

Table 1: Definitions and Mean Values for Variables Used in the Model

Variable	Definition	Full Sample	Non-Work Sample	Work Sample
AGE	Age in years	21.32	21.46	21.21
SATV	Verbal SAT score	611.46	610.58	612.10
HUM	Dummy Variable for Major (1 = humanities major, 0 = all other majors)	.06	.06	.06
OTHMAJ	Dummy Variable for Major (1 = undeclared or double major, 0 = all other majors)	.16	.13	.18
WKSTJOB	Dummy variable for job trait (1 = work-study job, 0 = other jobs)	.21	-	.36
TFAMINCS	Total Family income less sibling's tuition payments, measured in \$10,000	7.26	9.63	5.54
ACTUALPC	Dummy Variable for family willingness to contribute amount expected by financial aid office (1 = parents likely to contribute expected amount, 0 = unlikely)	.81	.90	.74
WORKT	Average weekly work hours	8.06	-	13.57
WAGES	Hourly wage in \$	-	-	4.31
RESWG	Reported reservation wage in dollars/hour	-	30.11	-
RESWG2	Reported reservation wage in dollars/hour excluding 2 outliers	-	5.29	-
N	Sample Size	143	60	83

METHODS

Direct Approach

Students who did not work were asked the following question to get a direct estimate of their reservation wage rates:

I have a hypothetical question for you. Please do the best you can with it. Suppose I have a sealed envelope with a mystery job description inside. The job is a part-time one which would enable you to attend all of your classes. What is the minimum hourly wage I would have to offer you to induce you to accept the job?

The Indirect Approach

The indirect approach for estimating reservation wage rates for non-workers, which is employed in this study, was first suggested by Heckman (1974) and has been used by Zick and Bryant (1983). A detailed description of the theoretical and empirical models underlying the technique is presented by Killingsworth (1986).

The model has three basic components. The first component, labor demand, is expressed in the following way for each student, i :

$$W_i = X_i \alpha + e_{wi} \quad (1)$$

where: W_i = the market wage rate for person i
 X_i = vector of variables that affect wages observed for i
 e_{wi} = mean-zero error term representing the effects of unobserved variables on i 's wage

The second component, the reservation wage function, is expressed as:

$$M^*_i = Z_i \beta + H_i \delta + V_i \theta + e_{mi} \quad (2)$$

where: M^*_i = i 's reservation wage
 Z_i = vector of i 's academic performance productivity determinants
 H_i = hours of market work for i
 V_i = non-wage income for i
 e_{mi} = mean-zero error term representing the effects of unobserved variables on i 's reservation wage

The reservation wage rate cannot be estimated directly when M^*_i is unobserved for non-workers. However, it is possible to estimate an hours of work function derived from the labor demand and reservation wage functions. This third component of the model can be expressed as the following:

$$H_i = 1/\delta (X_i \alpha - Z_i \beta - V_i \theta + e_{wi} - e_{mi}) \quad (3)$$

The model is based upon the assumption that the wage rate (W) is unaffected by the hours worked (H)⁹ while the reservation wage rate (M^*) is affected by H . Reservation wage rate coefficients can be retrieved from estimates of equations (1) and (3) as long as at least one element of X is excluded from Equation (3).

Equations (1) and (2) are translated into the following estimated model:

$$WAGE = a_0 + a_1(AGE) + a_2(SATV) + a_3(HUM) + a_4(OTHMAJ) + a_5(WKSTJOB) \quad (4)$$

$$RESWG = b_0 + b_1(AGE) + b_2(SATV) + b_3(HUM) + b_4(OTHMAJ) + b_5(TFAMINCS) + b_6(ACTUALPC) + b_7(WORKT) \quad (5)$$

As shown in Figure 1, the reservation wage is equal to the market wage for workers. Hence, for workers, Equations (4) and (5) are equated to solve for hours of market work ($WORKT$), which yields the following:

$$WORKT = c_0 + c_1(AGE) + c_2(SATV) + c_3(HUM) + c_4(OTHMAJ) + c_5(WKSTJOB) + c_6(TFAMINCS) + c_7(ACTUALPC) \quad (6)$$

⁹ This assumption is plausible for this application because the respondents are part-time workers who probably do not face overtime work bonuses.

Reservation wage coefficient estimates can be retrieved because WKSTJOB is included in the market wage equation and excluded from the reservation wage equation¹⁰. A job characteristic variable was selected for identification because this is the only type of variable included in the data that would appear to affect market wages without directly affecting academic productivity (and hence reservation wages). Work-study employers do not have to pay the full offered wage because wages for work-study students are subsidized. I therefore thought that wages offered for work-study jobs might be higher than for non-work-study jobs. The model also requires that all variables in the market wage equation be included in the hours of work equation. Student's with work-study jobs were hypothesized to work fewer hours, on average, than other workers, *ceteris paribus*, because of the earnings constraint that is imposed upon them.¹¹ Hence, I believed that WKSTJOB should be included in the hours of work equation.

Equations (4) and (6) are estimated only for the sub-sample of workers. However, by employing Heckman's sample selection model (1979), the resultant parameter estimates can be applied to non-workers as well. The sample selection model requires that LAMBDA be included in both equations as an instrumental variable. LAMBDA estimates for each individual are derived from a labor force participation equation that is estimated via probit using the full sample. The parameter estimates for Equations (4) and (6) were obtained using the sample selection model procedure in LIMDEP.¹²

¹⁰ Coefficients for the reservation wage equation were retrieved using the following relationships:

$$\begin{aligned} b_0 &= a_0 - b_7 * c_0 \\ b_1 &= a_1 - b_7 * c_1 \\ b_2 &= a_2 - b_7 * c_2 \\ b_3 &= a_3 - b_7 * c_3 \\ b_4 &= a_4 - b_7 * c_4 \\ b_5 &= -c_6 * b_7 \\ b_6 &= -c_7 * b_7 \\ b_7 &= a_5 / c_5 \end{aligned}$$

¹¹ For further information on the work-study earnings constraint see Pappalardo (1986).

¹² LIMDEP is a computer routine developed by William H. Greene, Department of Economics, Graduate School of Business Administration, New York University.

RESULTS

Direct Results

Non-worker responses to the reservation wage question yield a mean estimate of \$30.11 per hour (with a standard deviation of 142.27.) The mean is substantially influenced by two students who maintained that excessively high wages would have to be offered to induce them to work.¹³ When these two students are eliminated from the sample the adjusted mean is \$ 5.29 (with a standard deviation of 2.89.)

Indirect Results

Results from the estimation procedure are presented in Table 2. Using the estimated reservation wage coefficients and data on non-workers, the mean value of time for non-workers is estimated to be \$3.28 per hour and the standard deviation is .34.

Table 2. Parameter Estimates for Student's Market Wage and Hours of Work Equations, and Calculated Coefficients for the Reservation Wage Equation (t statistics in parenthesis)

Independent Variables	Dependent Variables		
	LN(WAGE) ^a	WORKT	LN(RESWG)
CONSTANT	.1478 (.619)	54.4064 (3.027)	.0009
AGE	.0424 (2.014)	-.6792 (-1.131)	.0442
SATV	.0005 (1.140)	.0251 (-1.881)	.0004
HUM	-.1411 (-1.030)	-.7304 (-1.189)	-.1391
OTHMAJ	.2245 (2.788)	2.2291 (.901)	.2184
WKSTJOB	-.0196 (-.287)	-7.1578 (-3.440)	-
TFAMINCS	-	-.1877 (-.704)	.0005
ACTUALPC	-	-2.9628 (-1.174)	.0080
LAMBDA	.0523	-10.0226 (1.796)	-
WORKT	-	-	.0027
R ²	.14	.24	-
Adj R ²	.08	.16	-
F	2.13	2.95	-

¹³ Ferber and Green also found a few relatively high self-reported estimates.

Comparison

By comparing these estimates to available wages it is possible to examine how consistent the estimates are with the underlying economic model. Recall that according to the model, students who choose not to work do so because their own valuation of what their time is worth exceeds the market's valuation. Hence, if the estimated reservation wages equal or exceed the available market wages, then this would suggest that the underlying framework is sensible.

A summary of the wage measures appears in Table 3. At the time of the survey the minimum wage was \$3.35 per hour. If jobs were available, then wages should have been available at rates greater or equal to \$3.35 per hour. Respondent's own estimates exceed the minimum wage and the indirect reservation wage estimate is less than the minimum. However, \$3.35 per hour is within one standard deviation of the indirect reservation wage measure. The results are therefore consistent with the underlying economic framework and suggest that these students are indifferent between working and other activities at the prevailing wages. In addition, when interviewing students I recall being surprised by the number of non-workers who stated that they would work for the minimum wage. This suggests that non-workers suffer from an inertia problem, perhaps do to high perceived costs of job search.

Table 3. Reservation Wage Estimates

	DIRECT		INDIRECT
	Without Outliers	Full	
MEAN RESERVATION WAGE	5.29	30.11	3.29
STANDARD DEVIATION	2.89	142.48	0.34
STANDARD ERROR OF MEAN	0.38	18.39	0.04

The mean market wage for workers is \$4.31 per hour (the standard deviation is 1.91.) Both direct average reservation wage estimates exceed the average market wage yet the estimated average reservation wage is less. The estimated reservation wage measures are well within one standard deviation of the mean market wage for workers.

The results of this research are comparable to Ferber and Green's. Ferber and Green found that respondent's own estimates of potential market wages exceeded those derived from the Heckman technique. I find that respondent's own estimates of reservation wages exceed the Heckman technique estimates as well.

Ferber and Green also point out that the Heckman technique is based upon estimated equations with low R^2 s. The R^2 for the wage equations in this research (.14) is lower than Ferber and Green's (.31 and .25) but greater than that reported by Zick and Bryant (.07). Zick and Bryant's hours of work R^2 (.25) is comparable to the hours of work R^2 here (.24). Nonetheless, these equations only explain a small portion of the variation in wages and hours worked. Many variables are apparently excluded from these models: variables known to respondents but not to researchers. I am therefore inclined to believe that respondent's own estimates should be taken seriously.

Ferber and Green also note that the Heckman procedure is sensitive to the specification of the labor force participation and market wage equations. I found the technique to be sensitive to model specification, as well. A systematic examination of the effects of different specifications has yet to be conducted with these data.

The simple correlation coefficient between the direct and indirect reservation wage rates (for the full sample of non-workers) is only .10. Again, this is similar to Ferber and Green's comparison between direct and indirect market wage measures: their estimated simple correlations were .13 for a small sample of 131 women and .45 for a larger sample of 295 people. The low correlation coefficient suggests that the direct reservation wage question and the indirect reservation wage estimates are not measuring the same concept. Unfortunately, it is unclear whether one measure reflects true reservation wages better than another. If either measure truly captures reservation wages, then the results would suggest that there is a substantial difference between survey responses and respondent behavior.

CONCLUSIONS AND SUGGESTIONS FOR FURTHER RESEARCH

The sample used for this analysis is small and specialized. Using data on full-time students, the value of time for non-workers was estimated by (1) asking respondents to reveal their own reservation wage estimates and (2) using estimated coefficients from selection bias corrected regression for workers, and the characteristics of non-workers.

The mean of respondent's own estimates is quite sensitive to outliers, which suggests that I should consider how to treat outlier responses more carefully. It would be instructive to examine these observations more extensively within the regression diagnostics framework. When outliers are removed, the respondent's own estimates are more comparable to the Heckman estimates. Nonetheless, the low correlation coefficient suggests that the direct and indirect measures are not measuring the same concept. It would appear that one likely problem is the low explanatory power of the models. Important explanatory variables are undoubtedly omitted from the estimated equations. Another

problem may stem from the small size and specialized nature of the sample. Although Ferber and Green compared indirect and direct estimates of a different variable, my results are quite similar to theirs. Both studies suggest (1) that the Heckman technique yields lower estimates than the direct approach and (2) that the correlation between direct and indirect estimates is quite low.

The results of this study are of a preliminary nature. With these data I plan further investigation of the effects of different model specifications. More general and more complete data, however, are needed to improve our understanding of what estimated reservation wage variables are really measuring. I therefore suggest that future researchers continue to ask respondents direct questions about reservation wage rates. Such information is necessary to replicate and improve comparisons of indirect and direct ghostbusting strategies.

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LIVING WITH DEREGULATION: THE ROLE OF CONSUMER ACTION GROUPS

Ken McEldowney, Consumer Action of San Francisco

ABSTRACT

Consumer Action is a nonprofit consumer advocacy group whose primary concerns are the consumer services of the financial services and the telecommunications industries. For more than a decade, Consumer Action has specialized in the production of comparative pricing surveys. Surveys are conducted both to provide consumers with needed information for making decisions and to gather the data needed to spot problems within an industry. In addition, we encourage consumers to support legislation and regulations that will improve disclosure and, where necessary, put limits on rates that can be charged in the areas of financial services and telecommunications.

Consumer Action is a 16-year-old consumer advocacy organization. We are a non-profit membership organization with 2,400 members throughout California. Our primary concerns are the consumer services of the telecommunications and financial services industries. More specifically we are concerned as to how deregulation in these two areas have impacted low and moderate incomes consumers.

For more than a decade Consumer Action has specialized in the production of comparative pricing surveys. The philosophy behind consumer pricing surveys is remarkably simple. We believe that the optimum functioning of the marketplace depends upon fully informed consumers who carefully and knowledgeably weigh choices. But marketplaces have ways of veiling, even hiding, real costs: the goal of the shopping survey is to cut through marketing slogans and pretty images to present clear comparisons of costs and benefits.

Consumer Action conducts surveys for two primary reasons. First, to provide consumers with the detailed information that they need to choose those accounts which will best meet their needs at the lowest cost. But second, and equally important, to gather the data we need to spot problems within the industry.

We annually release four major surveys of California banks and savings and loans: loans, savings instruments, credit cards and checking accounts. Once a year we co-sponsor with the Consumer Federation of America a national banking survey which is conducted by CFA member groups throughout the country. Last year this survey contained information on 225 banks and savings and loans in 18 states and the District of Columbia.

In the telecommunications area we have focused our surveys on the factors that consumers should consider in a world in which they must now select a long distance carrier. We regularly look at a wide range of rate and non-rate differences that exist between the companies that offer equal access long distance service to California residential customers.

The public response to our surveys has been overwhelming. Media coverage by newspapers, radio and television has been extensive throughout California. While the electronic media tend to focus on the broad conclusions that we have reached, the daily newspapers often go one step further and print comparative charts that we have developed. Consumers who want additional information send us self-addressed, stamped envelopes for copies of our survey results. Last year we received nearly 20,000 such requests.

I would like to look at the banking and telecommunication industries separately.

As a grassroots consumer group we hear from many people who have problems in the financial marketplace. The two most common complaints we hear about this industry are that charges are too high and that it is very difficult to obtain facts about the costs and conditions of basic services. These are significant problems, because access to financial services have become an essential part of our survival for everyone in today's society.

When consumers seek information from financial institutions they face a series of hurdles set up by an industry seemingly oblivious to the need for complete pre-purchase disclosure. How are consumers supposed to learn about the fees and conditions of the accounts they are comparing? Full disclosure of such information never appears in radio or TV ads and only rarely in newspaper ads. Brochures often ignore the potential for charges or merely indicate that unspecified fees may be assessed under certain conditions. Branch personnel often have a difficult time presenting clear and accurate explanations of bank practices. When disclosures are made they are often tied to unfamiliar and undefined terms. To compound matters, a lack of uniform terminology often makes comparing accounts at different institutions difficult.

Yet consumers' desire for such information, as measured by the response to pricing surveys by Consumer Action and other groups, is very strong. Today's consumer is increasingly aware of the need for full pre-purchase information, but when faced with the barriers to disclosure now found throughout this industry, many people throw up their hands and settle on the nearest institution.

Until the advent of deregulation, consumers at least had a fighting chance. For the most part, each institution offered a relatively small number of products and they were fairly similar to those offered by other institutions. The products themselves were fairly straight forward.

However, with deregulation this has changed. Banks and savings and loans are attempting to distinguish their products from those offered by the competition. The result has been a proliferation of new accounts, each unique and each loaded with features and conditions.

This development has not been accompanied by improvements in the delivery of pre-purchase information. Brochures and advertisements continue to be inadequate sources of information about the imposition of service fees and other key conditions. These findings might be forgivable if the industry had succeeded in improving the delivery of such facts at the branch level. Alas, it has been our experience that deregulation has compounded the difficulties experienced by branch personnel charged with explaining company policies.

Our preference as surveyors is to obtain information by calling branches of banks and savings and loans, posing as customers seeking to obtain loans or open accounts. This method has the advantage of providing us with the same information that is being provided to potential customers.

But this method of gathering information has proven impossible with banking deregulation. Our experience has shown that, in many cases, branch personnel cannot answer even the most basic questions. For example, the question of what balance is required to avoid service charges on a regular savings account, or even what that charge is, can be extremely difficult to have answered accurately. In one instance, which CA hopes was an extreme case, we called four branches of the same bank to find out whether it offered a SuperNOW; employees at two branches informed us that it did not have such an account; employees at the other two assured us that it offered the account.

One fact that is often particularly difficult to obtain is the annual yield on regular savings accounts--or any other kind of interest-bearing account. In many cases, branch personnel cannot give specific figures for the annual yield of their savings accounts. Such inquiries are even riskier when the subject is a figure likely to change with some frequency, such as money market accounts.

As a result of our experiences, we abandoned this method of gathering information. Instead, we now ask each institution to designate an executive who will provide us with official information on prices and services. While this is a method that suits our purposes as surveyors, it does not begin to meet the needs of consumers.

For loans the consumer can look to the Annual

Percentage Rate to provide a standardized figure that incorporates all the finance charges connected with a loan. Using the APR it should be fairly easy for the consumer to compare loans offered by different institutions. But this is not always the case.

Several years ago while conducting one of our periodic surveys of auto loans we discovered that a number of institutions charged fees in addition to interest. This was bad enough but we also found that most of the banks and savings and loans that charged such fees did not include them in the APR they quoted over the phone to consumers doing comparison shopping. As some of the fees were as high as \$100 or one percent of the loan, consumers were being seriously misled.

This Spring, we are conducting home equity loans for the first time. With changes in the tax law, interest payments on most loans will no longer be deductible from a consumer's gross income for income tax purposes. But Congress did carve out a large exemption--interest on home loans. As a result, institutions are now pushing what are basically second mortgage loans with the credit extended being secured by equity in the home.

As basically new products, revolving credit home equity loans are being advertised seemingly with little rhyme or reason. Despite laws on the books that seemingly would require that the APR be stated in ads that speak of interest rates, many institutions are failing to do so. In other instances only the introductory, teaser rate is clearly disclosed. Already, we have begun to receive complaints from consumers who didn't know that the teaser rate would only last a few months.

But even with these problems, consumers shopping for loans are far better off than those seeking to place savings in an interest bearing account. There is no equivalent of the APR that has been developed to help consumers who are seeking such accounts.

Consumer leaders have long pointed to hidden dangers that can affect the actual return a consumer will receive from an interest-bearing deposit account. The best known factor is compounding, the effect of which is usually handled by disclosure of the annual percentage yield (APY). The effect of compounding is relatively minor compared to other factors that affect earnings. A 5.5% APY compounded quarterly will yield about 5.61%; monthly, 5.64%; daily, 5.65%. The difference between daily and quarterly compounding at 5.5% is about 40 cents per \$1,000 per year.

Different methods of calculating balances on which interest is paid have a far greater impact on return. Most consumers assume that interest is paid on a day-of-deposit to day-of-withdrawal basis or on a daily balance basis. But interest may be paid on a minimum balance method, where interest is paid based on the lowest balance in the account on any one day of the month or quarter. The effect of this technique varies but can be far more significant than frequency of compounding.

But consumers have to consider more than just interest income. Interest yield is gross, not net income. In recent years, disclosure of account fees has become especially important in evaluating consumer accounts. For loans, the fees charged are supposedly factored into the APR. But for deposit accounts such items as low balance penalties stand alone. A person expecting a return of 6% might never be warned that after fees have eaten into his account he will only receive 1% -- or even lose money.

With deregulation has come yet another complication, tiering. On January 1, 1985, the minimum balance required to earn high interest on money market accounts and time deposit accounts dropped from \$2,500 to \$1,000; on January 1, 1986 the minimum balance requirement was completely dropped. On April 1, 1986 the ceiling on passbook savings account interest rates was lifted. The result of these changes is that banks and savings and loans are moving toward accounts in which both service fees and interest rates change at various balance levels. This has further hindered the ability of consumers to compare accounts.

1986 was touted as the year in which small savers would finally benefit from banking deregulation. But this has not been the case. Instead, small savers are being hit by higher service charges and bewildered by new accounts that may pay them less than their old savings accounts.

Our April 1986 survey of 82 California financial institutions reveals how the marketplace has changes. We found:

1. At many banks, consumers with less than \$2,500 in savings could get higher interest in a regular savings account than in a money market account. Money market accounts were designed as higher interest savings instruments with limited check-writing privileges. However, many surveyed banks were paying 5.25% on MMAs with balances below \$2,500 but 5.5% on regular savings accounts.
2. At about half of the surveyed banks, fees on MMAs with balances of \$1,000 or less would exceed interest earned. Consumers who leave \$1,000 untouched for a year could have net earnings that range from a loss of \$90 to a gain of \$70 at banks and a loss of \$39 or a gain of \$79 at savings and loans. Most banks and S&Ls have charges on MMAs that go below specified balance levels. In some instances the fees vary with the balance maintained in the accounts. Banks have charges of up to \$2 a month; S&Ls have charges of up to \$8 a month.
3. As of April, 1986 only two of the surveyed institutions were offering the higher rates made possible by the lifting of the interest rate ceilings on regular savings accounts. One paid 7.5% but no interest at all on balances of under \$1,000 while the other paid 7.5% but charges a fee of \$2.50 for each month in which the balance fell below \$500.

4. Most of the banks and the S&Ls paid 5.5% on regular savings accounts while there was a much greater variation in money market account rates. The range at banks was 5.25% to 7%; the range at S&Ls was 5.25% to 7.5%. Many of the institutions had tiered rates with higher rates on larger balances.

With such variety in the marketplace consumers need accurate disclosure information to insure proper choice of accounts. It is clear from our surveying work and from consumers' experiences with inaccurate and incomplete information received from banking employees that voluntary disclosures have not and will not work. Voluntary disclosures cannot work because to be valuable the information must be presented in a consistent format and with consistent terminology in order to allow consumers to make informed choices.

Disclosure of the fees and conditions associated with deposit accounts is essential to consumer comparative shopping and for the proper functioning of the market. Legislation needs to be adopted that would contain the following:

1. All fees must be revealed. In addition, other conditions, such as balances needed to earn interest and methods of calculating balances, must be disclosed.
2. Terminology must be standardized so that consumers will know that the use of a given term at one institution will mean the same as its use at another.
3. The format of the disclosures must be in a form that is easy to understand and use by all banks and savings and loans. A simple, standardized chart would permit a consumer to readily compare different institutions. Special care should be taken to insure accurate disclosure of fees and interest rates on tiered savings accounts and MMAs, including net earnings figures for specified sample balances.

Adoption of these proposals would turn the financial marketplace into an arena where consumers would have a fair chance to select the products and services most appropriate for their needs. Unfortunately, consumer groups face a situation with elected bodies both at the national and state level where financial institutions have great influence through campaign contributions and well-funded troops of lobbyists.

We believe that part of our strength and that of similar groups in other parts of the country is the growing recognition by consumers that there are great differences between the offerings by individual banks and savings and loans. Until deregulation this was not the case. Checking accounts were either free or very low cost and interest rates paid on savings were tightly regulated.

Consumers became accustomed to signing up for banking services at the nearest institution and gave little thought to comparison shopping. But

with deregulation there are benefits to be won for taking the effort to look into fees and interest rates charged by different banks and savings and loans.

The first job for consumer groups is to educate consumers to this fact. For example, ever since Consumer Action started surveying bank credit cards three years ago, we have received calls from consumers stating that they thought that all Mastercards were the same and all Visa cards identical. They didn't understand that banks offered their own cards and set their own credit criteria, fees and interest rates.

It is not a mystery why consumers are confused. Visa and Mastercard advertise heavily in newspapers, magazines and on television. The ads are generic and make it appear that there is but one card. Local banks compound this problem by devoting their advertising dollar to image ads that are designed not to inform the consumer about interest rates and fees but to promote the idea that their Visa Card or Mastercard is the one to have to gain status or accumulate gimmicks or gadgets.

As if this was not bad enough, many banks and savings and loans do not even put information as to interest rates, annual fees and the availability of grace periods on credit card applications. At least in California this practice will soon stop as legislation was passed in the State Legislature last year forcing institutions to put such information on applications.

Our credit card surveys serve several purposes. First, they provide comparative information about different cards. Second, they help to educate consumers as to the sharp differences that do exist between products offered by different banks and savings and loans. Third, they provide publicity for low cost cards that the smaller institutions could never afford to buy. Fourth, they focus attention on those institutions that have failed to lower credit card rates at a time when the cost of providing such cards has dropped significantly over the last few years. Fifth, they provide us with the raw data that we need to press for new laws at both the state and national level. These purposes apply to the rest of our financial surveys as well.

Consumer Action believes that a major focus of local and state consumer groups that wish to focus on banking issues is to conduct regular and comprehensive financial surveys and release the results to the media and to individual consumers at no charge.

Interestingly enough we find that the same problems for consumers exist in the telephone industry. Dating back to 1-1-84, consumers have been confronted with having to make one decision after another about a service that they took for granted.

First, consumers had to decide whether they wished to continue to lease their phones or to buy their own. For many in the population, particularly seniors, this created a sense of uneasiness and even fear. Some felt that they were being forced to buy their phones. Others did not have the information that they thought they needed to make such a decision.

Many consumers simply assumed that all of the phones suddenly flooding the market were of the same quality as the phones that they currently had in their homes. People bought phones for \$9.95 thinking they would not have to worry about getting a phone again only to learn they had bought the telecommunications equivalent of a disposable Bic lighter.

Next, consumers were hit with having to select a long distance carrier. This was even more fun because the Federal Communications changed the rules in the middle of the game. Early selection took place as consumers were led to believe that if they didn't affirmatively select a carrier that they would remain with AT&T. Then, the FCC decided that if you didn't select that you would be allocated to a carrier. Some local companies even went back to people who thought the selection process was over and forced them to select all over.

Next, the FCC decided that the inside wire in our homes and apartments should be the rate payer's responsibility and left all of the loose ends up to the states to tie up. Left unresolved are such questions as how do you deal with common inside wires in an apartment building and who is responsible for the wires -- the renter or the landlord. If it is the renter can he or she remove them when they move? If it is the landlord why does the renter have to pay for a maintenance fee or for repairs?

In each of these three areas, the problems for consumers have been compounded because the regulatory and judiciary powers that decreed such changes take place did not insure that consumers would have the information they needed to make the required decisions in an informed fashion. This despite the fact that the decisions were in areas in which the average consumer had no experience.

With varying degrees of success consumer groups around the country attempted to fill the vacuum. I believe that Consumer Action was in the forefront of this educational effort so I would like to provide some detail as to what we have done over the last few years.

In late 1983 and early 1984 we attempted to provide consumers with as much information as possible on what the impact would be from the breakup of AT&T. As you might expect, to the degree that the information was abstract and theoretical it did not have that much impact. We were much more successful in speaking to the factors that a consumer needed to consider in determining whether or not to buy the phone in the house and using that choice as a way to talk about the larger issue.

Consumer Action put out fact sheets, spoke at a number of conferences and participated in a number of radio and television talk shows that dealt with the breakup and with the lease-purchase question.

But at least, the question of the purchase of a phone dealt with a concrete product and to some degree consumers were able to deal with the issue as they might with any other highly important appliance. But the next hurdle, that of selecting a long distance carrier, was far more difficult.

It is true that a very small portion of the population were already using MCI or Sprint or SBS by dialing in long access codes. And they were reaping significant savings over AT&T. But the vast majority of the population had never considered leaving AT&T.

The Bell operating companies were directed to send ballots to all of their customers but were not ordered to provide any comparative information or even any tips on what factors should be considered in picking a long distance company. In California we believe that consumers had more information than in most parts of the country.

Consumer Action pulled together a loose coalition of consumer groups to sponsor a "Shoppers Guide" that was funded by Pacific Bell and sent to its customers along with the ballot that was to be used to pick a carrier. Consumer Action helped to write the "how to" section and on a quarterly basis has surveyed all equal access companies in California on a range of non-rate factors. Included in the Guide is information on how to get further information from the consumer groups that sponsored the Guide.

Pacific Bell determined that it would not be able to include rate information in the Guide. Unfortunately, this is the information that most consumers want when making a selection. However, we were able to get Pacific Bell to include in the Shoppers' Guide who consumers could get this information from and Bay Area Consumer Checkbook.

Consumer Action has surveyed the rates of equal access long distance companies since the Spring of 1985. We include information on rates for specific in-state, out-of-state, and international calls as well as information on rate bands and travel features. We conduct surveys each time there are significant rate changes in the marketplace.

Our most recent survey looked at rates that were effective as of March 1 of this year and reflected AT&T's FCC ordered rate reductions that went into effect January 1 and the subsequent responses by the other carriers. At the same time we called the major long distance companies posing as consumers who were calling up to ask how their rates compared with other carriers.

We found some very interesting contrasts which we believe point out the problems faced by consumers in a period of rapid deregulation and the challenge faced by consumer groups and others interested in insuring that consumers are able to make informed decisions.

Fairly consistently over the last several years, public opinion polls have found that consumers believe that AT&T's rates are between 18 and 20 percent more expensive than those of companies such as MCI and Sprint. I think there are several reasons for this. Certainly, before equal access went into place MCI and Sprint were limited to inferior connections and were able to pass on their cost savings to their customers who were willing to dial the extra string of numbers to make a long distance call.

Second, MCI and Sprint have even fairly recently used direct mail pieces that promised savings of up to 30 or 35% compared to AT&T. In addition, when we called up MCI and Sprint posing as consumers saying we were considering switching from AT&T and wondering what savings we could expect we were repeatedly told that we could get savings of 30% and more.

On the other hand, AT&T has chosen not to focus on rates. Certainly, in years past this made sense as its rates were significantly higher than those of its competitors. When we called AT&T posing as potential customers, their service representatives would not make generalized savings claims or make comparisons but would only provide us with what they would charge for a specific call.

So how did the public perception of AT&T's being 18-20 percent more expensive and MCI's and Sprint's claims of savings of 30-35% stack up to our survey results? For our comparison we looked at four test calls of varying lengths within the state and four such calls that went out-of-state and checked to see what the charges would be for those calls during the day, during the evening and during the night or weekend. The information was taken from survey forms that the carriers filled out for us.

We thus were able to compare what the total cost would be for 24 calls. AT&T Long Distance charged \$42.57; ITT Longer Distance, \$42.00; MCI \$41.52; US Sprint, \$41.50; and Allnet, \$41.32. The range between AT&T and the least expensive was only \$1.25 compared to \$6.11 in May of 1985. On some of the calls, the rates were nearly identical among the carriers. But here too the advertising and other disclosures have failed to provide the consumer with accurate, helpful information.

Our next task is to encourage those consumers who have requested surveys to take the next step -- support of legislation and regulations that will improve disclosure and where necessary, put limits on rates that can be charged.

In the financial area we are currently supporting the following:

1. Sharp limits on the length of time that a bank or savings and loan can limit access to funds contained in checks that are deposited into a checking account.
2. Improved credit card disclosure.

3. Caps on credit card interest rates.
4. Mandatory cashing of government checks for non-customers.
5. Prohibition of requiring a credit card to open a checking account.
6. Lifeline/baseline checking accounts that would provide basic banking services to low income consumers.
7. Truth-In-Savings disclosure.

In telecommunications we support:

1. Lifeline local telephone service which will combine low monthly rates with a waiver of deposits to start service and discounted charges for installation.
2. A rollback of the FCC ordered access charges.
3. Flat rate local service must always be an option.
4. Affordable rates for local and long distance service.
5. Maintenance of inside wire should revert back to the local telephone companies.
6. Deposits for local service should not be based on long distance charges which the local company does not provide.

We believe that even though we have a small staff of four and an annual budget of roughly \$75,000 that we have been able to have a major impact in banking and telecommunication in California. The impact has come primarily through the excellent media coverage that we receive. CA releases eight to ten banking and telephone surveys each year which receive extensive newspaper, radio and television coverage throughout the state.

While each survey during the year focuses on a different aspect of banking or telephones each survey has a common theme: there exists very significant differences between products offered by different institutions which can result in very real savings for those consumers willing to shop around. Consumer Action believes these are equally important.

FAMILY LIFE CYCLE CHANGES IN MONEY MANAGEMENT:
NEWLYWED FAMILIES AND FULL-NEST FAMILIES

Vicki Schram Fitzsimmons
University of Illinois at Urbana-Champaign¹

ABSTRACT²

This study investigated family money management (i.e., the regular handling of family finances and the planning of spending and savings). Longitudinal data were used to compare money management of newlywed and full-nest families. Wives in full-nest families were more likely to be responsible for paying bills than wives in newlywed families. Further, responsibility tended to be joint for decisionmaking money management tasks.

INTRODUCTION

Family money management, that is, the regular handling of family finances and the planning of spending and savings, is one of the family's basic economic functions. How money is managed often makes a difference in whether a family lives well or not. Recent changes in tax laws and deregulation of various industries have necessitated changes in financial management for many families. As consumer educators help families in making financial decisions, it is important for these professionals to know how families handle money management decisions and tasks. Knowing who makes these decisions and handles these tasks within the family is especially useful. The money manager is the best source of information about family financial data [6].

Financial counselors, too, need to know who is involved in family money management. By facilitating husband-wife communication about money, they help couples to make decisions about responsibility for money management tasks [13]. It is generally acknowledged that the pattern of money management has a strong impact on the marital relationship [4,5,8,13], with disagreement over finances cited as one of the leading contributors to divorce [3] and a frequent complaint of divorcing couples [9]. Understanding more about family money management, then, is an important contribution to understanding marital stability, which ultimately could lead to a lower divorce rate related to money, fewer arguments about money, and happier families.

¹Assistant Professor

²This study was a part of Project No. 60-0362 of the Agricultural Experiment Station, College of Agriculture, University of Illinois at Urbana-Champaign. University of Illinois Survey Research Laboratory services were used in preparation of the data tapes. The author wishes to thank James P. Fitzsimmons for assistance with data preparation.

Stampfl [12] suggests that it is important to study consumer behavior in a longitudinal framework because such behavior is not static. Families have different consumer problems and financial management concerns at each life cycle stage. For example, newlyweds need to develop skills in recordkeeping, handling complex budgets and complex decisions, jointly rather than individually. By the time the family reaches the full-nest stage, only complex decisionmaking continues to be a marketplace skill for development. Strategies for recordkeeping and budgeting appear to have been negotiated and institutionalized by the full-nest stage, according to Stampfl's framework.

Because family money management is likely to vary over time, longitudinal, rather than cross-sectional, analysis is a better approach and should add considerably to knowledge about family money management. Such knowledge is important in developing public policy and educational programs designed to help families as they experience change in their lives. Thus, the objective of this research is to compare money management of newlywed families and families in the full-nest stage of the family life cycle. Money management is examined in terms of (1) getting cash to use, (2) deciding how much cash to get, (3) paying the bills, (4) deciding how to spend surplus money, and (5) handling incidental expenses. Newlywed families are defined as recently married couples who are engaged in establishing a household. Full-nest families are those in which the household has been established for some time following several years of expanding income and expenses. In most cases, children are present.

PREVIOUS WORK

Couples handle money management tasks either jointly or individually with the husband or the wife assuming primary responsibility. In the latter, it is suggested that families engage in role specialization [2]. Such role specialization helps to avoid marital conflict. Ideally, this contributes to marital satisfaction and diminishes the probability of divorce.

In a longitudinal study comparing happily married couples and divorced couples, Schaninger and Buss [11] found greater role specialization in money management among happily married couples than among couples who eventually divorced. The assumption was that initial decisions made about money management would predict subsequent marital happiness and divorce status. Allocation of responsibilities during the first year of marriage was used to measure role specialization,

but no attempt was made to investigate any changes in who handled the money management tasks in subsequent years even though the data were available. Marital status, on the other hand, was measured 10-1/2 years later. Couples were judged to be happily married if both husband and wife reported they were very satisfied with their marriage. Divorced couples were those who obtained a divorce at any time during the study. Length of marriage varied for all couples as a result. Among the happily married couples, responsibility for various money management tasks was more frequently role specialized than it was for those who subsequently divorced. When decisionmaking was not joint, husbands were more likely to dominate in couples that eventually divorced; whereas, wives were more likely to dominate in happily married couples. Thus, wives in happily married couples were more likely to have input to money management decisions than were wives in couples that eventually divorced. Possibly, this factor is just as important as role specialization in diminishing marital conflict and divorce. In fact, consumer educators advise that money management is more successful and has less conflict when both husband and wife have input to the financial decisionmaking process.

Another possible explanation is that couples make conscious decisions to specialize in certain tasks. They might have an equality/equity orientation in which both spouses expect to share equally or equitably in money management [11]. But, they decide to allocate tasks to a certain individual to maximize use of their resources. One person might have more time to devote to the task than the other; or, the two might have differing abilities for various money management tasks. This division of labor within the family is consistent with utility theory [1]. Such an explanation has some support from a previous study. Ferber and Lee [7] created a variable, family financial officer, from three money management tasks and investigated family purchasing behavior. Results indicated that the family financial officer tended to be the couple acting jointly in the first year of marriage. During the second year, the percent of families with the couple acting jointly decreased, but remained the largest category. Thus, there appeared to be initial joint money management in a newly married family with changes to individual money management beginning by the second year of marriage.

Whether this pattern of role specialization continues throughout the family life cycle has not been investigated on a longitudinal basis. In a cross-sectional study, however, Rosen and Granbois [10] found that individual, rather than joint, money management increased with the number of years married. As in the Ferber and Lee study [7], the dependent variable was a composite of several money management tasks but different tasks than Ferber and Lee used. Rosen and Granbois measured implementation decisions, such as book-keeping and other paper-handling tasks, and actual decisionmaking activities, such as decisions about spending and saving. Schaninger and Buss [11] analyzed the money management tasks separately.

In this study, it is hypothesized that families in the full-nest stage, compared to newlywed families, will exhibit more specialization in money management. It is assumed that families specialize in money management roles in an effort to maximize use of their resources.

METHODOLOGY

Data

Data used in this study were from "A Panel Study on Consumer Decisions and Asset Management" and were collected by the University of Illinois Survey Research Laboratory with Robert Ferber and Francesco Nicosia as the principal investigators. This data set contains financial, demographic, personality, and expenditure variables. Personal interviews and self-administered questionnaires were used to collect data for the 18 waves, beginning in summer 1968 and ending in spring 1981. The time periods between waves varied due to funding availability. Only data from the first and last waves are used in this study.

The sample consisted of a panel of young, newlywed couples, living in Peoria or Decatur, Illinois and who were married in these cities in the summer of 1968. The initial sample size was 311 couples, with the husband aged 30 years or younger. Due to attrition, panel size in 1981 was 209 which included intact families, divorced families, and remarried/blended families. Given the purpose of this study, only the intact families were used; final sample size was 140 couples.

Variables

Five different money management variables were measured in both the first and last waves of data collection. These variables measured who had the main responsibility for: (1) getting cash to use, (2) deciding how much cash to get, (3) paying the bills, and (4) deciding the disposition of surplus money. These variables were coded as husband, wife, or both. The fifth variable measured how incidentals (lunch money, cigarettes, bus, etc.) were handled and answers included husband's allowance, both allowance, and neither on allowance. Creation of the family financial officer variable used by Ferber and Lee [7] was considered. However, there were differences in data collection for the variable, who keeps track of expenditures, in the two waves, and this created difficulty in constructing the composite measure without eliminating a sizeable portion of the sample. For this reason, the variable was not included in this analysis at all.

FINDINGS

Sample characteristics were examined. In the first wave, the husband's mean age was 23 years, and the wife's age was 21 years. Median education for both husbands and wives was high

school graduate. Ninety percent of the husbands were employed full-time in the first wave, and slightly more than 95 percent were employed full-time in wave 18. For the wives, slightly less than 70 percent were employed full-time when first married while slightly less than 55 percent were employed full-time in the full-nest stage. Couples had an average of two children in this latter stage.

Each of the variables was tested using chi-square analysis to determine whether there were significant differences between the two life cycle stages (Table 1). Results indicate that there were differences in responsibility for all but one of the money management tasks. There was no difference in how incidentals were handled.

The most significant difference ($p \leq .001$) was for the variable, who looks after paying the bills, with the percent of wives as the responsible individual increasing from 36 percent for newlyweds to 60 percent for full-nest wives. Both husband responsibility and joint

TABLE 1. Crosstabulations and Chi-Squares for Money Management Tasks of Newlywed Families and Full-Nest Families.

Item	% Newlywed Families (n=140)	% Full-nest Families (n=140)	χ^2
Who looks after getting cash?	(n=138)	(n=138)	
Husband	31.2	10.1	11.31*
Wife	22.5	31.2	
Joint	46.4	58.7	
Who decides how much cash to get?	(n=136)	(n=136)	
Husband	33.1	15.4	16.78**
Wife	13.2	16.9	
Joint	53.7	67.6	
How are incidentals handled?	(n=133)	(n=133)	
Husband allowance	1.5	3.0	1.57
Both allowance	24.8	22.6	
Neither on allowance	73.7	74.4	
Who looks after paying bills?	(n=140)	(n=140)	
Husband	30.7	19.3	19.70***
Wife	35.7	60.0	
Joint	33.6	20.7	
Who decides disposition of surplus money?	(n=135)	(n=135)	
Husband	14.1	7.4	15.87**
Wife	4.4	8.9	
Joint	81.5	83.7	

* $p \leq .05$
 ** $p \leq .01$
 *** $p \leq .001$

responsibility declined. The percent of families with husbands responsible for paying the bills decreased from slightly more than 30 percent to slightly less than 20 percent. Joint responsibility accounted for almost 35 percent of the newlywed families and only slightly more than 20 percent of the full-nest families. This pattern was different for the other three significant variables. For these variables, joint responsibility and wife responsibility increased while husband responsibility decreased.

Overall, the hypothesis that families in the full-nest stage compared to newlywed families will exhibit more specialization in money management was not supported. When individual money management tasks were examined, however, the variable accounting for the most significant difference between the two stages, who looks after paying the bills, supported the general hypothesis. In the full-nest stage, role specialization for the bill-paying task was much greater than in the newlywed stage with wives more likely to specialize in this role than husbands.

DISCUSSION AND IMPLICATIONS

Role specialization seems to exist for at least one money management task, paying the bills. Professionals who need to know information about household expenditures can expect to obtain information about these from wives because they are more likely to have paid for the expenses. Why wives assume this responsibility is of interest to other professionals but is beyond the scope of this study. It is possible that paying bills is viewed as a type of clerical task, while other tasks are viewed as decisionmaking. Once decisions already have been made on how to spend the money, the task can be more readily delegated to the individual with more time to do it. In the full-nest stage a smaller percent of wives were employed outside the home than in the newlywed stage. Paying bills could be part of the full-time homemaker role. Further investigation of this aspect of family money management is underway.

Joint responsibility for money management tasks tends to increase over the life cycle which is inconsistent with what others have suggested. Rosen and Granbois [10] used only cross-sectional data, and Ferber and Lee [7] examined money management in the first and second years of marriage only. In this latter study, joint decisionmaking was the largest category even though individual decisionmaking increased by the second year. In both of these studies, the dependent variable was a composite of several money management tasks. Possibly, such a composite measure does not represent responsibility for money management tasks accurately. Thus, the results of the present study are more appropriate than previous studies to explain the responsibility for separate money management tasks of families moving through the life cycle. Further research is planned to test the

convergent validity of the variables used in this study and others available in the data set. This procedure should help to clarify the findings of this study in relation to previous research.

One important contribution of this study is the investigation of the way families make changes over time, especially during years when important societal changes in male and female roles were being made. Traditionally, women have been perceived as having little input to family money management. Actual input seems to vary by type of money management task and family income level. With recent role changes, more input by wives would be expected. This study suggests that wives, either through individual or joint decisionmaking, potentially have greater input to some money management tasks than husbands. Whether this increase is due to life cycle stage or role changes within the family is not known.

Most importantly, these results indicate that consumer educators and financial counselors need to be aware that husbands and wives are likely to handle money management tasks jointly. They can, however, be helped to discern which tasks can be delegated to one individual to maximize their resource use. For example, one person can pay the bills while the other person gets the needed cash. What tasks can be delegated and how to divide tasks to maximize resource use, yet preserve joint input to money management, is an important area for further research.

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CHANGES IN CONSUMPTION MANAGEMENT DURING UNEMPLOYMENT
THEIR IMPACT ON ECONOMIC SATISFACTION

Mari S. Wilhelm, Ph.D., The University of Arizona¹
Donna R. Iams, Ph.D., The University of Arizona²
Carl A. Ridley, Ph.D., The University of Arizona³

ABSTRACT

Numerous studies have shown that unemployment and job uncertainty contribute to varying levels of change in financial well-being (2,13,18,21). In response, the family members frequently report that they or other members of their family make a variety of changes in their consumption management with the hope that their financial vulnerability to the unemployed situation will be lessened (2,3,13,21). Little research has been conducted to address the impacts of these consumption changes on family economic well-being. The purpose of this research is to address, at least in part, the impact of family economic well-being.

CHANGES IN CONSUMPTION MANAGEMENT

Families respond in a variety of ways as they experience changes in their financial situation. The literature concerned with these changes includes studies of families as they "cope" with inflationary as well as recessionary environments (2,3,4,5,6,16,21). A large number of the changes implemented are directly concerned with the allocation of reduced real income to the family's consumption needs. These changes include expenditure cutbacks, increases in self-reliant behaviors, changes in shopping practices and store selection, and implementation of plans for budgeting money and paying bills. Other changes are concerned with finding ways to bring more money into the family budget. To this end, families have reported income raising strategies and increases in credit use.

One of the most frequently reported adjustments to economic change reported in the literature has been the curtailment of expenditures (2,3,4,5,21). The list of expenditure items ranges from the basic needs of food and clothing to luxury expenditures for vacations, automobiles, and entertainment. Expenditures for nonessentials are usually the first to be reduced or eliminated. As the period of unemployment or economic uncertainty increases, many families also report reductions of expenditures for many of the basic needs. In an attempt to maintain the lifestyle enjoyed previous to unemployment, however, some families choose not to decrease consumption but rather to

increase their use of credit (2,4). These families borrowed from other family members as well as from financial institutions.

Families also reported adjusting to a changed economic situation by changing their shopping behaviors. Shama (16) reported that, during the period of the 70's stagflation, those families who were able to alter their buying patterns were best able to "cope" with the problems of that time. Participants in his study reported major changes in shopping behaviors such as comparison shopping, bargain hunting, and looking for product durability. Additionally, Shama noted considerable increases in shopping at discount and wholesale stores.

Self-sufficient behaviors also increased in response to unemployment. Increases in the number of family members performing home repairs and other do-it-yourself tasks were reported by families during the depression (5), as well as families experiencing more recent economic changes (2,6). Families were also likely to make attempts at alternative ways of increasing income such as taking odd jobs or having another family member work. Finally, families frequently reported the need to revise their budgets. New budgets and special plans to get bills paid were critical aspects of coping with unemployment. Voydanoff (21) noted that the importance of effective financial management increased as financial resources dwindled.

ECONOMIC SATISFACTION

Moen (14) and others have suggested that indicators of family economic well-being should not be based solely on objective measures such as income and net worth. Rather, they have suggested that subjective measures of economic well-being, such as satisfaction with one's economic or financial situation, are an important component in assessing overall economic well-being. Some researchers have stressed that subjective economic measures may be equally as important in indicating overall economic well-being as are objective economic measures (10,23).

Measures of satisfaction, in general, represent the relationship between aspirations and reality (17). Economic satisfaction, therefore, may be said to represent the relationship between the objective resources of economic well-being and acceptance of the allocation of those resources, within constraints, to the needs, wants, and goals of family members. As resources are increased or decreased, adjustments are made in

¹Assistant Professor of Consumer Studies
²Associate Professor of Consumer Studies
³Professor of Child Development and Family Relations

their allocation. A measure of economic satisfaction, therefore, can provide an indication of the respondent's perception of the ability of the family to fulfill the function of meeting family needs and goals. The question relative to unemployment which arises then is the extent to which certain consumption management practices lead to satisfaction or dissatisfaction with their overall well-being. Little research is available to help us answer this question.

It is quite tempting to predict that a family successful in staving off severe financial problems would have a sense of accomplishment and would experience higher levels of economic satisfaction. Due to the fact that these changes occurred in response to unemployment of the primary breadwinner, however, one must recognize the potential disequilibrium that these changes may indeed cause. Systems theory would suggest that such disequilibrium may, at least initially, result in lowered levels of perceived satisfaction.

Gurin and Gurin (7) noted, however, that making predictions concerning economic satisfaction may be difficult. Those who implement changes and accommodate easily and quickly to these changes may report higher levels of satisfaction, whereas those who feel out of control may report greater dissatisfaction. A feeling of being out of control may arise either from being unable to identify or make changes or as a result of displeasure with the changes that were made. From a slightly different perspective, Gurin and Gurin also noted that those who have a sense of personal control may see potential for improvement and as a result, may report greater dissatisfaction.

Rettig (15) found that families having made changes in their consumption management due to inflation were especially likely to report unhappiness with their situation if they had high rather than low incomes. Elder (5) noted a similar response by higher income families during the depression. He concluded that the greater the relative loss, the greater the dissatisfaction.

The purpose of this study was to explore the influence that changes in several types of consumption management have on an individual's satisfaction with his/her economic well-being. The impact of changes in seven consumption management strategies were to be addressed. Those included income raising, planning, credit use, self-reliance in consumption, shopping practices, store selection, and expenditure cutbacks.

METHODOLOGY

Research Design/Instruments

This sample was from a small mining town in Arizona. This particular mining town was selected for an intensive study of families who had recently experienced the unemployment of the

primary breadwinner due to major layoffs from a copper mine. The sample was made up of those families who remained in the town following the layoff and those who moved within three months of the layoff. The couples who remained in the town participated in an interview and completed questionnaires. The couples who had moved completed only the questionnaires.

In order to select those families remaining in the town, the telephone directory was used to randomly select the sample. Based on a random start, every tenth phone number was called to determine willingness of the household to participate. This procedure was continued until a total sample of twenty-five families experiencing unemployment was found. Limited resources of time and money restricted the size of the sample. Using a sample of twenty-five couples allowed the researchers time for the interviews and also allowed the project to pay each husband and each wife ten dollars for participating. Husbands and wives were interviewed together for approximately one and one-half hours. Upon completion of the interview, two identical questionnaires were left; one for each the husband and wife to complete independently and return to the investigator in separate preaddressed, stamped envelopes. Payment of ten dollars was made upon receipt of the completed questionnaire.

In order to select those participants who had moved from the town, letters were sent to all names listed in the telephone directory with the exception of the names of those persons who had participated in the interviews. The letter was a request for volunteers to complete the questionnaires. If the families had moved within the last three months due to unemployment and if both husband and wife were available and willing to complete a separate questionnaire, the respondents completed a one page form indicating their new address and their willingness to participate. Questionnaires similar to those completed by the sample who had moved were sent immediately upon indication of the agreement to participate. Twenty-two families participated by returning the completed questionnaires. Payment of ten dollars was sent to each person completing the questionnaire.

One year after the initial layoff, follow-up questionnaires were sent to all 88 participants of the original study. A return of 77 percent was realized. The thirty-four couples (68 individuals) who participated in both phases of the study comprise the sample of interest for this paper in order to perform an analysis which included questions from both the initial and follow-up questionnaires. Follow-up questions allowed assessment of economic satisfaction and changes in consumption management one year following the initial layoffs.

Sample

The 68 participants of this study were primarily in their early thirties, over sixty percent were

in their first marriage, and they had been married to their present spouse an average of 10.5 years. All couples were married and the families had an average of two children. Greater than 80 percent of the sample had at least a high school education, with about half having some college. Previous to the layoff, approximately 70 percent of the families had one member, primarily the husband, working outside the home; the remaining families had two or more employed members. The average household income for the year previous to unemployment was \$37,000. On average, these husbands and wives reported that they would need approximately \$26,000 per year to live comfortably. The average reported income appeared to meet this standard. In addition, for those families providing asset and debt information, the families appeared to be solvent. The average dollar value of savings and investments was \$33,000 and the average debt level approximately \$7,500.

Changes in Consumption Management

Behaviors concerned with changed consumption management were identified from the literature as potential responses to the experience of unemployment and/or reduced purchasing power as a result of inflation. Categories of responses identified in the literature included income raising (2,3,4,22), self-reliance in consumption (1,2,8,9,11,13), shopping practices (12,16), store selection (16,19), planning for expenditures (22), credit use (4), and cutting back on expenditures (2,4,5,31). Specific items for inclusion in the questionnaire were selected directly from the literature or were designed by the researchers as needed. Respondents were asked to indicate, using a six point Likert-type scale from strongly agree to strongly disagree, the extent to which they agreed that unemployment contributed to the identified change. Responses were coded by assigning a zero to strongly disagree through 5 for strongly agree. Seven consumption management strategies based on the literature were identified. They included making plans, self-reliance, shopping practices, store selection, income raising, and credit use. The seven management change scores were calculated by computing the average score across all items in each category.

Economic Satisfaction

The measure of economic satisfaction used in this research consisted of a summed score of the responses of participants concerning their satisfaction with level of income, money available for family necessities, ability to handle financial emergencies, amount of their debt, level of savings, and money available for future needs of the family. Responses were indicated and coded using a six point Likert-type scale from extremely dissatisfied, coded zero, to extremely satisfied, coded five. A total economic satisfaction score was obtained by summing across the six items. The identical

economic satisfaction measure was used during both the initial (time one) and follow-up (time two) phases of the study. Economic satisfaction scores from the initial phase were used to control the level of economic satisfaction previous to implementation of changes in consumption management.

FINDINGS

Findings will be presented in two steps starting with a description of the changes in consumption management that husbands and wives reported were made by their families in response to unemployment. This description will be followed by the findings of the multivariate analysis of the relationship between the categories of consumption management and economic satisfaction one year after the initial layoff. Stepwise multiple regression allowed the researchers to control for the level of economic satisfaction at the onset of unemployment and previous to implementation of the consumption management changes. The additional contribution of the change in consumption behaviors to economic satisfaction can then be determined.

EXTENT TO WHICH HUSBANDS AND WIVES REPORTED CHANGES IN CONSUMPTION PATTERNS DUE TO THE EXPERIENCE OF UNEMPLOYMENT

Tables 1 and 2 indicate that the greatest consumption changes occurred in planning, self-reliance, shopping, and cutback behaviors. Over 70 percent of the sample reported that they had formulated a new budget and had devised a special plan for getting bills paid. A similar percentage reported increases in family members doing their own repairs and performing other do-it-yourself activities. Couples also reported that their shopping practices had changed considerably. Greater care was taken by comparing prices and products, shopping for specials, and looking for product durability. Additionally, more shopping was done in wholesale and discount stores. Fewer families reported changes in the use of credit and borrowing to pay bills. Couples also refrained from asking for an increase in financial support from relatives. It must be noted, however, that while there were fewer reports of changed behavior, nearly one-third did increase their credit use at least to some extent. Similarly, fewer families reported an increase in taking odd jobs or having other family members start working. Husbands and wives also reported expenditure cutbacks in all categories. Expenditures in food, gas and medical care were least impacted; while luxuries, vacations, auto purchases, and leisure activities were hit the hardest.

MULTIVARIATE ANALYSIS

In order to determine the most significant contributors to the measure of economic satisfaction one year following unemployment, a multivariate regression was performed to control the level of economic satisfaction previous to the implementation of changes in

Table 1. Percentage of Husbands and Wives Reporting Changes in Consumer Management Practices Due to the Experience of Unemployment.

Management Practice	Husbands (N=34)				Wives (N=34)			
	SA*	A	D	SD	SA	A	D	SD
<u>Planning</u>								
Devise a plan for paying bills	--	74	24	3	6	65	21	9
Plan a new budget	6	71	21	3	6	68	21	6
<u>Self-reliance</u>								
Do-it-yourself	24	56	12	6	9	71	18	3
Do own repairs	35	41	15	9	30	41	24	6
<u>Shopping Practices</u>								
Change purchasing habits	21	74	3	3	21	74	3	3
Judge products in a new way	21	68	9	3	27	59	9	6
Become a comparative shopper	18	71	9	3	32	65	3	--
Discuss purchase decisions more	21	59	12	9	15	59	21	6
Shop for specials and bargains	35	53	6	6	41	44	15	--
Look for product durability	27	62	9	3	24	59	17	--
Be more careful with money	47	44	6	3	27	74	--	--
<u>Store Selection</u>								
Shop in wholesale outlets more	12	50	29	6	15	41	41	3
Shop at discount stores more	15	53	26	6	18	38	41	3
<u>Income Raising</u>								
Another family member starts work	6	18	41	32	9	18	41	30
Family members take odd jobs	6	26	38	24	3	21	35	41
<u>Credit</u>								
Use more credit	6	21	41	32	9	12	50	30
Borrow to pay bills	6	12	35	47	6	9	35	50
Look to relatives for support	6	9	38	47	3	21	35	41

*SA - Strongly Agree

A - Agree

D - Disagree

SD - Strongly Disagree

consumption management. This was accomplished by forcing the economic satisfaction measure collected at time one (immediately following unemployment) into the regression equation before changes in consumption management were allowed to enter the equation. The measure of economic satisfaction at time one was not a strong predictor of economic satisfaction one year later. The question which was of primary interest, however, was the extent to which changes in consumption management further influenced economic satisfaction at time two. Results of the multivariate analyses are reported in Table 3.

For both husbands and wives, the extent to which borrowing increased was the strongest predictor of the economic satisfaction one year after first becoming unemployed. For wives, credit use was the sole significant variable and accounted for 22 percent of the variance beyond the time one measure of economic satisfaction. Behaviors to increase income such as taking on odd jobs and having another family member start to work was an additional significant predictor for economic satisfaction for husbands. Together, credit use and income raising accounted for 49 percent of the variance in

Table 2. Percentage of Husbands and Wives Reporting Expenditure Cutbacks Due to Unemployment.

Expenditure Cutbacks	Husbands					Wives				
	None	Occasional	Severe	Mild	Severe	None	Occasional	Severe	Mild	Severe
Entertainment	9	24	27	18	24	12	21	15	29	24
Recreation	15	18	35	24	9	18	12	29	27	15
Food	27	29	24	18	3	9	41	29	15	6
Clothing	18	27	27	15	15	6	21	29	29	12
Gasoline	41	18	27	9	6	27	35	29	9	--
Home Furnishings	9	21	24	15	32	9	9	12	27	44
Restaurants	12	6	35	18	27	6	18	15	38	24
Vacations	12	12	18	15	44	9	3	6	32	50
Dental Care	27	18	18	18	21	27	21	15	15	24
Medical Care	32	24	18	15	12	38	24	12	15	12
Purchase of Cars	6	6	9	12	69	15	9	6	18	53
Luxuries	3	15	6	18	59	--	15	6	29	50

economic satisfaction scores for husbands after controlling for initial satisfaction.

DISCUSSION

Husbands and wives reported similar changes in consumption management as a result of unemployment. It is evident also that the sample of husbands and wives included in this study reported that their families had responded to the financial concerns of unemployment in a manner similar to their counterparts during the depression and more recent years of inflationary and recessionary economic periods. The findings of this study support those of earlier studies concluding that when struck with financial stress, families react by implementing changes in their consumption management. All consumption changes were implemented by at least some of the families studied. The greatest changes reported were in the area of altering or reducing the allocation of dollar resources to consumption needs. Fewer changes were made in income raising and credit use.

The nonsignificant relationship of economic satisfaction at the onset of unemployment to economic satisfaction one year later suggests that being unemployed may indeed impact the perception that an individual has concerning their economic well-being, especially in the early stages of unemployment. The findings of the multiple regression analysis indicate that the consumption management change, which is the strongest predictor of economic satisfaction one year following the onset of unemployment, is whether or not the family needed to borrow money to pay bills and meet other needs and goals. The more the family borrowed, the more both husbands and wives were likely to express less satisfaction with their economic situation.

It was interesting that increased use of credit was one of the less frequently implemented management strategies, yet it proved to be the strongest predictor of economic satisfaction one

Table 3. Stepwise Regression Analysis of Economic Satisfaction onto Consumption Management Strategies. Betas for Wives (n=34) and Husbands (n=34).

Management Strategy	Economic Satisfaction	
	Wives	Husbands
Time 1	-.01 ^{NS}	.11 ^{NS}
Planning		
Self-Reliance		
Shopping Practices		
Store Choice		
Income Raising		-.36
Credit	-.49	-.66
Cutbacks		
<hr/>		
Adjusted R ²	.19	.53
Significance	.018	.001
R ² due to Behavior Change	.22	.49

year following the layoff. The relationship between credit use and economic satisfaction may be explained as the inability of the family's financial resources to meet the needs and goals of the family, the inability of the family to comfortably change those needs and goals, or the inability of the family to implement those management strategies which had a less negative impact on economic satisfaction. According to Gurin and Gurin (7), families who implemented necessary changes were more likely to accommodate and report greater satisfaction. Families who used credit while unemployed may have felt somewhat out of control and thus felt greater dissatisfaction. Obviously, these family members sense an inability of their present income to meet family needs and are most likely concerned with the ability of their financial resources to also meet long term needs.

The extent to which the family implemented income raising strategies was an additional significant predictor of economic satisfaction one year following the onset of unemployment for the husbands. Again, income raising was a less frequently implemented management strategy. Income raising activities included taking odd jobs and having other family members begin work. The relationship was negative, indicating that an increase in income raising behaviors was related to lower levels of economic satisfaction.

The relationship between an increase in income raising behaviors and economic satisfaction for husbands may be explained by considering the potentially lower income derived currently from

odd jobs or having another family member work as compared to the income from the husband's previous job. From a longer term perspective, the husbands may be concerned about the ability of the amount of money already saved and in retirement plans to meet the needs of a more uncertain economic future. As the primary breadwinner of the family, these husbands may be perceiving that these income raising behaviors are not sufficient to fulfill the family's financial needs and goals for either long or short term. Income raising was not a significant predictor of economic satisfaction for wives. Wives may have viewed the income raising behaviors as short term means of paying bills and meeting basic needs for the family during a period of financial stress. Since the wives in this particular sample did not tend to work outside the home, they may not have sensed or felt responsible for the relationship between the job and the amount of income brought into the home. Additionally, if the wife did start to work outside the home due to the unemployment of the husband, she may have developed a greater sense of control over the money coming into the home, thus reducing negative aspects of the behavior.

As conclusions are drawn based on the findings of this study, it is important to note the self report method of data collection. Similarities between the findings of this study and those of others on the extent to which families made changes due to unemployment, however, lessens this concern. Additionally, the small sample size may limit the generability. The sample is approximately 3.4% of the population of the town and a somewhat higher percentage of the population of blue collar workers who were laid off. As a result, the findings are most generalizable to other families in small, rural towns which have one primary employer.

The findings, however, suggest that certain consumption management strategies may be more beneficial than others in helping families cope with unemployment. Similar research on families from rural towns with more than one primary employer, on families living in urban areas, and on larger samples would be beneficial for those individuals responsible for working with unemployed families by providing more knowledge concerning management strategies to recommend.

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CHANGES IN ASSET RESOURCES DURING RETIREMENT

Jeanne M. Hogarth, Cornell University¹

ABSTRACT

This research explored changes between levels of financial resources at the onset of retirement and several years into retirement. Nominal value of total assets increased over the eight year period, primarily due to increased market values of owned housing. Holdings in bonds, savings, and life insurance declined over the period. Although no clear patterns of asset decumulation were apparent, retirees seemed to move assets out of low return, fixed income assets and to have a preference for liquid assets. Factors affecting a change in a given asset were changes in other assets, income, area of residence, a change in marital status, education, age, sex, race, and marital status.

Demographic trendlines for the proportion of persons 65 and over, for labor force participation rates of persons 55 and over, and for life expectancies all portend strains on both public and private resources supporting retirees. In 1980, 40 percent of income in households with a member age 65 or over came from Social Security, with 15 percent coming from pensions, 19 percent from earnings, 22 percent from assets, and the remainder from other sources (e.g. public assistance) [Upp, 1983]. The "income portfolio" of married respondents in the 1980-81 Social Security Administration's New Beneficiary Survey was 34 percent Social Security, 19 percent pensions, 20 percent earnings, and 23 percent asset income [Maxfield, 1985]. Clearly, assets, and the income they generate, are essential to the economic security of retirees.

Of these four major sources of retirement income, pension benefits usually are fixed at the time of retirement; the other three sources are relatively flexible and allow the household to adjust to changing price levels. The fixed nature of pension benefits implies that the purchasing power of the benefits can diminish considerably over time. Fox estimated that the real value of private pensions declined by about 20 percent during the first 4 years of retirement for persons retiring between 1968 and 1973 [Fox, 1984].

Social Security retirement benefits are adjusted every January to partially offset the effects of inflation from the previous year. However, problems with this adjustment are that it comes one year after retirees have experienced the rise in prices and it is only a partial adjustment relative to the CPI.

Earnings based on wages and salaries have tended to keep pace with price levels. A retiree working part time could find that wage increases help ameliorate the effects of rising prices. However, only about 25 percent of retirees receive wages [Upp, 1983; Maxfield, 1985]. And it is likely that desire and ability to work decline with age, just when the need to buffer retirement income against the effects of rising prices is becoming greater.

Finally, assets can be managed to provide rates of return which can maintain a constant level of purchasing power for the household. Asset management becomes an especially important issue for household who are asset-rich and cash-poor (i.e. those who hold a large proportion of their wealth in non-financial assets such as real estate). The ability of a retired household to generate income from assets depends on the type of assets held, the household's risk preferences, its knowledge of financial products and markets, and its general skills in financial management.

Educators, personnel departments, and financial planners are often called upon to help with retirement planning, both planning for retirement and asset management in retirement. While a good deal of popular literature is available, there is a relatively small research base on which to build educational and advising programs. It would be particularly helpful to know what financial resources people have available to them during retirement and how these resources are used throughout retirement, through portfolio rearrangement as well as dissaving and liquidation. In addition, in order to determine appropriate and feasible policies with respect to retirement income programs, policy makers need to be supplied with current information on retirement dissaving practices.

The purpose of this research was to determine any changes between the level of financial resources at the onset of retirement and a number of years into retirement, to explore patterns of asset decumulation, and to determine factors affecting changes in asset resources during retirement.

PREVIOUS WORK

Research on assets in retirement falls into two basic categories: descriptions of income and asset levels at retirement and/or at some point into retirement and life cycle analysis of savings.

Descriptive studies by Social Security Administration researchers have provided a picture of assets prior to and during retirement. Epstein and Murray's 1963 study of postretirement assets

¹Assistant Professor,
Consumer Economics and Housing

revealed that the average asset portfolio consisted of liquid financial assets (20%), other financial assets (20%), equity value of house (33%), and other equity (27%). Retirement income came primarily from Social Security and earnings with some interest income. Seventeen percent reported a decrease in assets over a given year, with illness being the major reason for a decline in assets [Epstein and Murray, 1967].

Other retirement income studies conducted by Wentworth and Motley [1970], Sherman [1973], and Upp [1983] have included measures of asset income as part of the retirement income portfolio. However, no special analysis of asset management was included. Similarly, the most recent Survey of Consumer Finances [Avery, Elliehausen, and Canner, 1984] provides information on assets at and in retirement, but only in a cross section perspective.

The life cycle hypothesis of savings specifies a "hump" profile with persons saving in middle stages of their lives and dissaving in early and later stages, such as retirement [Ando and Modigliani, 1963; Lydall, 1955; Sharrocks, 1975]. Numerous studies have been conducted on the asset accumulation of persons prior to retirement. Research by Hemming [1977], Munnell [1976], and Sobol [1979] are representative works in this area. However the asset "decumulation" literature is somewhat more sparse. Empirical evidence using "macro" data (i.e. data aggregated at the national level) does not show consistent support for this dissaving-at-retirement hypothesis [Davies, 1981; Mirer, 1980].

Using net worth as a dependent variable, Davies found persons aged 65 to 85 dissaved at a rate of 2.9 to 3.7 percent per year, a rate significantly lower than the rate of 7 to 9 percent predicted by the life cycle hypothesis [Davies, 1981]. He indicated that uncertainty about life expectancy was a major factor in the difference between the expected and actual dissaving rates. However, his findings were based on cross-sectional data and it may not be appropriate to infer the behavior of one cohort from the behavior of another.

Similarly, Mirer [1980] found a median dissavings rate of 1.2 percent, using the saving/wealth ratio as the dependent variable and cross sectional data. He also found that households with lower levels of wealth and income had greater dissavings than those with higher wealth and income. Mirer did not include present values of Social Security and pension benefits in his wealth measure, thus his estimates may have an upward bias.

Kotlikoff, Spivak and Summers [1982] studied the ratio of consumption during old age to lifetime consumption as a measure of the adequacy of lifetime savings using Retirement History Study data. Their results indicate that over 90 percent of married couples can afford old age consumption levels of at least 80 percent of their lifetime consumption level, 85 percent of couples could afford to purchase a larger annuity in their old

age than they could at age 30, and that 73 percent of couples could afford to consume at a higher level than their lifetime consumption level, but only until age 88. Further, they found the determinants of the ratio between the two consumption streams to be a function of age, education, race, home ownership, Social Security (the ratio of Social Security to the present value of lifetime income resources), pensions (a similar present value ratio), future value of earnings, and lifetime income resources interacted with Social Security. They conclude that there is no evidence of under-saving among the elderly. However, they include the present value of Social Security benefits as part of the savings portfolio of the elderly. And while this may be an appropriate measure for this particular cohort, it may not be an appropriate measure to use with future cohorts.

Hammermesh [1982] examined the effects of life expectancy on the timing of retirement and consumption during retirement. Life cycle theory posits that persons will consume less and work more if they expect to live longer. However, he found that increased longevity had not been met by spending cuts which would enable people to maintain their real consumption over longer lifetimes. If such is the case, then asset decumulation should take place at a more rapid rate as a person ages.

Finally, since the focus of this study is changes between and among assets, it is important to couch the study in a portfolio context. While there is a body of literature on asset and debt portfolios (see, for example, Bryant, 1986), little work has been done which focuses on asset portfolios and portfolio adjustment in retirement.

In summary, empirical results are mixed with regard to life cycle effects and existing models give no indication of patterns of asset decumulation. While the life cycle hypothesis indicates that dissaving should occur during retirement, rather low levels of dissaving have been found in empirical studies. Nor do other descriptive studies of asset and income portfolios at or near retirement provide any evidence of what pattern, if any retirees follow in their dissavings nor the factors affecting portfolio adjustments. The use of a longitudinal data set may be helpful in clarifying some of these patterns and relationships.

MODEL

The portfolio model posited for this study is that the change in a given asset is a function of changes in other assets in the portfolio and of a set of socio-economic variables which are likely to affect asset use:

$$\Delta \text{Asset} = f(\Delta \text{OA}, Z)$$

where

OA = other assets in the portfolio

Z = a vector of socio-economic variables

The specific OLS regression model to be tested empirically is:

$$\Delta \text{Asset} = (\Delta \text{OA}, \text{Ed}, \text{Age}, \text{MS}, \text{CMS}, \text{Sex}, \text{Race}, \text{Urban}, \text{Health}, \text{Income})$$

where:

Assets = Savings bonds; stocks and other bonds; balances in checking accounts; balances in savings accounts; cash value in life insurance policies; market value of house; sum of financial assets; sum of total assets

Ed = number of years of schooling completed

Age = age in 1979

MS = marital status (1=married)

CMS = change in marital status from married to widowed (1=widowed)

Health = perception of health compared to others of same age (1 = health is better or the same as others)

Income = income in 1979 from earnings; railroad retirement; military, government, and employer pensions; SSI; public assistance; Social Security; disability benefits from Social Security and others; survivors' benefits; black lung; interest

Sex 1 = male

Race 1 = white

Urban 1 = lives in urban area

This portfolio approach results in a simultaneous equations system model. Consequently, the parameter estimates may not be consistent. Thus, the results reported here should be considered preliminary, subject to further validation.

DATA AND VARIABLES

The sample for this study was drawn from the Social Security Administration's Longitudinal Retirement History Surveys (LHRS) from 1969 to 1979. The LHRS included men and single, widowed, divorced or separated women who were ages 58 to 63 in 1969. The LHRS did not include women who were living with their husbands, although the widow of an LHRS respondent continued to be interviewed after her respondent-husband died. The final sample included 11,153 respondents in 1969.

Respondents who were working in 1969 but who reported themselves retired in 1971 were included in this study. This controlled the length of retirement and permitted some evaluation of pre-retirement data. The potential age range in 1971 was 60 to 65. Data from 1979 were used to determine changes during the retirement period; respondents ages in 1979 ranged from 68 to 73. Because data from both time periods were needed, only respondents with "complete" data from 1969 through 1979 were included; the final sample contained 701 respondents.

Of necessity, this is a study of survivors. Since the LHRS contains information from widows of respondent males, there is some control for

married couples. No such control exists for single persons, however. This study will focus on these survivors, recognizing the sample selection bias inherent in this approach.

Financial and real estate asset variables studied were the values of: U.S. savings bonds, stocks and other securities, cash in savings accounts, cash in checking accounts, cash value of life insurance, and the market value of the respondent's house if a homeowner. Values of these variables were measured in 1971 and again in 1979. Summary variables were created to study financial assets (bonds, stocks, checking and savings accounts and life insurance) and total assets (financial assets plus the value of owned housing). For a discussion of net asset variables, please see Appendix Note 1.

ANALYTIC DESIGN

The set of dependent variables of interest is the change in the value of assets from 1971 to 1979. There are several possible schema which could be used to determine the change in value. The one which is explored in this study is a straightforward nominal dollar change between 1971 and 1979. This scenario could be best described as the "spend all interest, leave the principal intact" scheme.

To analyze the data, a set of difference variables was created. These variables represent the difference between the actual values in 1979 and a set of expected values in 1979, which in this case are the values in 1971. Thus if a household held a \$10,000 savings account in 1971, it was expected that they would withdraw the interest and the \$10,000 principle would remain intact in 1979. The expected value (\$10,000) was subtracted from the actual value reported in 1979. A positive difference variable would indicate that the household was holding more of this asset than expected; a negative value indicates that the household is holding less than the expected value.

DESCRIPTIVE RESULTS

The mean and median values for the financial and other assets held in 1971 and 1979 as well as for the socio-economic independent variables are reported in Table 1. Information on the percentage of households not holding certain assets is included as well as information on constant dollar values of assets in 1979. Most households held checking and saving accounts, life insurance and owned a home. The aggregate data in Table 1 suggest that, on average, the constant dollar value of assets held in bonds and cash value of life insurance declined, while the value of assets in stocks, checking and savings accounts and value of owned housing rose. In the aggregate, the values of total financial assets and total assets rose.

Table 1

MEANS AND MEDIANS OF FINANCIAL AND OTHER ASSETS, 1971 AND 1979
 MEANS, MEDIANS, AND PROPORTIONS OF INDEPENDENT VARIABLES
 CURRENT DOLLAR FIGURES

	Mean	Median	S.D.	% Reporting	Mean
			0	(Constant \$)	
1971					
Bonds	\$1,252.27	\$ 0	4,426	70	
Stocks	6,253.86	0	34,073	75	
Checking	839.10	288	2,010	26	
Savings	6,949.65	1,900	14,208	32	
Life Insurance	7,338.35	3,000	13,647	19	
House	15,336.44	12,000	17,757	19	
Mortgage	1,285.72	0	3,794	81	
Sum Financial Assets	23,903.60	11,767	43443		
Sum Total Assets	39,078.40	28,804	51,21		
1979					
Bonds	935.68	0	4,247	82	739.19
Stocks	7,529.37	0	39,253	79	5,948.20
Checking	1,005.06	350	2,411	21	793.99
Saving	13,248.00	4,000	23,418	25	10,465.92
Life Insurance	5,809.26	1,925	16,356	23	4,589.31
House	29,415.10	24,000	36,518	26	23,237.93
Mortgage	1,065.04	0	4,453	89	
Sum Financial Assets	25,862.40	14,946	57,113		20,431.29
Sum Total Assets	55,086.63	37,178	77,558		43,518.44
Independent Variables					
Education	10.02	10	3.55		
Age	71.34	71	1.50		
MS	.77				
CMS	.25				
Sex	.86				
Race	.94				
Urban	.57				
Health	.69				
Income	8,311.68	6855	6399		

Information on the means of the difference between the actual value of assets in 1979 and the expected value (i.e., the value in 1971) is presented in Table 2. Over the eight years being studied, on average, balances in checking accounts rose, as did the value of owned housing and stock held and the value of total assets. Assets held in bonds, savings accounts, and life insurance declined on average, as did the value of total financial assets.

The decline in the value of bonds held may be a reflection of the difference between the rate of return on savings bonds and the rate of inflation. As inflation eroded the value of the accruing interest, retirees may have decided to cash these in and use or re-invest the proceeds. The decline in the value of life insurance might be expected since the elderly may feel less of a need for life insurance to support dependents and since life insurance paid very low rates of return relative to inflation in the mid-1970s.

Table 2

MEAN DIFFERENCES BETWEEN OBSERVED (1979) AND EXPECTED (1971) VALUES

Variable	Mean	Median	S.D.
Bonds	-\$ 305.23	\$ 0	3,290
Stocks	1,269.65	0	26,155
Checking	267.15	233	1,888
Saving	-83.19	4,511	20,624
Life Insurance	-1,490.70	0	14,668
House	14,219.36	9,500	27,596
Sum Financial Assets	-529.66	1,800	40,928
Sum Total Assets	13,636.89	8,923	52,417