more than their income. In 1999 the proportion increased to 30.1 % indicating that about one third of urban households in Korea run a deficit in their household budget and live in unstable economic conditions (Korea National Statistical Office, 1990; 1999)

Identifying the determinants of household spending and saving is an important current research and policy question (Avery & Kennickell, 1991). The family life-cycle stage has been recognized as a key variable associated with saving and consumption. The life-cycle theory of consumption suggests that consumption plans are made so as to achieve a smooth or even level of consumption over the lifetime by saving during periods of high income and dissaving during periods of low income. The life-cycle theory of saving predicts that people save a lot when their income is high relative to lifetime average income and dissave when their income is low relative to the lifetime average; the middle-aged save for retirement and the old dissave (Dornbusch & Fisher, 1994).

The theoretical model focuses on change in income with less emphasis on change in consumption needs across the stages of the family life-cycle. Empirical research based on the theoretical model provides results that are often not consistent with theoretical predictions. Thaler (1990) suggested that over the life-cycle, the young and the old appear to consume too little, and middle aged consume too much while consumption appears to be excessively sensitive to income. Small families at early or later stages of the life-cycle may have different income and needs than do large families with dependent children. Households at different life-cycle stages, with different demographic and economic characteristics, should be motivated to save or dissave in accordance with their practical needs and financial plans (Chang, 1994).

According to Garman and Fogue (1994), financial planning is the process of developing and implementing long-range plans to achieve financial objectives. Although saving is an important component of implementing a financial plan, previous research has not examined household savings in relation to household financial management practices. Analyzing saving in the concept of household financial management practices produces direct and practical implications for financial management education of families and financial industry

personnel.

Since the substantial proportion of households run a deficit in their budget and cannot save for the future, examining the level of household saving would not capture the whole picture related to saving decisions. This study investigates the first step to accumulate household assets spending less than income in the context of family life-cycle stages. The family life-cycle stages capture changes in demands placed on income, as well as changes in the level of income. In the following section results of previous research are reviewed and the purposes of this study are stated. In the methodology section, the data and sample, the variables, and the method of analysis are described. Results of the analysis are presented in section five and the implications are presented in the last section.

II. THE PREVIOUS STUDIES

Household saving affects a family's level of living, reserves for financial emergencies, ability to purchase durable goods on a cash rather than credit basis (Hira, 1987). Saving is necessary to improve the economic well-being of households and to protect families from financial crisis.

According to the economic approach maximizing lifetime utility, individuals save during periods of high income and dissave during periods of low income in order to smooth levels of consumption throughout the entire life span. Households must decide how to allocate their income over multiple time periods to maintain a constant level of consumption because levels of income vary over the life-cycle while the household's consumption needs are relatively constant. The life-cycle savings theory specifies a profile, in which persons borrow in the early stages of their lives, save in middle age and dissave in latter stages (Hogarth, 1991). Inspired by life-cycle theory, family life-cycle has been used to study a wide range of family financial characteristics and expenditure patterns. Age of householder is usually used as an indicator of life-cycle stages. However, this simple scheme captures only one aspect of the related dynamics. Expenditure patterns, as well as income patterns, change across the life-cycle and saving is determined both by income and spending.

Therefore, to examine the effect of the change in life-cycle stages on saving using cross-sectional data, family life-cycle stages need to be defined to reflect changes both in income and expenditure patterns.

Seo and Lim (1984) identified the family life -cycle stages and investigated change in economic status across the life-cycle. In Seo and Lim (1984), family life-cycle consisted of 7 stages -young married couple (I), young parents with preschool children (II), young parents with elementary school children (III), parents with secondary school children (IV), parents with college children (V), parents with unmarried adult children (VI) and, parents with married children (VII). In Stage I, both income and spending were relatively low, while in Stage II total household income decreased due to the reduction in wife's income, but spending increased. Between Stages III and V, both income and spending increased as children and family grew in Stage VI as the children completed education and householders retired, both income and spending were reduced. In the final stage, income reached its peak and spending was relatively high mainly due to income from assets and children. Seo and Lim applied only one factor in dividing the family life cycle stages — the status of the first child. Other important factors related to household's economic status including age of the householders and whether they were retired were ignored. Cho (1984) stated that the balance between income and expenditure showed a different shape across the family life stages. Cho found that in the first stage (young married couple) of the family life-cycle over 30 % of the households saved more than 40 % of their income, while in the fifth stage (parents with college children), only 9 % of the households saved more than 40 % of household income and more than 65 % saved less than 20 % of their household income. This result implied that having a child in college made household saving decrease in the economically strained situation.

Empirical research has been conducted to identify variables associated with household saving. Ethnicity, educational attainment, household size and composition, income, percentage of durable goods expenditure obtained by use of credit, and assets have been identified as the determinants of saving. White households saved more (higher level of saving) than black or other ethnic households (Short, 1984; Avery & Kennickell, 1991). All other things being equal, both average and marginal propensities to save tended to rise with

educational attainment of the householder (Solmon, 1975). William and Manning (1972) found that net worth changes were strongly associated with increased cash income, high current income, increased property assets, decreased percentage of durable goods expenditure obtained by use of credit, and increased business or farm assets. Hefferan (1982) found that the decision to save and the level of savings is primarily influenced by income and adjusted for an estimate of consumption needs, while the level of savings is influenced by total assets, housing tenure and education. Chang (1994) defines saving as the net increase in the amount of wealth between 1983 and 1986. Income, age, windfalls and inheritance are positively related to non-housing assets, but the initial net non-housing assets are negatively related. Household size, education, amount of social security coverage, gross value of pensions, and housing tenure, ethnicity and marital status do not have significant effects.

Saving should be considered in the context of financial planning and financial management practices. Saving can be realized when households implement relevant financial plans. The importance of financial management practices is recognized in studies of overspending and household solvency status. Hira (1987) studied variables related to financial management in explaining the total amount of financial asset. Age, net income, housing tenure, number of cards held, and the amount managers felt comfortable accumulating on those cards were significant. Mueller and Hira (1984) examined the influence of selected socio-demographic characteristics and money management practices on a household's solvency status. They found that selected money management practices were more significant in predicting household solvency status than socio-demographic characteristics. The money management practices which they considered included the division of responsibility for financial decision-making, the frequency of evaluation of spending habits, total financial review, financial goals, the number of credit cards held, the frequency of financial charges, and the amount of debt the household felt comfortable accumulating on credit cards (Hira, 1987). Bae, Hanna, and Lindamood (1993) pointed out that in the absence of written, long term budgets, some households might mistakenly overspend and they would avoid overspending if they followed recommended financial practices.

If households intend to achieve their financial goals, they have to save. Xiao and Noring (1994) identified six household saving goals — saving for daily expenses, purchases, emergencies, retirement children, and growth. Families that express a willingness to bear high risks or to tie up money for longer periods also had much higher saving (Avery & Kennickell, 1991). Seligman (1984) pointed out that the big swings in the official savings rate typically came from changes in consumer debt — from surges or cutbacks in credit — rather than from changes in assets, and that the savings rate fell sharply anytime sales of automobiles and other consumer durables rose. For individual families, it will be hard to run a surplus because of the burden of repaying loans.

With respect to budgeting practice, Davis and Carr (1992) found that only about 7% of households had budgets that were for a period as long as a year. In Davis and Weber (1990), over 80% of the sample reported having a budget (defined as a plan for spending and saving income). The majority of respondents had a very short-term approach to budgeting; in that only 16% said that their budget covered a year's time or longer, and another 24% said that their spending plan covered a period of "several months".

III. PURPOSE OF STUDY

Spending less than income is the first step to accumulate financial assets for future use. The purpose of this study is to investigate how the family life-cycle stage affects household saving measured by whether less than income is spent. The family life-cycle stages are defined to reflect changes in income and expenditures throughout the life-cycle. As previous studies have indicated household saving behavior cannot be separated from financial management practices. Inspired by results of previous research (Xiao & Noring, 1994; Seligman, 1984; Davis & Carr, 1992; Davis & Weber, 1990), the effects of several household financial management factors are examined — a financial planning horizon, household saving goals, and the amount of long-term and short-term debt. This study intends to provide evidence of the importance of a household's individual financial management practice in household saving behavior.

IV. METHODOLOGY

1. Data and Sample

Data used for empirical analysis were from the 1995 Survey of Consumer Finances (SCF). Households with pre-tax annual income greater than \$500,000 were excluded from the analysis to reduce the effect of very high income families on the estimation of the probability of saving. The total sample used in the analysis is 3913 households.

2. Variables

The dependent variable for the empirical analysis is a dichotomous variable that is equal to 1 if the household answered that they spend in excess of their income to the question of “over the past year, would you say that your spending exceeded income, that it was about the same as your income, or that you spent less than your income?”¹⁾ and otherwise 0.

Family cycle is purported to be a composite framework that combines trends in income with demands placed on income (Wagner & Hanna, 1983). Family life-cycle stages in this research are defined based on the householder’s age, marital status, presence of children, and retirement status. First, families are divided into younger (under 45 years old), midlife (between 45 and 64 years old), and older (above 64 years old) according to age of the householder adapting the criteria used in Andrews and Withey (1976 in Deacon & Firebaugh, 1981) and Engel, Blackwell, and Miniard (1995). The younger stage is divided into three stages — younger single, younger couple, and younger parents — based on the householder’s marital status and presence of a child less than 18 years. Midlife and older stages are divided into three sub-stages based on the presence of dependent children and householder’s retirement status. The description of the classification is summarized in <Table 1>.

Adapting the implications from results in Xiao & Noring (1994), Seligman (1984), Davis &

1) The strict definitions (or the ranges) of spending and income are not provided in the question.

<Table 1> Family Life-cycle Stages

Stage	Description
Younger singles	Householder's age less than 45, never married or single, and no children
Younger couples	Householder's age less than 45, married couple, and no children
Younger parents	Householder's age less than 45, with children
Midlife parents (pre-retired)	Householder's age between 45 and 64, non-retired, and with dependent children
Midlife household (pre-retired)	Householder's age between 45 and 64, non-retired, and no dependent children
Midlife household (retired)	Householder's age between 45 and 64, retired, and no dependent children
Older parents ²⁾	Householder's age more than 64 and with dependent children.
Older household (pre-retired)	Householder's age more than 64, non-retired, and no dependent children
Older household (retired)	Householder's age more than 64, retired, and no dependent children

Carr (1992), Davis & Weber (1990), the financial management practices include financial planning horizon, saving goals, the amount of long-term debt, credit card balance, and other short-term debt. The financial planning horizon is measured by the question, "In planning your family's saving and spending, which of the time periods are most important to you?" The responses are categorized into four groups — next few months, next year or next few years, next 5-10 years, and longer than 10 years. Four dummy variables are used to capture savings goals indicating whether households saved for (1) emergency, (2) purchase of house, car and other durable goods, vacation, home improvement, etc., (3) education, and (4) retirement. Saving for each of the financial goals was coded as 1 and 0 otherwise. Long-term debt is the sum of current housing debt, loans from the lines of credit, real estate debt, other property debt, vehicle loan, and education loan. Short-term debt consists of other consumer loans for household appliances, furniture, hobbies, recreational equipment, medical bills and loans from friends, relatives, or others. Credit card debt is the sum of all credit card balances.

The explanatory variables also include socio-demographic factors. Several socio-

2) Midlife retired parents with dependent children are included in this category because they are only 16 households in the sample and can be assumed to have the similar income and spending patterns to those of this stage.

demographic factors are used as control variables and include education, race and ethnicity of the household respondent, as well as household income. Education is a continuous variable and is measured by years of schooling. Household income is also continuous, while race and ethnicity are categorical.

3. Analysis

Means and frequencies of the variables were obtained to examine the descriptive characteristics of the sample. Since the dependent variable was dichotomous, a logistic analysis was used to examine the probability of spending less than income (i.e., saving).

V. RESULTS

Only about 49 % of the sample spent less than income. In other words, over 50 % of the sample did not save at all. Frequencies and means of the independent variables are shown in <Table 2>.

The results of the logit analysis are presented in <Table 3>. Household income and householder's education have a significant positive effect on saving — higher household income and education are related to a higher probability of saving. Black households are less likely to save than otherwise similar white households. Regarding the effect of the family life-cycle stages, younger married couples without children, middle pre-retired households without dependent children, and older households without dependent children are more likely to save than otherwise similar households in income and than otherwise similar younger single households. Household saving appears to be related to the head of household's age and the presence of dependent children in the family — families with a head aged 45 or more and no dependent children are more likely to save. The common factor among the significant life-cycle stages in the results is No Dependent Children. The result shows that households with dependent children are more likely to spend more than income.

<Table 2> Descriptive statistics

Variables	Definition and measurement	
Positive Saving	1,925	(49.2)
Life-cycle Stage		
Younger singles	416	(10.6)
Younger couples	294	(10.5)
Younger parents	1,048	(26.8)
Midlife parents (pre-retired)	454	(11.6)
Midlife household (pre-retired)	767	(19.6)
Midlife household (retired)	117	(3.0)
Older parents	41	(1.0)
Older household (pre-retired)	282	(7.2)
Older household (retired)	494	(12.6)
Saving Goals		
Retirement	1,027	(26.2)
Education	257	(6.6)
Emergency	1,147	(29.3)
Purchase	478	(12.2)
Financial Planing Period		
Few month	685	(17.5)
Few year	1,256	(32.1)
5-10 years	1,386	(35.4)
More than 10 years	586	(15.0)
Race/ethnicity of Household Head		
Asian/American Indian	163	(4.2)
Black	379	(9.7)
Hispanic	175	(4.5)
White	3,196	(81.7)
Variables	Mean (STD)	
Age of Household Head (years)	48.76	(16.65)
Education of Household Head (years)	13.53	(2.85)
Pre-tax Household Income (dollars)	67,342.83	(18810.63)
Long-term debt (dollars)	118,591.43	(1144094.31)
Credit Card Balance (dollars)	1,395.39	(3859.09)
Other Short-term debt (dollars)	1,233.66	(18810.63)

Table 3. The Result of Logistic analysis of Household Savings (N=3913)

Variable	Coefficient	S.E.	P- value
Household Income	6.4E-6	(6.4E-7)	0.0001
Head's Education	0.12	(0.01)	0.0001
Race/Ethnicity (vs. White)			
Asian/American Indian	0.01	(0.18)	0.9533
Black	-0.44	(0.13)	0.0005
Hispanic	-0.06	(0.18)	0.7377
Life-cycle (vs. younger single)			
Younger couple	0.42	(0.16)	0.0089
Younger parents	0.02	(0.13)	0.8793
Midlife parents (pre-retired)	-0.14	(0.15)	0.3523
Midlife household (pre-retired)	0.45	(0.14)	0.0010
Midlife household (retired)	0.31	(0.23)	0.1654
Older parents	0.45	(0.37)	0.2234
Older household (pre-retired)	0.84	(0.18)	0.0001
Older household (retired)	0.59	(0.15)	0.0001
Financial Planning Horizon (vs. Next few month)			
Next year-next few years	0.51	(0.11)	0.0001
Next 5-10 years	0.70	(0.11)	0.0001
Longer than 10 years	0.91	(0.13)	0.0001
Saving Goals			
Retirement	0.50	(0.10)	0.0.001
Education	0.25	(0.16)	0.1041
Purchase	0.37	(0.12)	0.0024
Emergency	0.29	(0.10)	0.0022
Long-term Debt	-5.3E-8	(4.1E-8)	0.1996
Credit Card Balance	-0.6E-4	(0.1E-5)	0.0001
Other Short-term Debt	-3.7E-6	(2.2E-6)	0.0825

All the variables related to financial management practices have a significant influence on household saving. Households with longer financial planning horizons are more likely to save than otherwise similar households with shorter financial planning horizons.

Household saving goals for emergency, retirement, and purchase of durable goods are also positively associated with household saving. The total amount of long-term debt and that of other short-term debt do not present significant effects. The total credit card balance has a significant negative effect on household saving, indicating that the higher the credit card balance, the lower the probability of saving. This provides an important implication to financial planning educators, in that it is credit card balances rather than long-term debt that hinders saving.

VI. CONCLUSIONS AND DISCUSSION

The level of household saving is crucial for household security and the amount of total saving has a direct impact on the economy at large (Hira, 1987). Spending less than income is essential in household budgeting because it is the first step toward accumulating financial assets. This study analyzed characteristics associated with household saving focusing specifically on the family life-cycle stages and financial management practices. Only 49% of the sample spent less than income. The results of the logit analysis suggest that saving is related to high income and education, a long-term financial planning horizon, setting specific saving goals, low credit card debt, and family lifecycle stages. Additionally, black households are less likely to save than white households.

In contrast to the predictions of life-cycle saving theory, younger couples without children and older households without dependent children are more likely to save than younger single households. Among middle age groups, only the pre-retirees without dependent children are more likely to save than younger single households. Results of the family life-cycle stages imply that middle-age households seem to delay saving until children attain financial independence and they reach the conventional retirement age of 65. This phenomenon might be partly related to high education costs for children. In a society where the public financial aid program is not established and an individual household has to pay the entire cost of college, it is hard to save. Saving for old age cannot be appropriately planned for and implemented in Korea where expensive private lessons are necessary for

preparing for college entrance examinations, and the normal retirement age is earlier in Korea at 55 years than in other countries. Supporting the elderly population will be an important policy issue in the near future in Korea. To stimulate private savings for old age, a policy for reducing private education costs should be implemented along with a policy to support individual retirement accounts through tax benefit programs.

Results of the empirical analysis provide useful information for developing and implementing financial management education programs. The low percentage of saving implies that a large proportion of the U.S. population needs to be made aware of the importance of saving. Low income, less educated, and black households should be targeted for financial management education. If the goal is to induce households to save, the education programs should emphasize the importance of financial goal setting, a long-term perspective in household financial planning, and appropriate use of credit cards. It is important to notice that the type of household debt that had a significant detrimental effect on saving is credit card debt as opposed to long-term or short-term consumer loan debt.

Low income, lower education of the householder and a high demand for spending all lower the probability of household saving. The lack of saving makes these households particularly vulnerable to unexpected declines or interruptions in income. Public policies that provide saving incentives (e.g., tax advantages or higher interest rates) may make it feasible for these more vulnerable households to save, thus improving their financial security.

REFERENCES

- Andrews, F. M. & Withey, S. B. (1976). *Social indicators of well-being*. New York: Plenum Press
- Avery, R. B. & Kennickell, (1991). Household saving in the U.S. *review of income and wealth*, 37 (4), 409-430.
- Bae, M. K. Hanna, S. & Lindamood, S. (1993). Patterns of overspending in U. S. households. *Financial Counseling and Planning*, 4, 11-30.
- Chang Y. R. (1994). Saving behavior of U. S. households in the 1980s: results from the 1983

- and 1986 Survey of Consumer Finance. *Financial Counseling and Planning*, 5, 45-64.
- Davis, E. & Carr, R. A. (1992). Budgeting practice over the life cycle. *Financial Counseling and Planning*, 3, 3-16.
- Davis, E. & Weber, J. (1990). Patterns and obstacles to financial management. *Financial Counseling and Planning*, 1, 41-51.
- Cho, H. K. (1984). A Study on the Household Saving Behavior According to Family Life Cycle. *Journal of Korean Home Management Association*, 2-1, 57-66.
- Deacon, R. E. & Firebaugh, F. M. (1988). *Family Resource Management: Principles and Applications*, 2nd Ed. Needham Heights, MA: Allyn and Bacon, Inc.
- Dornbusch, R. & Fisher, S. (1994). *Macroeconomics*, 6th Ed., New York: McGraw-Hill
- Engel, J. F., Blackwell, R. D. & Miniad, P. W. (1995). *Consumer Behavior*, 8th Ed. The Dryden Press.
- Garman, E. T. & Forgue, R. E. (1994). *Personal Finance*, 4th Ed. Boston, MA: Houghton Mifflin.
- Hira, T. K. (1987). Money management practice influencing household asset ownership. *Journal of Consumer Studies and Home Economics*, 11, 183-194.
- Hogarth, J. M. (1991). Asset management and retired households: savers, dissavers and alternators, *Financial Counseling and Planning*, 2, 93-122.
- Muller M. J. & Hira, T. K (1984). Impact of selected money management practices on household solvency status. *Proceedings American Council Consumer Interest*.
- Murphy, P. E. & Staples, W. (1979). A modernized family life cycle, *Journal of Consumer Research*, 6, 12-22.
- Seligman, D. (1984). Why Americans don't save enough, *Fortune*(April), 27- 32
- Seo, B. S. & Lim, H. K. (1984). A study on the change of household-economy incidental to the family life cycle. *Journal of Korean Home Management Association*, 2-1, 35-55.
- Short, K. S. (1984). The life cycle theory, uncertainty, and the saving behavior of the Elderly. Unpublished doctoral dissertation, The University of Michigan
- Solmon, L. C. (1975). The relation between schooling and savings behavior: an example of the indirect effects of education. In F. Thoman Juster (Ed.). *Education, income and human Behavior*, (pp. 253-293), New York: McGraw-Hill Book Co.

- Thaler, R. H. (1990). Anomalies: saving, fungibility, and mental accounts. *Journal of Economic Perspectives*, 4 (1), 193-205.
- Wagner, J. & Hanna, S. (December, 1983). The effectiveness of family life cycle variables in consumer expenditure research. *Journal of Consumer Research*, 10, 181-191.
- Xiao, J. J. & Noring, F. E. (1994). Perceived saving motives and hierarchical financial needs. *Financial Counseling and Planning*, 5, 25-44.