

Effect of Financial Resources And Credit On Savings Behavior Of Low-Income Families

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This study examined the effects of available financial resources, credit use, savings attitudes, methods of saving, and demographic characteristics on the change in low-income families' real savings (change in real net worth) from 1983 to 1986. Multiple regression results indicated that having a higher level of education, having larger families, and expecting financial assistance from friends or relatives in emergency situations increased real savings. In addition, having higher outstanding 1983 noninstallment loan balances increased real savings, while having lower 1983 net worth increased real savings from 1983 to 1986.

KEY WORDS: *financial resources and credit, savings behavior, low-income families*

According to Garman and Forgue (1994), availability of financial resources is one factor that affects families' goal setting behavior. When financial resources are scarce, families do not place a high priority on savings. This implies that saving is not a financial goal of low-income families, or that it is an unattainable goal given their level of monetary resources. If low-income families can not save, financial resources during emergencies will be insufficient. Many may have to rely heavily upon public financial resources, credit, and/or other means of support.

This conclusion is based on the narrow definition of saving which is setting aside money for use in the future (The American Heritage Dictionary, 1985). On the other hand, a broader definition of saving may indicate that low-income families have other mechanisms by which they save. For example, low-income families may save by paying off debt which increases net worth. In an examination of the life cycle model, Hanna, Fan and Chang (1995), noted that persons having high outstanding debt have high interest rates and should, therefore, rationally consume less today to consume more in the future. Thus, savings behavior, in this study, was measured as the change in real net worth from 1983 to 1986.

Previous Research

There is a considerable amount of literature on the savings behavior of families. However, research directly examining the savings behavior of low-income families is scarce. Several studies that examined other aspects of low-income families' financial management practices

have included some information on savings attitudes and/or behavior.

An examination of selected financial management attitudes and behaviors of 199 young to middle-aged, low-income Black, white and Hispanic persons in Arizona revealed that a large proportion of each racial group did not save (36%, 25% and 38%, respectively) (Schnittgrund & Baker, 1983). Among those who did save, a large proportion of each group was dissatisfied with the amount of money they saved (59%, 61% and 56%, respectively).

Davis (1992), with a sample of 672 nonmetropolitan households in Kansas, examined financial management behavior of households with different levels of financial resources and found that households with low incomes were far less likely than middle- and high-income groups to save a specific amount of money on a regular basis. Only 8% of the low-income group saved a specific amount of money compared to 76% for the middle-income group and 63% for the high-income group.

Focusing specifically on checking accounts, Leech, Scott, and Fox (1990) studied behaviors of 308 low- and moderate-income consumers who were either the head of household and/or the financial decision maker for the family. Among the half who indicated that they did not have a checking account, 46% noted that they couldn't save enough to open an account.

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A study by Davis and Schumm (1987), using 1739 low- and high-income married couples in both rural and urban states, investigated savings behavior and satisfaction. Results indicated no relationship between income and savings among low-income families, but it was related among high-income families. Educational level and housing tenure were not as important for low-income families as high-income families. Low- and high-income families' behaviors were similar with regard to the relationship between how important it is to save and the amount saved. Further, low- and high-income households had similar behaviors with respect to the importance of savings and satisfaction level.

Roobian-Mohr (1989) studied the savings behavior of a convenience sample of 99 low-income rural and urban elderly in Ohio and found that 70% had at least one savings account. Reasons given for opening a particular type of savings account or choosing a particular financial institution for opening a savings account included convenience, interest rates, services offered, personal service, insurance and safety, and marketing strategies.

Chang (1994) analyzed the 1983-1986 panels of the Survey of Consumer Finance to study savings, defined as the change in real net non-housing assets. She found that 40% of households had negative savings. Higher initial asset levels were related to lower savings. Higher initial income levels were associated with higher savings.

In summary, the studies discussed above provide limited, general information on the savings behavior of low-income families. For example, the majority only determined whether or not low-income families saved, if they were satisfied with their savings, and why they chose particular savings accounts or financial institutions. Only two studies explored relationships between income, assets, and savings behavior. Further, in all of these studies other than Chang's (1994), saving was defined as money set aside for use in the future (income-expenses). The purpose of this study was to examine the effects of available financial resources, credit use, savings attitudes, methods of saving, and demographic characteristics on the change in low-income families' real savings (change in real net worth) from 1983 to 1986.

Method

Data and Sample

Data used in this study were obtained from the 1983 and 1986 Survey of Consumer Finances (SCF). This national data set was sponsored by the Federal Reserve Board and

other federal agencies, and conducted by the Survey Research Center at the University of Michigan. The family was the unit of observation in the study. Families were defined as individuals living in one household who are related by blood, marriage, or adoption. A single person was also considered a family. If more than one family lived together, the family that provided the majority of financial support was interviewed. The interviewee was either the head of the family or the financially knowledgeable person in the family (Avery, Elliehausen & Kennickell, 1987).

A total of 755 panel subjects were selected for this study. Each of the families selected was surveyed in both 1983 and 1986, and the observations on subjects' financial behaviors were available for both years. This sample selection provides an equal number of observations for each variable from both survey years. Missing data for some variables excluded some families from the study.

In addition, families included had 1982 annual incomes less than or equal to 200 percent of the 1982 poverty level based on specific family sizes. For example, 200 percent of the poverty level for a two person family in 1982 was \$12,562. If the 1982 annual income for a two person family was less than or equal to \$12,562, that family was included in the study. This same procedure was done for each household size. The 1982 poverty figures were used because respondents in the 1983 SCF reported annual incomes for 1982. The 1982 poverty thresholds for different household sizes were 1 person (4,901), 2 persons (6,281), 3 persons (7,693), 4 persons (9,862), 5 persons (11,684), 6 persons (13,207), 7 persons (15,036), 8 persons (16,719), and 9 or more persons (19,698). Mean, maximum, and minimum annual incomes for households of different sizes included in the study are provided in Table 1.

Of the 755 families in the sample, 78% were white, 41% were female, 57% were employed, 50% were nonmarried, and 69% were less than 65 years old with a mean age of 52 years.. The average household size was 2.8 persons with the majority (84%) having one to four persons. More than half (54%) had a high school diploma, some college, or a college degree, and the mean level of education was 10.7 years. The average income of the sample was 9,743. More than half of the sample had health insurance (55%), and almost half could receive financial assistance from friends or relatives in emergency situations. Less than half of the sample had the other financial resources examined in this study. Thirty-five percent received social insurance and/or

public assistance; 28% received Medicare; 11% received Medicaid; and 5% received VA medical benefits (Table 2).

Table 1
Annual Incomes by Household Size (n = 755)

Size	N	# 200% Poverty Threshold	1982 Mean	Standard Deviation	Maximum	Minimum
1	200	9,802	5,388	2,122	9,700	700
2	180	12,562	7,474	2,963	12,500	320
3	118	15,386	10,091	3,679	15,378	100
4	112	19,724	13,245	4,751	19,700	1,200
5	81	23,368	14,134	5,803	23,000	3,763
6	35	26,414	15,968	5,748	26,300	2,500
7	16	30,072	19,073	7,206	28,400	6,200
8	7	33,438	15,656	9,697	30,000	3,000
9+	6	39,396	23,413	6,390	28,750	11,250

The average outstanding credit card balance was \$166, and the average outstanding balance on installment and noninstallment loans was \$989 and \$1,079, respectively. Net worth for 1983 averaged \$32,411. The majority of the sample had a checking and/or savings account (79%) and equity in their homes (62%). However, very few had other forms of financial and real assets. Whole life insurance was owned by 33%; money market accounts/CDs were owned by 14%; bonds were owned by 9%; IRAs/Keoghs were owned by 8%; profit sharing/thrift accounts were owned by 7%; and stocks/mutual funds were owned by 6% (Table 2).

With regard to savings attitudes, methods of saving, and savings type, a large percent of the sample indicated that they would make no change in the amount they saved if interest rates increased (70%), save all, most, some, or a little of a cash prize equal to three months of their income if they won it (86%), and first pay all their expenses and then use the rest for savings instead of saving first (85%). Forty-three percent indicated that they had taken more money out instead of putting more money in their savings over the past three years (Table 2).

Table 2
Descriptive Data

Variables	Frequency				Mean
	Yes		No		
	n	%	n	%	
Demographic Characteristics					
White	587	77.7	168	22.3	
Male	444	58.8	311	41.2	
Employed	432	57.2	323	42.8	
Married	375	49.7	380	50.3	
Age					51.6
Less than 65	518	68.6	237	31.4	
Education					10.7
Less than 12 years	349	46.2	406	53.8	
Household Size					2.8
1-4 persons	634	84.0	121	16.0	
South	329	43.6	426	56.4	
Financial Resources					
Income					9,743
Financial Assistance From Friends or Relatives in Emergency Situations					
Social Insurance/					
Public Assistance	267	35.4	488	64.6	
Health Insurance	417	55.2	338	44.8	
Medicare	208	27.5	547	72.5	
Medicaid	84	11.1	671	88.9	
VA Medical	39	5.2	716	94.8	
Credit Use					
Credit Card Debt (1983)					166
Installment Loans (1983)					989
Noninstallment Loans (1983)					1,079
Net Worth (1983)					32,411
Financial and Real Assets					
Stocks/Mutual Funds	48	6.4	707	93.6	
Bonds	67	8.9	688	91.1	
Checking/Savings Accts	599	79.3	156	20.7	
IRAs/Keoghs	61	8.1	694	91.9	
Money Market					
Accounts/CDs	106	14.0	649	86.0	
Profit Sharing/					
Thrift Accounts	52	6.9	703	93.1	
Whole Life Insurance	251	33.2	504	66.8	
Home Equity	467	61.9	288	38.1	
Savings Attitudes					
Reaction to Interest Rates Increase					
Increase Savings			225	29.8	
No Change			530	70.2	
If Won Cash Prize					
Save			652	86.4	
Won't Save			103	13.6	
Methods of Saving					
Savings Change in Past 3 Years					
Put In More Money			149	19.7	
Stayed the Same			129	17.1	
Took Out More money			326	43.2	
No Savings			138	18.3	
Don't Know/N.A.			13	1.7	
Savings Type					
Save, Then Pay Expenses			116	15.4	
Pay Expenses, Then Save			639	84.6	
Real Savings (Change in Real Net Worth From 1983 to 1986)					2,893
Decrease			346	45.8	
No Change			18	2.4	
Increase			391	51.8	

Empirical Model

Based on the limited background information on savings behavior of low-income families, the following model was examined.

$$\text{Real} = f(\text{FR}, \text{CU}, \text{SA}, \text{MS}, \text{DEMO})$$

Real was the change in real savings (change in real net worth) from 1983 to 1986. FR represented available financial resources, and CU represented credit use. SA represented savings attitudes, and MS represented methods of saving. DEMO represented demographic characteristics.

Variables

Dependent Variables The dependent variable was real savings (change in net worth) from 1983 to 1986. All assets and debt (except pensions) were included when computing net worth in both years. The Consumer Price Index (CPI) was used to inflate 1983 dollars to 1986 dollars (Avery & Kennickell, 1988).

Independent Variables The financial resources variables included income, financial assistance, social insurance and/or public assistance, private or employer-sponsored health insurance, Medicare, Medicaid, and VA medical benefits. Income was a continuous variable and defined as total 1982 household income. The remainder of the financial resources variables were recoded as dummy variables. If financial resources were available to respondents, the response was coded 1. Otherwise, the response was coded 0. The variable, financial assistance, was measured by response to the question, "In an emergency could you (or your spouse) get financial assistance of \$3,000 or more from any friends or relatives who do not live with you?" The variable, social insurance and/or public assistance, was measured by response to the question, "During the past three years did you (or anyone in your family living in the household) receive workmen's or unemployment compensation, ADC, AFDC, food stamps, SSI, or other public assistance?" Respondents were also asked if any household members were covered by an employer-sponsored or privately paid health plan and if any household members were eligible to receive Medicare, Medicaid, and VA medical benefits (Avery & Kennickell, 1988).

The credit use variables included credit card debt, installment loans, and noninstallment loans. The total amount outstanding in 1983 on these types of consumer debt was used. Net worth was defined as total assets (excluding pensions) in 1983 minus total debt in 1983.

These variables were continuous (Avery & Kennickell, 1988).

The savings attitudes variables were based on responses to the following two questions regarding what respondents would do with money in specific situations. Both of these variables were recoded as dummies. "If the rate of interest you could earn on all your savings and investments went up by five percentage points, would you decrease the amount you spend so that you could set aside more to save, or would you make no change in your spending habits" (Avery & Kennickell, 1988)? If respondents indicated that they decreased spending and increased saving, the response was coded 1. If respondents increased or had no change in spending, the response was coded 0. "If you won a cash prize equal to about three months of your usual income, would you save all of it, most of it, some of it, a little of it, or none of it" (Avery & Kennickell, 1988)? If respondents would save all, most, some, or a little of the cash prize, the response was coded 1. If respondents would save none of it, the response was coded 0.

The methods of saving variable was based on responses to the following question regarding types of savers. "There seem to be two different methods people use to save. Some people first put aside a certain amount for savings and then use the rest for expenses, while other people first pay all their expenses and then use the rest for savings. Which of these two ways comes closest to your saving habits" (Avery & Kennickell, 1988)? This variable was recoded as dummy variable. Responses were coded 1 if respondents first put aside savings and 0 if respondents paid expenses first or did not save.

Various demographic variables were included. These were race, employment status, marital status, age, household size, education, and region (Avery & Kennickell, 1988). Education and household size were continuous variables, and the other demographic characteristics were coded as dummy variables. Race was coded white (1) and nonwhite (0). Employment status was coded employed (1) and nonemployed (0). Marital status was coded married (1) and nonmarried (0). Age was converted to a series of dummy variables based on the following categories: less than 25, 25-34, 35-44, 45-54, 55-64, and 65 and older with 65 and older being the omitted category.

Data Analysis

Multiple regression was used to test the effects of the independent variables on real savings (change in real net worth) from 1983 to 1986. One regression was performed based on the empirical model above. A p-value of .05 was used to determine statistical significance. Table 3 displays the results of the regression analysis.

Results

The F-value for the regression equation was statistically significant. Five of the variables in the equation were statistically significant. These were education, household size, financial assistance from friends or relatives, 1983 noninstallment loan balances, and 1983 net worth. Having a higher level of education, having larger families, and expecting financial assistance from friends or relatives in emergency situations increased real savings (change in real net worth) from 1983 to 1986. Further, having higher outstanding 1983 noninstallment loan balances increased real savings. On the other hand, having lower 1983 net worth increased real savings from 1983 to 1986.

Conclusions and Implications

Although there were only five significant variables in the regression equation, this study provides some interesting information and have important implications for practitioners who work with low-income families. There is evidence that having higher levels of education increased real savings (change in real net worth) from 1983 to 1986. Given their limited financial resources, low-income respondents who had higher levels of education knew the importance of improving their economic situation by eliminating debt. Practitioners can teach this group ways of staying out of debt. They can also stress the importance of saving the money they once used to repay debt. Practitioners can work at educating low-income families with less educational attainment in the area of debt repayment. They can stress setting financial goals of debt repayment and suggest help from the Consumer Credit Counseling Service (CCCS) when appropriate.

The findings also show that having higher outstanding 1983 noninstallment loan balances increased real savings (change in real net worth) from 1983 to 1986. Some would expect that households with higher loan balances would save less because they use credit as a substitute for savings. This is probably true using the narrow definition of saving since money left after paying expenses is used to pay off debt and not available to

save. However, using the broader definition of saving in this study, it is obvious why higher outstanding loan balances increased real savings. Those respondents who had higher loan balances were more motivated than those who did not to pay them off which increased real savings from 1983 to 1986. This same argument can be made for the finding that having lower 1983 net worth increased real savings from 1983 to 1986. Having lower 1983 net worth probably meant having higher 1983 loan balances. Thus, respondents were motivated to pay off debt. Practitioners can stress to clients the importance of debt repayment that will eventually lead clients to save using the narrow definition of saving which is setting money aside for use in the future. This will hopefully reduce the amount of debt their clients will have to incur in the future.

Table 3
Regression Results: Dependent Variable=Real Savings (Change in Real Net Worth) From 1983 to 1986 (n=755)

Variables	Parameter Estimate	P-Value
Financial Resources		
Income (1982)	-0.066	0.8707
Financial Assistance From Relatives or Friends When Needed	8718.243	0.0259
Social Insurance		
Public Assistance	-1541.465	0.7099
Health Insurance	-1911.822	0.6317
Medicare	10363	0.1234
Medicaid	-6711.689	0.2603
VA Medical	-10263	0.2006
Credit Use		
Credit Card Debt(1983)	4.687	0.2006
Installment Loan (1983)	-0.905	0.1454
Noninstallment Loan(1983)	0.641	0.0029
Net worth (1983)	-0.246	0.0001
Savings Attitudes		
Save If Interest Increased	-5450.509	0.1747
Save Cash Prize	1075.908	0.8357
Methods of Saving		
Save, Then Pay Expenses	-6333.951	0.1943
Demographic Characteristics		
Household Size	2871.642	0.0451
Region	-2934.016	0.4210
Education	1513.315	0.0190
Age< 25	18550	0.1552
Age 25 to 34	938.501	0.9177
Age 35 to 44	1756.509	0.8496
Age 45 to 54	9199.267	0.2991
Age 55 to 64	13199	0.1064
Marital Status	-1091.655	0.8038
Employment Status	1951.691	0.7233
Race	7708.558	0.1014
Constant	-24861	0.0081
R²=.129. P< 0.001		

Having larger families and expecting financial assistance from friends or relatives in emergency situations increased real savings (change in real net worth) from 1983 to 1986. These findings can be attributed to more employed family members in the household and the receipt of financial help from relatives or friends to eliminate outstanding debt. In order for clients to improve their financial situation, practitioners can encourage them to examine the possibility of other family members working as well as part-time jobs for those who are already employed.

It is important for practitioners to have insight into how financial resources, credit use, and demographic characteristics affect the savings behavior of low-income families. This insight will enable practitioners to develop ways of encouraging and helping low-income families use existing financial resources, use credit wisely, and accumulate assets given their limited financial resources. This research will also help practitioners target specific low-income persons who do not save in any way and are at risk of financial difficulty in the event of an financial emergency. However, future research is needed to provide consistent evidence before educational programs can be developed.

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