

While the need-feasibility-desirability framework developed here has the potential to capture the advisability of beginning any contemplated price information program, its power in this regard is unfortunately limited. Specifically, the limitation arises from the lack of a sound and comprehensive basis with which to aggregate the several need and feasibility factors. Is dispersion more important in establishing need than the product's share of the budget? Or, should homogeneity contribute more to an information program's feasibility than the potential for collection error? Until these questions can be answered better, the user of the framework may wish to try his or her own weighting scheme or try a type of "sensitivity analysis" to establish the stability of a particular outcome.

Application of the Framework to Six Product Markets

Six product markets were chosen in which to apply the evaluation framework. The accompanying tables summarize the evaluations made for the Lafayette/West Lafayette, Indiana market. In the case of several need and feasibility factors, specific products within the six product groups were used for the evaluation. These were

1. food and sundries: a 100-item food and non-food marketbasket
2. auto parts: 48 month, maintenance free battery
3. optical services and products: soft contact lenses and associated services and cleaning products
4. insurance: auto insurance
5. credit: 36 month, new car loan
6. home appliances: 19 inch, solid state color television.

The results of the need evaluations are presented in Table 1. High, moderate, or low characterizations only were attempted. The overall information need rating was constructed using equal weights for all eight factors. Food markets were determined to have the greatest need despite low dispersion. Automobile parts and optical services/products received relatively low evaluations of need due to a pattern of moderation across all factors. For reasons already discussed, the reader should not be concerned with the absolute magnitude of these overall ratings but instead use them as a set of relative measures. Note too that these relative ratings might differ if done for a different geographical market.

Table 2 summarizes the determination of an

information system's feasibility in these six product markets. In general, the feasibility evaluations are not location specific, as were the need evaluations. Optical services/products were judged to be the most feasible market for a price information system. Food received a very low feasibility rating due to sellers' margin shifting potential, necessary frequency of provision, and the inability to use low cost, broad coverage media for dissemination. Overall evaluations were again made by assigning equal importance to all feasibility factors.

When the need and feasibility ratings are considered jointly, a rating of the desirability of a price information system can be obtained for a product market. Table 3 reports desirability or advisability ratings for the six product markets, calculated as the simple sum of the need and feasibility ratings. Insurance receives the highest rating, followed closely by appliances, credit, and optical services/products. Food, despite its high need rating, has the lowest desirability rating. No wonder our food price reporting experience was unsettling.

Conclusions

The framework just presented and tested likely does not produce distinctions between product markets which are wide enough. Our belief is that need and feasibility likely differ more between product markets than our crude scale and weighting system could capture. More work is clearly called for to refine and enrich the framework begun here. In spite of its shortcomings, however, use of an evaluation procedure such as this would be a useful exercise for anyone contemplating any type of a buyer information program.

This framework does suggest quite clearly, that net information system payoffs are likely to differ substantially among products. Further, public reporting although justified (need), may be infeasible and therefore inadvisable; or, while feasible, may not be justified. Crucial factors in these evaluations seem to be price dispersion, search time required, prior information available to buyers, and the feasibility of the use of media with high market penetration.

Table 1. The Need for Consumer Price Information in Six (6) Markets

FACTOR ^a	FOOD & SUNDR.	AUTO PARTS	OPTICAL SVCS/ EQUIP	INSUR- ANCE	CREDIT	HOME APPLIANCES
(+) Dispersion of Prices ^b	L	M	M	H+	M	L
(-) Number of sellers ^c	L	M	M	H	M	M
(+) Search time required	H	L	M	M	L	H
(+) Share of annual budget ^d	H+	L	L	M	M	L
(+) Price saliency	H	H	L	M	H	M
(-) Prior information available	H	M	L	L	M	M
(+) Frequency of price changes	H	M	L	L	M	M
(+) Knowledge required for effective search	L	M	H	M	M	H
OVERALL INFO NEED RATING ^e	19	15	15	17	16	16

a Hypothesized correlation between factor and information need is in parentheses before each factor. L = low, M = moderate, and H = high.

b Dispersion in a Lafayette, Indiana sample (1981) was car battery (26%), soft contact lens (20%), auto insurance (63%), auto loan (21%), and 19 inch, color TV (8%); food/sundries was 6% based on a 4 city, midwest survey in 1979-80. Dispersion expressed as the price range as a percentage of the average price.

c Based on "Yellow Pages" estimate in Lafayette, Indiana. Counts of firms or brands were 6-8, 15-20, 20-25, 40-50, 25-30, and 10-20, in order for products listed above, left to right.

d Based on BLS-CPI expenditure weights, December 1978. Weights in order from left to right were, 16-18%, 1-3%, less than 1%, 4-6%, 7-9%, and 2-4%.

e If the factor is positively related to feasibility, Low = 1, Moderate = 2, High = 3, High+ = 4; if negatively related, Low = 3, Moderate = 2, High = 1. The overall rating is the sum of the scores for all factors; the greater the rating, the greater is the need for consumer price information.

Table 2. The Feasibility of Public Provision of Comparative Price Information in Six(6) Markets

FACTOR ^a	FOOD & SUNDR.	AUTO PARTS	OPTICAL SVCS/EQUIP	INSUR-ANCE	CREDIT	HOME APPLIANCES
(+) Product homogeneity	L	M	H	M	L	H
(-) Margin shifting potential	H+	M	L	M	L	M
(-) Number of sellers	L	M	M	H	M	L
(-) Frequency of provision necessary	H	M	L	L	M	M
(+) Feasibility of use of public media	L	L	M	H	H	M
(-) Potential price collection error	H	M	M	L	L	M
(-) Importance of service(s)	M	L	H	M	L	M
(-) Ability to impose other rationing methods	L	L	L	M	H	L
(+) Ease of representing store price structure via compact message	L	M	H	H	H	M
OVERALL FEASIBILITY RATING ^b	13	19	22	21	21	21

a Hypothesized correlation between factor and reporting feasibility is in parentheses before each factor. L = low, M = moderate, H = high.

b If the factor is positively related to feasibility, Low = 1, Moderate = 2, High = 3; if negatively related, Low = 3, Moderate = 2, High = 1, High+ = 0. The overall rating is the sum of the scores for all factors; the greater the rating, the more feasible is a price reporting system hypothesized to be.

Table 3. Potential Success of Public Price Reporting in Six(6) Markets

RATING ^a	FOOD & SUNDR.	AUTO PARTS	OPTICAL SVCS/EQUIP.	INSUR-ANCE	CREDIT	HOME APPLIANCES
NEED RATING	19 H	15 L	15 L	17 M	16 M	16 M
FEASIBILITY RATING	13 L-	19 M	22 H	21 H	21 H	21 H
DESIRABILITY RATING ^b	32 L	34 M-	37 M+	38 H-	37 M+	37 M+

a Numerical scores transferred from Tables 1 and 2. L = low, M = moderate, H = high.

b Sum of need and feasibility; indicates desirability or advisability of adopting a public price reporting system.

References

1. Boynton, R.D., V. McCracken and S. Irwin, "Food Advertising as a Source of Consumer Information: A Case Study of Newspaper Advertising and its Relationship to Public Price Reports". NC-117 Monograph No. 17 (forthcoming), University of Wisconsin, Madison, March 1982.
2. Boynton, R.D., J.N. Uhl, B.F. Blake and V. McCracken, "An Analysis of the Impacts of Comparative Foodstore Price Reporting on Price Structures and Consumer Behavior". Research Bulletin No. 968, Purdue University, Agricultural Experiment Station, August, 1981.
3. Devine, D.G., "A Review of the Experimental Effects of Increased Price Information on the Performance of Canadian Retail Food Stores in the 1970's". Canadian Journal of Agricultural Economics, Vol. 26:3, November, 1978, pp. 24-30.
4. Devine, G.D. and B.W. Marion, "The Influence of Consumer Price Information on Retail Pricing and Consumer Behavior". American Journal of Agricultural Economics, Vol. 61:2, May, 1979 pp. 228-237.
5. Maynes, E.S., J.N. Morgan, W. Vivian and G.J. Duncan, "The Local Consumer Information System: An Institution To Be". Journal of Consumer Affairs, Vol. 11:1, Summer 1977, pp. 17-33.
6. Mincer, J., "Market Prices, Opportunity Costs, and Income Effects". Measurement in Economics, Stanford University Press, 1963.
7. Nelson, P., "Information as Consumer Behavior". Journal of Political Economy, Vol. 78, 1970, pp. 311-329.
8. Perloff, J., "Lowering Prices Through the Use of Comparative Price Surveys". Unpublished paper, University of Pennsylvania, Department of Economics, March, 1980.
9. Rothschild, M., "Models of Market Organization with Imperfect Information: A Survey". Journal of Political Economy, Vol. 81:6, November-December, 1973, pp. 1283-1289.
10. Salop, S., "Information and Monopolistic Competition". American Economic Review, Vol. 66:2, May, 1976, pp. 240-45.
11. Scitovsky, T., "Ignorance as a Source of Oligopoly Power". American Economic Review, Vol. 40:2, May, 1950, pp. 48-53.
12. Shephard, L., "Toward a Framework for Consumer Policy Analysis". Journal of Consumer Affairs, Vol. 12:1, Summer 1978, pp. 1-11.
13. Stigler, G., "The Economics of Information". Journal of Political Economy, Vol. 69:3, June, 1961, pp. 213-225.
14. Uhl, J.N., "Public Provision of Comparative Foodstore Price Information: Problems, Potentials and Issues". NC-117 Monograph No. 17 (forthcoming). University of Wisconsin, Madison, March 1982.

AN INTEGRATED APPROACH TO FINANCIAL CRISIS MANAGEMENT:
A FAMILY CONTEXT MODEL

Joan Brandt-Erichsen, Oregon State University¹

Abstract

With the expected increase in people turning toward financial counseling services, it becomes important to examine not only the type of assistance available, but also the quality of the service provided. One type of service, Consumer Credit Counseling Service (CCCS), was used as the setting for the potential application of an integrated approach to financial crisis management. A proposed model, the Family Context Model, integrates the financial aspects of counseling with the personality characteristics and interactions of individuals within the framework of family crisis theory.

In the 1980's the field of financial counseling is expected to undergo a marked expansion. In coping with increasing inflation, rising unemployment, and general concern for making ends meet, more and more people are turning toward financial counselors for assistance with financial matters.

There are two types of services available for those in need of financial counseling: financial planning and financial counseling. Financial planners work with individuals and families to help them plan and meet financial objectives. The main goal of the financial planner is to help people better understand their financial affairs and plan for a more productive future (3). Financial counselors work in community or government funded agencies and operate on a non-profit basis. The counselors work with individuals and families to help them meet their financial obligations and improve their financial management skills. The main services provided by financial counselors are debt adjustment and money management education. Some commercial agencies charge their clients for services and operate on a profit basis (4).

One type of financial counseling agency, the Consumer Credit Counseling Service (CCCS), will serve as the setting for the potential application of the model presented in this paper. CCCS was one of the first non-profit community based financial counseling services in America. In 1957 there were two CCCS agencies and in 1970 there were a total of 200 agencies. This expansion raises the issue of whether or not the CCCS programs are able to meet the clients' objectives.

Five researchers have evaluated the CCCS agencies by investigating clients' behavior and attitudes

(7, 13, 5, 15, 11). These five researchers reported that the counseling programs appeared to be helping clients out of their immediate indebtedness but concluded that more emphasis needed to be spent on changing clients' behavior to help them avoid future financial difficulties.

Behavior change is most often prompted by attitudinal and value changes. It may be that clients' future financial difficulties could be avoided if counseling focused not only on the financial aspects of the family but also on personality characteristics and family interaction variables. In fact, it has been acknowledged in the financial counseling literature (7) that personality characteristics and family interaction variables may influence one's financial crisis situation; however, it is recommended that the financial counselors refer the client to another type of counselor to handle those problems. One short-coming of this approach is that a client must deal with two counselors in independent sessions.

The model proposed here, the Family Context Model, suggests that financial problems do not occur in a vacuum but that individual characteristics and interactions of family members are major factors in determining whether or not a particular financial problem will produce a crisis situation. It may thus prove fruitful for financial counselors to consider more than financial variables in their attempts to help individuals and families understand how the crisis situation arose, what they can do to deal with the crisis, and how they can avoid similar situations in the future.

Framework for the Development of the Family
Context Model

The framework for the Family Context Model is as follows:

- I. Types of counselors
- II. Crisis situations: Determining factors
 - A. Definitions of crisis situations
 1. Definition of stress
 2. Definition of crisis
 - B. Family context: GAVES variables
- III. Vulnerability to and recovery from crisis situations
 - A. Application of Burr's principles
 - B. Determining level of functionality

Types of Counselors

The Family Context Model suggests that there be at least two levels of financial counselors: (1) those who are trained specifically at handling financial matters only, and (2) those trained to

¹Ph.D Candidate, Family Life Department and Family Resource Management Department

handle financial matters, personality characteristics, and family interaction variables. There may be sublevels within these two levels, and it would be the responsibility of individual States to determine qualifications and licensing procedures. Excellent manuals have been written describing the art of financial counseling on the first level (6, 8, 12). Therefore, the specifics of that type of counseling will not be discussed here. Specifically, the Family Context Model addresses the second level: the integration of marriage and family crisis models with the already recognized techniques of financial counselors for dealing with financial crisis situations.

Crisis Situations: Determining Factors

Definitions of Crisis Situations

Definition of Stress. Frequently the words stress and crisis are used interchangeably in the literature describing distressing financial situations. However, the two words have quite separate and distinct meanings. In the Family Context Model, stress is defined as the nonspecific response of the body to any demand made upon it (16). Stress consists of the biochemical reactions that occur in the body when one experiences a stressor such as the death of a spouse or the burning down of one's home. Thus, stress is ongoing, may build up over time, and a certain amount of stress is normal. In some people stress is expressed as anxiety or worry ("Will I have enough money to get me through until payday?"); for others it may be expressed as nervousness, tension, or headaches. If stress builds up it can result in emotional and physical illness which can precipitate a crisis situation for an individual or family.

Definition of Crisis. In the Family Context Model crisis situations are defined as those in which the family system is so disrupted or disorganized that it is not able to operate in its routine or usual manner. The normal family routines are upset and the day-to-day needs of the family cannot be met. In a crisis situation the family is faced with a problem that cannot be readily resolved by using the coping mechanisms that worked in the past. Faced with mounting tension and anxiety, the family members become even less capable of finding a solution. In this situation individuals feel helpless, and are often unable to initiate actions which could solve the problem (1).

From this point of view, then, stress and crisis may be viewed as being on a continuum with stress at one end and crisis at the other end. As stress increases, a crisis may be produced.

Family Context: GAVES Variables

All financial crises occur in a family context. As individuals we are all members of a family regardless of whether or not we are currently

living in a family situation. A family can be conceived of as an arena of interacting personalities who are organized internally into positions, norms, and roles (9). Father, mother, and children all have proscribed positions, roles, and norms which they try to maintain. Viewed externally, the family can be seen as an organized group which engages in transactions with other associations.

How family members view each other, their goals, attitudes, values, expectations, and their interactions with each other and other organizations will be factors in determining how well they weather stresses and financial crises when and if they occur. In the Family Context Model these variables are labelled GAVES (for goals, attitudes, values, expectations, and external supports). It is hypothesized in this model that the GAVES of each family member will influence the family's vulnerability to and ability to recover from stress and crisis situations. Specifically, it is hypothesized that high congruency (similarity and mutual supportiveness) between family members' goals, attitudes, values, expectations, and supports will be related to low vulnerability to stress and ease of recovery from crisis situations.

Vulnerability to and Recovery from Crisis Situations

Application of Burr's Principles

Burr (2) has suggested that nine principles are related to an individual's vulnerability to stress and ability to recover from crises. In the model proposed here, Burr's principles are utilized as dimensions for evaluation of the level of family functioning at the time of the initial counseling interview. One additional dimension has been added: that of "responsibility". These ten dimensions of family functioning are illustrated in Figure 1 and are defined below.

Determining Level of Functionality

After interviewing the clients and assessing the areas covered in the ten dimensions of family functioning, the counselor can use that information to determine the family's "level of functionality" (14). The level of functionality in the Family Context Model refers to the level at which the family members' needs are met on a day-to-day basis. In determining level of functionality the counselor rates each family member on all of the ten dimensions. It is hypothesized that the degree of congruence of the GAVES variables will influence the family's level of functionality. In addition it is hypothesized that the level of functionality will be reflected in the degree of congruence between family members on the ten dimensions of family functioning. Thus the level of functionality may be measured by the degree of congruence between family members on the ten dimensions of family functioning.

In the Family Context Model this degree of congruence is viewed as a "functionality index".

Figure 1. Determining Level of Functionality (each family member is rated on all of the ten dimensions of family functioning)

	<u>Adaptability</u>	
Flexible.....		Rigid
	<u>Integration</u>	
Well-organized.....		Disorganized
	<u>Blame</u>	
External.....		Internal
	<u>Perception of Severity of Situation</u>	
Normal.....		Abnormal
	<u>Decision-making</u>	
Democratic.....		Authoritarian
	<u>Responsibility</u>	
Shared.....		Individual
	<u>Anticipation</u>	
Long.....		Short
	<u>Participation of Wives in Roles Outside Home</u>	
Moderate.....		Lacking/over-involved
	<u>Marriage</u>	
Satisfied.....		Dissatisfied
	<u>Prior Learning</u>	
Experience.....		Inexperience

1. Adaptability refers to the family's flexibility in meeting situations.
2. Integration refers to the adequacy of the family's organization.
3. Blame for the stressful event can be placed either within the family or outside of the family system.
4. Perception of the severity of the situation can be either normal or abnormal.
5. Decision-making by the family can be of a democratic nature (family council) or can be authoritarian.
6. The responsibility for the situation can be either shared or held by one individual.
7. The amount of time that crisis events were anticipated can be either of short or long duration.
8. Participation of wives in roles outside the home can be non-existent, moderate, or over-involved.
9. Marital satisfaction of dissatisfaction will affect vulnerability to stress and ease of recovery from crisis situations.
10. Prior learning or experience with a crisis event may make families less vulnerable to that stress or crisis and facilitate the ease of recovery.

Once the counselor has this index identified for a family, two courses of action are possible: (1) Immediate discussion of areas possibly related to the crisis situation can begin and first steps toward a solution may be taken. (2) The groundwork for long-range plans to discuss the GAVES variables (as they relate to present level of family functionality) can be laid. This second step is most important because hypothetically the GAVES variables underly family functionality and affect whether or not individuals or families experience a situation as a crisis.

In summary, the counselor can help families find solutions to their own problems by helping them identify areas of incongruence on the ten dimensions of family functioning and by initiating discussion of the GAVES variables.

Conclusion

The Family Context Model offers a way for the financial counselor to look at the total situation of the family in order to identify ways of assisting the family through a crisis as well as investigating ways to prevent future crises. Financial counselors have typically focused only on the financial aspects of a crisis situation, leaving the family to deal with other variables on their own. The Family Context Model is an attempt to integrate both financial and personal interactional components into a single counseling situation.

This model should not be perceived as a prescriptive model but rather as one tool which the creative counselor can utilize in his or her repertoire of counseling techniques. This model is only a beginning; specific assessment tools and interview items need to be developed. With the development

of assessment tools and new approaches to counseling, the Family Context Model will then be ready for the next step: field testing.

References

1. Aguilera, D.C., and J.M. Messick, Crisis Intervention: Theory and Methodology, 3rd ed. (St. Louis: C.V. Mosby, 1978).
2. Burr, Wesley R., Successful Marriage: A Principles Approach (Homewood, Illinois: Dorsey Press, 1976).
3. Dickerson, Mary Dee, "The Home Economist as a Financial Planner: A Career Option", Journal of Home Economics 72 (Winter 1980), 40-41.
4. Downing, Betty Lou, Director, Consumer Credit Counseling Service of Albany, Oregon, personal interview, September, 1981.
5. Dwyer, E.K.H., "A Survey of Consumer Credit Counseling Service Clients", unpublished Master's thesis, Colorado State University, 1972.
6. Garrison, James E., Jr., David Myhre, E. Thomas Garman, and David Hutchins, Building Basic Financial Counseling Skills: A Leader's Guide for Group Training of Financial Counselors (Blacksburg, Virginia: Virginia Polytechnic Institute and State University, 1979).
7. Hall, P.B., Family Credit Counseling--An Emerging Community Service (New York: Family Service of America, 1967).
8. Harvey, Donald R., David C. Myhre, Michael J. Sporkowski, and Anita H. Webb, Developing a Personal Approach to Financial Counseling (Blacksburg, Virginia: Virginia Polytechnic Institute and State University, 1979).
9. Hill, Reuben, "Generic Features of Families under Stress", in H.J. Parad (Ed.), Crisis Intervention: Selected Readings (New York: Family Service Association of America, 1965).
10. Langrehr, Virginia, lecture given at Oregon State University, June, 1980.
11. Langrehr, Virginia, and Fred Langrehr, "Clients of Commercial and Not-for-Profit Credit Counseling Agencies: Their Evaluations of Agency Services and Money Management Behavior", Journal of Consumer Affairs 13 (1979), 321-333.
12. Myhre, David (Ed.), Financial Counseling: Assessing the State of the Art (Blacksburg, Virginia: Virginia Polytechnic Institute and State University, 1979).
13. Olsen, N.E., "A Study of the Effectiveness of Debt Counseling Services in Seattle, Washington", unpublished Master's thesis, University of Washington, 1968.
14. Scanzoni, John, Opportunity and the Family (New York: Free Press, 1970).
15. Schiller, M.K., "Family Credit Counseling: An Emerging Community Service Revisited", Journal of Consumer Affairs 10 (1976), 97-100.
16. Selye, Hans, Stress without Distress (New York: New American Library, 1974).
17. Sporkowski, Michael J., "Financial Problems as Stress and Crisis", in D.R. Harvey, D.C. Myhre, M.J. Sporkowski, and A.H. Webb, Developing A Personal Approach to Financial Counseling (Blacksburg, Virginia: Virginia Polytechnic Institute and State University, 1979).

ALTERNATIVE CAREER LADDER FOR CONSUMER AFFAIRS PROFESSIONALS

John R. Burton, Ph.D., University of Utah

In 1975 when I conducted my pioneering study of career opportunities for consumer affairs professionals (CAPs), I gave an optimistic report about the future growth of the profession. Business was either enlightened or was at least trying to ward off the possibility of government intrusion by initiating pro-consumer policies and/or establishing consumer affairs departments (CADs). In the public sector, the local government financial crises and the fear of Big Brother Government were not such greatly perceived problems and therefore, many state and local consumer protection agencies were flourishing.

We are all aware that a lot has happened to the consumer movement since 1975. Some see these changes as significant set backs for consumerism, others see them as the maturing of consumerism. However, no matter what the label, my observations as chair of the ACCI Career Opportunity Committee tell me the bottom line is that students of consumer science will have considerable difficulty in acquiring a CAP position. Whether this is the result of an anti-consumer mood or a reflection of the current depressed economy, the effect is still the same, you as consumer science majors will find that the pursuit of a career as a CAP difficult to attain. Note, however, I used the word difficult, I did not use the word impossible.

Most of you will probably not find CAP jobs available, especially at the entry level. My 1975 data indicated that a substantial proportion of the then employed CAPs had entered their firms in jobs other than that of consumer affairs professional. Many had previously been in marketing, public relations, or some related field. Although the newness of the CAP profession may have been the primary cause for this, I believe the situation has changed little since then.

For those of you who wish to become CAPs, your best bet may be to enter the profession through some door other than the front door. You may have to enter through a window or even down the chimney. In short, in order to get a job as a CAP, you may have to begin your career in some other type of job and in an office that is not involved in consumer activities. On the bright side, one of the positive aspects of a consumer science education is that it is usually a broad education that encompasses business, marketing, home economics, and communications. These academic skills are often highly marketable in the work world.

The basic tenet of this paper is to offer a simple model on how someone who was trained in college as a CAP can become a CAP by entering the work force in some other occupation. This model is illustrated in Chart 1.

You are now on the first step, that is, you are getting your consumer science education. The next step, GET ENTRY LEVEL JOB, is probably the most difficult. Ideally, you should attempt to get a job with a company that has an established CAD and then work your way into that department. Since this is not always possible, search for a company that is fairly large and has dealings with the consumer and therefore has the need and potential to support a CAD. In order to be initially hired by this company, you will have to find a position open that has a need for the talents you possess. Table 1 is designed to help you in that task. For example, if your educational background was oriented toward personal finance, you may be able to get a job in credit management or credit analysis in banking, insurance, retail merchandising, or in social science or government.

If you are lucky enough to get a job in a company that already has a CAD then you must make yourself known to that department. And even more important, you must show the management of that department that your educational background and interests will qualify you for any openings that may occur in that department. This may be more difficult than you think since some persons in CADs may not see the need for a person with a college education in consumer science or they may even be frightened by your expertise. If they do not have an opening, you may in a diplomatic way, show them how they can expand the functions of their department in a way that may include your expertise.

If you join a company that has no CAD, you have the difficult task of demonstrating to management that they should have a CAD or at least a CAP representative. The only real way to justify this need is by showing management how a CAD can increase the bottom line. This can be shown. I have listed several sources in Chart 1 that will help you do this. The bibliography in Claes Fornell's, "Increasing the Organizational Influence of Corporate Consumer Affairs Departments," The Journal of Consumer Affairs, Winter, 1981, offers additional sources. Once you have convinced management of the need for a CAD, you must then organize such a department and then last but not least, you attain your original objective and get yourself appointed to this department and hopefully as the head of the new CAD.

I said in the beginning of this paper that I was optimistic about the CAP career in 1975. I am still optimistic, but in a more realistic way. If you want a job you will have to plan more, be creative, and work hard in the search. If you do these, I sincerely believe that you will attain your goal of being a consumer affairs professional.

ON BEING CONSUMER EDUCATORS
IN THE 1980's

Gwen J. Bymers¹

Abstract

Consumer educators have real work to do in the 1980's. To help people make the best decisions they can in a sluggish market and to communicate to the larger society that consumer education is a positive and constructive force in the system. Fortunately, we do not have to do it all alone.

Introduction

Thank you for inviting me to give the Colston E. Warne lecture at this, the 28th annual meeting of the American Council on Consumer Interest. I believe I am the eleventh person to be so honored. It is indeed a humbling experience.

Colston Warne is a key figure who spans the history of formal consumer education. Colston, you were espousing the cause, contributing to the literature, and giving form to an ill-defined set of frustrations during the 1930's. You kept at it even during the 1940's when consumers were not getting very much t.l.c. You were around to withstand the abuse of McCarthyism and the anti-consumer attitudes of the 1950's. You were there to provide advice and council to those attempting to launch a renewed effort at consumerism in the 1960's. For the last 20 years you have watched the consumer movement gain confidence and respect; you have watched us fight amongst ourselves; you have seen the rise of new professional fields of consumer law and advocacy; you have witnessed phenomenal growth in consumer education and you have had the patience to watch us continue to try to define ourselves as a field. Colston, we salute you.

Retirement is really a privileged stage in the professional life cycle. You still do not have time to do or read everything you think you should, but you no longer have to feel guilty about it. That is, you don't feel guilty until you face the reality of trying to write a major paper for an audience such as this.

Deciding what I would talk about to this group this morning was not an easy task. Your interests are so varied, your expertise far exceeds mine in so many directions that I wondered what I could bring to you that would make getting here at 9:00 a.m. worthwhile.

I decided to talk to you as educators, as the people responsible for helping build the base of understanding needed to get along in our complex market-ordered economy. Specifically,

it is to you who teach consumer education courses at any level, you who teach the teachers and do the research in the whole broad areas of consumerism that I am talking today.

Please, I don't want the rest of you, the advocates, the lawyers, and other consumer affairs professionals to get up and leave, but I am giving you fair warning that I shall spend my time sharing a few ideas I have about consumer education. Where it has been, where it is going, and what we ought to be striving for in the next decade.

Consumerism 1980 Style

As I prepared for this talk, I found myself reading several premature obituaries of the consumer movement. Journalists with their professional flair have taken considerable note of the adversities currently facing consumer organizations. Anyone truly concerned with the viability of the consumer movement cannot remain indifferent to this news. Belt tightening at Consumers Union, closing of the U.S. Office of Consumer Education, and the decline in enthusiasm at the corporate level for even their version of consumer affairs; all these add up to a message of some disenchantment with consumerism. However, just as the exuberant consumer press of the 1970's probably overstated the real advances on the consumer front, this "gloom and doom" syndrome is equally overdrawn.

If you think as I do that consumerism is really the "rising level of public awareness of problems, policies, and issues that affect consumer well-being,"² I think you can agree that it will not suddenly disappear. Solid roots are there and we can continue to move forward, though perhaps in a less dramatic and exhilarating fashion than we were doing 10 years ago.

Bloom and Greyser in the December Harvard Business Review article are speaking to this very point.³ In their view, consumerism will be around for a long time; it is not fading as an issue or force in society, it has simply matured. Examining the movement in a marketing context

²Gwen J. Bymers. "Consumerism" in Encyclopedia of Economics, edited by Douglas Greenwald, McGraw-Hill Book Company, 1981, p. 195.

³Paul N. Bloom and Stephen A. Greyser. "The Maturing of Consumerism," Harvard Business Review, November-December 1981, pp. 130-139.

¹Professor Emerita, Cornell University

they find that many of the goals or strategies identified as belonging to or "products of" consumer organizations have been accepted, supported, and even internalized by the larger society. They foresee a quieter but still very active consumer movement during the 1980's, one in which participative consumerism will prevail. In other words, they are telling us that one of the underlying goals of consumerism--a more informed and responsive citizenry--is on the way to being realized!

I am not sure I share the total optimism of Bloom and Greyser, but I do take a long view of what has been going on. It is far too early to start proposing last rites. The history of the consumer movement has been marked by advances and setbacks throughout the twentieth century. The achievements of the past 20 years have been substantial.

At the end of the 1970's consumerism was beginning to be recognized on its merits as a "growing initiative that complements a well-functioning enterprise system."⁴ Increased recognition of consumer education, both formal and informal, is one of the real accomplishments. Another is the new Coalition for Consumer Education, a really diverse group that has come together to try to salvage support for their common goal: the development of consumer education. One of the fallouts of the present lean years for the consumer movement may be that consumer educators will emerge with a clearer identity of what it is we should be doing.

Consumer Education--What is It?

Separate consumer education courses began to appear in the 1930's. Students of social and political history have spent years unraveling the threads of programs and movements that were knitted together during the great depression. There is even a kind of nostalgia cult developing that looks back on the 1930's through rose-colored glasses. I trust they are not trying to psych us into a repeat performance.

It was during this great depression that Consumers Union got its start. A market for consumer information was born out of the "revolutionary" idea that if consumers had access to independent testing and rating data about products, they would be able to do a better job of spending their money. I have always found it somewhat ironic that an institution whose major contribution has been to extend product information and communication throughout the market; that is, knowledge, the very essence of the competitive system, should have been questioned as to its ultimate purposes. Only the myopia of business leadership, much of which still prevails regarding consumerism, can explain the gener-

alized anti-consumer education and consumer information efforts that continue even today.

Consumer education has been a field where free enterprise has prevailed. Belonging to no single discipline and ignored until very recently by the traditional social sciences, it is not surprising that consumer education has been an all purpose vehicle for conveying whatever learnings and understanding those promoting the effort thought most salient at the time. The term has served as a cloak for courses as diverse as environmental protection, financial management, and motor mechanics. You can all add to the list. You probably have. We have each tried in our own way to fit what we were doing into our own notion of valid consumer education. A few of us laying claim to being a bit more pure have tried to restrict our effects into a framework called consumer economics; but even we have not had very great success in identifying what we are about.

There have been several recent efforts to organize the concepts in the field, due in no small part to the financial support extended through the U.S. Office of Consumer Education. Among the promising efforts is the study released in 1980 by the Michigan group in the Consumer Education Development Program. That report defines consumer education as "the study of the knowledge and skills needed by individuals and groups in managing consumer resources and taking action as citizens to influence the factors which affect consumer decisions."⁵

The responsibilities that stem from this definition are awesome. The CEDP classification of concepts was a monumental task. I am not trying to put it down. The more I have studied and thought about it, the more important I think the report is. Not because it provides a neat blue print for the future, but because in one single document they have drawn together the myriad threads of much that has passed for consumer education in the last 50 years. Having everything all swept together and sorted into three broad categories: decision making, resource management, and citizen participation is most revealing. It certainly brings home the necessity to try to think clearly about what should receive priority in the field in the 1980's.

We are going to be teaching in an environment concerned with scarcity. Consumer educators are no longer the new kids on the street. Probably each of you has already had to fight to hold your place in the curriculum or to keep line items for the consumer education program. We need to keep in mind that consumer education is not the only

⁴Gwen J. Bymers, op cit.

⁵Roselle Bannister and Charles Monsma. "Classification of Concepts in Consumer Education," a working document, April 1980, Michigan Consumer Education Center, p. 7.

subject matter area concerned with citizen action. We need to develop linkages to the other courses and teachers who also have something to offer toward understanding social and economic issues.

The primary emphasis in consumer education needs to remain on the individual and the household in its relation to the economy. This is contrary to much that I read that urges us toward group identity and joint action. I know we live in a world of multinational corporations, of large conglomerates and powerful labor unions. But I also know we live in a society in which consumer decisions influence the production process. Perhaps not as much or as directly as we might sometimes wish, but certainly enough to put rational, informed decision making far ahead of uninformed choice.

Consumer education thus perceived has a second or "hidden" agenda: to encourage improvement in the production and delivery system itself. A timely article that links corporate management of consumer affairs with the marketing strategies for business appeared in the Winter 1981 issue of the Journal of Consumer Affairs.⁶ Professor Fornell argues very cogently that consumer complaints properly attended to are a profit-maximizing tool. Ignored or suppressed, they will diminish sales and can bring about disaster. The present economic climate may help promote the message of mutual business-consumer interests to management. In the final analysis it is in the production and distribution system that we will find the source of real gains in either the private market or the public sector.

Although our primary focus should remain on the individual and household, our course content must clearly articulate with the larger economy. It is at this point that the linkages with economic education need to be built and understood. The timing is fortunate, the teaching of economics is on the rise in the nation's schools.⁷ Thus, there is something there to latch onto and I believe we are making headway toward cooperation. There seems to be a willingness on the part of economic educators to recognize that consumer educators exist. Consumer educators are beginning to feel less threatened by the idea that a substantial portion of their subject matter has its feet in basic economics. The national consumer economics project of the Joint Council on Economic Education has played no small part in promoting this state of affairs.

⁶Claes Fornell. "Increasing the Organizational Influence of Corporate Consumer Affairs Departments," Journal of Consumer Affairs, Vol. 15, No. 2, pp. 191-213, Winter 1981.

⁷National Survey of Economic Education, 1981. Study conducted by Yankelovich, Skelly, and White, Incorporated.

If consumer education included no more than economic content, then surely with the ingenuity in this room we would have piggy-backed on the economics courses a long time ago. It is because consumer education needs to incorporate a broader perspective: emotional and psychological considerations, managerial functions of the household, the social and political environment, and to also pay some attention to the intricate family relationships that influence decision making; for all these reasons the separateness of the field emerges. Economics cannot be the whole story in a consumer education program. However, consumer education that does not require solid economic understanding is indeed misnamed and ought to be actionable under either false advertising or labeling statutes.

It is probably obvious by this time that in my model of consumer education, the consumer is neither the beneficiary nor the victim of the system, but rather an active participant who both contributes to and takes from the flow of goods and services produced. The adversarial nature of much that is presented in the context of consumer education reflects a long history of the market transaction. The seller attempting to extract as much as he can from an ill-informed buyer has contributed to the victim image and the emphasis on consumer protection that still prevails throughout the field. Consumer education programs developed from the participant perspective are likely to place emphasis on the quality and convenience of consumer information systems, on careful decision making, on alternatives, on payoffs, and on improvements that can be generated in the distribution process. Consumer responsibility is apt to receive as much attention as consumer protection in such a model; particularly the responsibility to seek redress when the product or service is unsatisfactory. The system needs this input. Quality of products and services offered is the responsibility of the business community. If they fail to respond, other remedies should be in place. It is not a matter of either-or, it is a matter of emphasis and perspective.

Consumer Education in the 1980's

It is a different world out there. From the 1940's through the mid-1970's, we lived with relatively full employment, relatively stable prices, and relatively high productivity. People's incomes increased faster than the price level. It was easy for consumer educators to concentrate on the individual and the market. In economic jargon we operated at the micro level. A different set of questions has taken center stage. We are now in an era of unstable prices (including wages and interest rates), declining productivity and unemployment. These are macro issues and not central to consumer education. Yet we cannot proceed unmindful of their impact on consumers and households. We need the linkages I spoke of earlier. We are living in a different

economic climate and we are also facing rapidly changing institutions and markets that will affect our teaching. We are not expected to teach macroeconomics, but we must understand how it affects the consumer environment.

The crunch of learning to live within the limits of a non-growing economy is finally coming through to us. As a society, we haven't wanted to recognize the lack of real growth in the system even though it has been around for several years. We have continued to think positively, and to meet each round of inflation with a demand for wage and price increases designed to protect our own share of what has proven to be a smaller pie. The contest is heating up, the pressures are divisive. Deep down, I believe Americans still want to maintain a basic level of support for the less fortunate in the society. I have to admit our commitments in this direction are not very clear at the present time. A new set of preferred clients has appeared at the table, the military, and we have a government in place that puts a great deal of emphasis on carrying a big stick. The trouble is they haven't been speaking very softly.

Kenneth Boulding wrote way back in 1973 that "the adjustment to slow growth may be just as difficult as the adjustment to no growth."⁸ I wasn't sure I agreed with him at the time, but history is proving that it is not easy to bring deeply-rooted expectations into line with a leaner system. We can expect to see more controversy over income distribution, more pressure for collective action. It is going to be increasingly difficult to meet the commitments, both individual and social, made during our more affluent past. Middle class America built its aspirations out of the prosperous history of post World War II. Now we find ourselves having to relearn how to "cut our coats to fit the cloth." It is not easy.

The 1980's may be a period of real testing of our institutions and our values. The last time we lived through such a strain, consumer educators were often sorely torn between the obvious weaknesses of the market system and the promises of those espousing public ownership of one kind or another.

Because consumer education and consumer educators are often focusing on the sore spots in the system, non-competitive pricing, faulty products, false advertising, or whatever, it is easy to see why the public generally identifies us with the social critics and often with the radicals. That doesn't worry me very much so long as I can see the goal is improvement of the system. For example, the emphasis on product safety and product recalls has undoubtedly had an impact on

design and quality control in American manufacturing.⁹ Japanese imports are helping too. You may argue that these are costly techniques, but so are the alternatives.

In the 1980's we can expect that more critical issues, more sharply drawn will emerge. Calls for price and wage ceilings will become more strident as economic times become more turbulent. We should not be surprised to find "consumerism" once again linked with flamboyant political ventures.

Consumer educators need to remain alert to new issues facing the society. Individuals and organizations with agendas other than the maintenance of a market economy will seek our support and appear to further our common cause. All I can say to you is be sure you know their real goals and ask yourselves seriously what their proposed agendas do to the consumer's right to choice, to be heard and to know. The market system with all its warts is for my money still to be preferred to the alternatives I have seen functioning elsewhere.

Educators also need to keep abreast of the rapidly-changing financial markets with which consumers must deal. There has been a veritable revolution in the shelter market. Not only have prices doubled in the past five years, so have the interest rates. Coupled with this deterrent to purchase we have seen the virtual disappearance of the fixed-rate, long-term mortgage. This was the instrument that provided two generations of homeowners with access to equity on terms not known previously and perhaps never to be known again. Without question, none of the alternatives developed in the present market are as attractive to consumers as was the previous arrangement. The fixed payment mortgage was a creature of a stable price level. Long-term mortgage funds tend to disappear in the face of rapidly rising prices and interest rates. Alternative mortgage instruments, with short time horizons, and adjustable rates are clearly preferable to "no mortgage funds available."

As consumer spokesmen, we should be asking: Are the new instruments clear in what they provide? Are the provisions spelled out? Are they being honestly advertised? What should we be doing to make sure that the public is aware that they are not buying the same set of arrangements their parents did when they bought their house with a good old fixed-rate, long-term contract?

The fundamental consumer question is: what arrangements can be made that will insure that persons willing to put a large share of their future income stream hostage to the hazards of

⁸Kenneth E. Boulding. "The Shadow of the Stationary State," *The No-Growth Society*, Olson and Landsberg, (eds), W.W. Norton: NY, 1973, p. 98.

⁹E. Scott Maynes. "Consumer Policy: The Balance Between Consumer Education, Information, and Protection." Paper presented to American Council on Consumer Interest, Columbia, Missouri, April 1981.

home ownership will have a chance to do so. Will mortgage money be available?

As consumer educators, how do we best assist our students in making informed decisions about shelter? Consumer educators have played a considerable role in perpetuating the idea that home ownership was the way to go. Given the price level history and tax structure of the past, it was. Today, the rental arrangement probably deserves a better deal than we have been giving it.

Another development in the present market forcing consumer educators into revising their lesson plans is the blurring of what has previously been clear cut distinctions between savings, investing and insurance. Most of our teaching and practically all the textbooks are organized around units. The units describe a set of institutions and products neatly separated one from another: insurance, stocks and bonds, and savings accounts.

But something has happened out there. New depository arrangements are springing up everywhere. Stock brokers, insurance companies, and mail order houses are all willing to accept deposits in relatively small amounts and pay close to money market rates. Liquidity in 24 hours or less and check-drawing privileges are common. Insurance companies are going one better; they are introducing a new product that incorporates the elements of a whole life policy with a portable savings account that can be had with or without check-drawing privileges. In line with these developments, deregulation has vastly expanded the services credit unions can offer and the rates they can pay.

Credit is an area where consumer educators really need to keep pace with market reality. It took 10 years after World War II for us to feel comfortable teaching people to borrow when we were living in a growing economy. Using consumer credit in a no-growth system at real interest rates eight to twelve percent above the inflation rate is quite a different question. I trust we have speeded up our response time.

The energy market is also presenting us with a new set of examples. After eight years of skyrocketing gasoline prices, we are seeing some movement in the opposite direction. Will consumers go on a driving spree? What will the price break do to research and exploration efforts? Is Detroit going to be stuck with fuel-economy vehicles? These are questions consumers will answer. The basic long-run problems are still with us. However, I must note the MacAvoy plea¹⁰ for a tariff on imported oil to protect the industry and encourage conservation does not appeal to my consumer-oriented brain.

¹⁰New York Times, Sunday, March 14, 1982, Business Section, p. 3.

Consumer educators need to be aware that people are moving much less frequently than they did a decade ago. There are several contributing factors here and not all related to the economic slump or the cost of housing. Two-earner families are more awkward to move. For some households, friends, geography, and lifestyle have emerged as more important than corporate promotions. Some of these coupled with the fact that they may still have an eight percent mortgage on a \$35,000 house now worth \$70,000, makes the price of a move go up dramatically.

Arrangements for health care, its adequacy, the costs involved, the entire third-party-pay system are all going to be critical consumer issues in the 1980's. As organized labor is forced to accept wage concessions in the present market, its members are going to look much more critically at the cost elements associated with fringe benefits and other expense items of the corporate world. Among the latter we expect to find corporate expense accounts challenged more frequently than they have been in the past. Consumer and labor interests not always parallel tend to converge around issues such as these.

And then there is the Ma Bell fracas. Americans have enjoyed the most reliable and least costly communication system in the world. That era, too, may be coming to an end. I have not had time to study this issue, but it appears to me that the solution currently before us defies "common sense." Consumers may gain from the increased competition on the long lines but our position vis a vis local telephone service has not changed for the better. Researchers, lawyers, and scholars will try to unravel the impact of the 1982 consent decree for a long time to come and I predict that this item will occupy a substantial portion of ACCI agendas in the future.

As for the controversy over local measured service vs. flat rates, it seems to me the issue should turn on whether this is an efficient packaging and pricing technique. Evidently the technology exists to bill on the basis of calls made. After 40 years of paying the same basic rate as my friends with three teenagers, the idea has some appeal. If the product can be delivered and billed in smaller purchase units without adding excessive handling costs, it fits my notion of consumer interest. I can govern at least one more dimension of my telephone bill.

Nonmarket production is another economic reality that will confront many consumer educators in the 1980's, particularly those in extension or adult education. Calls for do-it-yourself plumbing and decorating courses, home gardening, clothing construction, car repairs will become more frequent. These skills become progressively more attractive as wage rates decline in relation to the price level. Nonmarket production is one of the few real tax dodges left for the middle class. I also expect to see a resurgence of interest in the cooperative as a means of owning and managing business enterprises. Unemployment

stimulates interest in several lines of activity. You may note a flourishing "off-the-books-economy" developing in your communities. Some households may cease non-market production as service skills become available at cut rates. The time-price tradeoffs are interesting to watch. Consumer educators need to recognize that any or all of these developments can be viable responses to a sluggish economic climate and I suspect that is what we will be operating in for the next several years.

Summary

Consumer educators have a real job to do in the 1980's. To help people recognize alternatives and make the best decisions they can in an economy that is not going to be very easy on mistakes is no small order.

We have another task, that is to get through to the larger society that consumer education is a positive and constructive force in the operation of a market-oriented economy. This may mean shedding some of our adversarial armour, but it doesn't mean we lay down and play dead.

There is an opportunity out there for leaders in the field, both consumerists and business, to get back in touch with each other. The "bottom line" of all the verbiage about deregulation and getting government off the business back is that responsibility for consumer satisfaction is once again viewed as belonging to the business community. Consumer educators can encourage the business community to pick up this charge.

Consumer educators may need to narrow the focus on what we are trying to teach in the classroom. At the same time, we need to widen our view and understanding of the economic environment in which we are teaching. This sounds like contrary advice, but we must remember that others also contribute to the sum total of economic, social, and political understanding of our students. There is no more sure avenue to failure than trying to take on too much.

Consumer education, as much as we might like to differentiate our product, is really the culmination of the totality of the educational process. We do not do it all alone. Many of you have heard me quote Hazel Kyrk before. She was one of the intellectual forbears of our field who held forth for years at the University of Chicago. Among her comments is this:

"Education for wise consumption is evidently not something that can be reduced to a course of 10 or even 40 lessons. To be adequate, it must be a planned attempt to coordinate the diverse fields of thought that have something to contribute to the shaping of the consumer's standards of

choice and to direct what they have to offer to the specific problems involved."¹¹

¹¹Hazel Kyrk. The Family in the American Economy, The University of Chicago Press, 1953, p. 392.

EXTENT OF MARKETPLACE PROBLEMS AS PERCEIVED BY SOLAR HOMEOWNERS
AND SOLAR EXPERTS

E. Raedene Combs, University of Nebraska-Lincoln¹

Abstract

Marketplace problems experienced by solar consumers can have a negative influence on the overall adoption rate of solar heating systems for homes. It was the purpose of this study to determine the extent of delivery system and solar product-related problems within the marketplace as perceived by those who have purchased solar and those whose work directly involves some aspect of solar. Findings indicate that while both delivery system and product-related problems are perceived, delivery system problems tend to be more serious. Types and extent of marketplace problems do not appear to be related to marketplace location or market segment involved. Solar experts and solar consumers appear to have similar perceptions as to the extent of most marketplace problems.

The use of solar energy as a possible alternative energy source to replace diminishing fossil fuels has captured the imagination of many. Studies have indicated that the general public places solar energy high on the priority list of energy alternatives [6] and is very favorable toward its use in the home [1]. But positive attitudes in and of themselves do not have an impact on energy supply. For this positive attitude to be transformed into actual demand, wherein consumers purchase solar systems for their homes, a number of factors must be met. One of these factors is the occurrence of satisfactory experiences by the consumer within the marketplace where the exchange between those who demand solar technology and those who supply such technology takes place. If numerous consumers purchase solar products or systems that work unsatisfactorily or experience unreliability within the marketing and servicing sectors, disenchantment will result, spread and have repercussions affecting the commercialization process of solar.

Therefore, it is important to determine the extent of possible problems within the marketplace as perceived by those who have purchased solar and those whose work directly involves some aspect of solar. In this way, decision-makers within government, industry, marketing and servicing can focus resources and technology toward minimizing such problems. It is the purpose of this study to add to the understanding of the extent of marketplace problems as perceived by solar homeowners and solar experts and to determine if these perceptions vary by marketplace and market segment.

The first objective of the present study is to better understand the extent of selected problems within the marketplace as perceived by

solar consumers and solar experts. Problems which might be encountered were determined from a review of the literature [2,4,5,7,8,9,10,11,12,13]. This review resulted in the identification of two categories of concerns or problems: 1) product-related problems, and 2) delivery system problems. Possible problems or concerns connected to an assessment of the solar product are: durability of the system; predictability of performance of the system/design; safety in the use of the system/design; production of adequate heat and hot water by the system/design; possibility of early obsolescence of the system/design. Possible problems or concerns related to the delivery system of solar heating systems/designs are: exaggerated claims made by the dealers; dealers who are undependable; inadequate warranties for the provision of protection from the cost of repair of defects in the system/design; and unavailable service for repair of problems encountered with a solar system/design. The findings of past solar studies suggest that delivery system problems are greater than product design problems.

The second objective of the study is to determine if the perceptions of the extent of selected problems is related to the residential location of the consumer or to the consumer's income and educational level. Differential segments of the population may perceive the extent of solar-related problems differently. In other words, are some problems perceived to be greater for consumers living in rural areas than for consumers living in urban areas? Are some solar-related problems perceived to be greater for lower income and less educated consumers than for higher income and more educated consumers? If problems are perceived differently by specific segments of the population, reasons for these differences could be investigated and appropriate policies designed. A finding from a previous study [9] indicates that lower income (below \$30,000) households are more likely than higher-income households to encounter problems with various aspects of the technology delivery system. They experienced more difficulty in obtaining parts, components or personnel to make repairs. They found it more difficult to convince the building trades to adopt new building designs and construction techniques.

The third objective of the study is to determine if there is a difference in perception of the extent of problems between those who have purchased solar systems (solar homeowners) and those whose work entails some aspect of solar (solar experts). Studies in consumer behavior [3] have found that purchasers of a product often tend to minimize problems which may exist as part

¹Assistant Professor, Education and Family Resources

of the process of reducing cognitive dissonance. There seems to be a tendency by consumers to rationalize the situation so that their purchases are justifiable. Findings from solar studies [11] indicate that solar experts perceive more problems, particularly with product performance, than do solar consumers. If perceptions of problems in the marketplace differ between homeowners and experts, one might be inclined to question the validity of homeowners' perceptions. Also, it is possible that solar experts may be aware of a greater range of problems and have more realistic expectations for performance of equipment/designs because of their contact with clientele and exposure to solar experiences gained through their work.

Method

In the spring of 1981, a questionnaire was mailed to 167 solar homeowners and 138 solar experts² in the state of Nebraska. Names were obtained by contacting the Nebraska Solar Office, county extension agents, solar home experts and consumers themselves. Of the identified 167 solar homeowners, 24 were disqualified (fourteen questionnaires were not deliverable by mail, ten did not live in homes with solar systems). One hundred-five usable questionnaires were returned for a 73% response rate of eligible recipients. Of the 138 identified solar experts, seventeen were disqualified (eleven were not deliverable by mail, two had gone out of business and four did not qualify as solar experts). Ninety-seven usable questionnaires were returned for an 80% response rate of eligible recipients.

Respondents were asked to give their opinions about possible problems that may or may not be connected with solar heating systems. Problems listed in the questionnaire were: 1) safety of solar systems; 2) exaggerated claims by dealers; 3) undependable dealers; 4) inadequate warranty coverage; 5) present solar systems becoming obsolete very soon; 6) unpredictable performance; 7) equipment not durable; 8) not enough heat, hot water; 9) unavailability of service, repairs. For each problem the respondent was to indicate, in relation to solar heating systems, whether he/she thought the problem was 1) not a problem;

²To qualify as a solar expert, a part or all of the individual's work time had to be connected with some solar related activity. In this sample, 36 respondents indicated that they sold solar systems; 26 provided information on solar homes; 19 built solar homes; 18 designed solar homes; 15 did research on solar systems and 27 reported solar related activities other than the above. Many solar experts performed more than one activity.

2) a small problem; 3) a medium problem or 4) a serious problem.

For purposes of statistical analyses, solar homeowners were divided into the following categories: 1) rural-urban area of residence; 2) two income levels; and 3) two educational levels. Rural residence was defined as a community of less than 10,000 (59% of the respondents fell in this category). Urban residents included communities of 10,000 population or more (41% of the respondents were in this category). The two income levels defined were: 1) income less than \$25,000 (51% of the respondents); and 2) income of \$25,000 or more (49% of the respondents). Respondents who had an educational level of grade school, some high school, a high school graduate, had attended trade school or had some college education were classified in one education group (50% of the respondents). Those respondents who had a college degree, who had taken some graduate work or had obtained a graduate degree were placed in the second category (50% of the respondents).

Findings

To what extent do solar homeowners and solar experts perceive the existence of marketplace problems connected to solar heating systems? The findings (See Table 1) indicate that more solar homeowners perceive problems related to the delivery system to be serious than problems related to the solar product. Between 65 and 66% of the solar homeowners surveyed believe that dealer-related problems (undependable dealers, dealers who make exaggerated claims) constitute a medium to serious problem. A smaller proportion, but still sizeable percentage (44%) think that inadequate warranty coverage is a medium to serious problem. Forty percent of the solar homeowners surveyed think that unavailability of service and/or repairs constitute a problem (medium to serious).

Fewer solar homeowners perceived medium to serious problems connected with the product itself. Thirty-seven percent expressed concern that present solar systems may soon become obsolete; 34% believe that unpredictable performance and equipment that is not durable constitute medium to serious problems; 25% believe that the production of enough heat and hot water by solar systems is a medium to serious problem. Few (5%) see the safety of solar systems as presenting a problem.

Close to three-fourths (74%) of the solar experts surveyed are concerned about the problem of undependable dealers (31% see that as a serious problem). Sixty-eight percent perceive exaggerated claims by dealers to be a medium (33%) to serious (35%) problem. Slightly less than half (46%) believe unavailable service and repairs

TABLE 1. Extent of Marketplace Problems as Perceived by Solar Homeowners and Solar Experts

Possible Problems Connected to Solar Heating Systems	To what extent is this a problem?				(Medium-Serious Categories Combined)	Median	Standard Deviation
	Not	Small	Medium	Serious			
	Percent				Percent		
<u>Delivery System Problems</u>							
Undependable Dealers							
SOLAR HOMEOWNERS	3	30	47	19	(66)	2.83	.775
SOLAR EXPERTS	2	24	43	31	(74)	3.03	.800
Exaggerated claims by dealers							
SOLAR HOMEOWNERS	13	22	37	28	(65)	2.80	.990
SOLAR EXPERTS	2	29	33	35	(68)	3.02	.858
Inadequate warranty coverage							
SOLAR HOMEOWNERS	17	39	28	16	(44)	2.43	.952
SOLAR EXPERTS	12	45	33	10	(43)	2.44	.830
Unavailability of service, repairs							
SOLAR HOMEOWNERS	24	36	28	12	(40)	2.27	.961
SOLAR EXPERTS	16	38	33	13	(46)	2.43	.903
<u>Product-Related Problems</u>							
Present solar systems becoming obsolete very soon							
SOLAR HOMEOWNERS	26	37	30	7	(37)	2.19	.905
SOLAR EXPERTS	24	44	27	5	(32)	2.14	.841
Unpredictable performance							
SOLAR HOMEOWNERS	21	44	30	5	(34)	2.20	.825
SOLAR EXPERTS	16	38	40	6	(46)	2.37	.826
Equipment not durable							
SOLAR HOMEOWNERS	23	43	23	11	(34)	2.23	.934
SOLAR EXPERTS	16	43	34	7	(41)	2.33	.829
Not enough heat, hot water							
SOLAR HOMEOWNERS	25	49	21	4	(25)	2.04	.800
SOLAR EXPERTS	21	42	31	6	(37)	2.23	.852
Safety of solar systems							
SOLAR HOMEOWNERS	73	22	4	1	(5)	1.33	.604
SOLAR EXPERTS	66	30	1	3	(4)	1.41	.676

are a medium (33%) to serious (13%) problem, 43% identify inadequate warranties as a medium to serious (10%) problem.

The product-related problem perceived by the most solar experts to be medium (40%) to serious (6%) in nature is unpredictable performance. Forty-one percent of solar experts think that a medium (34%) to serious (7%) problem with solar is equipment that is not durable. Thirty-seven percent are concerned (31% medium problem; 6% serious) that not enough heat or hot water is produced. About one-third (32%) think that present solar systems will become obsolete very soon (27% medium problem, 5% serious). Few solar experts (4%) think that the safety of solar systems constitutes a medium to serious problem.

Are perceptions of the extent of marketplace problems related to the residential location of

the solar consumer or to the solar consumer's income or educational level? Responses as to the extent of the nine possible problems were summed for rural and urban place of residence; for lower and higher income levels; and for lower and higher educational levels. The Wilcoxon test of differences was used to determine if rural solar homeowners perceive the extent of marketplace problems to a greater degree than urban solar homeowners; if lower income solar homeowners perceive problems to a greater extent than higher income solar homeowners; or if lower educated solar homeowners perceive problems to a greater extent than higher educated solar homeowners. No significant difference (at the $P < .05$ level) in perception of the extent of marketplace problems was indicated between rural and urban solar homeowners; between solar homeowners having lower and higher income levels, or between solar homeowners with lower and higher educational levels. To determine if

there was a relationship between perceived extent of a specific problem and place of residence, level of income and level of education, Chi-square analysis was used to test the relationship of each set of categories with perceived extent of each problem. No significant relationship (at the $P < .05$ level) between perceived extent of any problem and residential location, income level, or educational level was indicated. Types and extent of marketplace problems connected with solar systems/designs do not appear to be related to whether the solar homeowner lives in a rural as opposed to an urban area; has a lower income rather than a higher income; or has a

lower rather than higher educational level.

Are possible problems in the marketplace perceived to a different extent by solar homeowners than by solar experts? Previous research would indicate that solar experts would perceive problems to a greater extent than solar homeowners. Responses as to the extent of the nine possible problems were summed for solar homeowners and solar experts. The Wilcoxon test of difference was used to determine if solar experts do perceive problems to a greater extent than solar homeowners. A difference was indicated at the $P < .01$ level (See Table 2). Chi-square

TABLE 2. Differences in Perception of Extent of Solar-Related Problems Between Solar Homeowners and Solar Experts

Group	Number	Sum of Scores	Expected Under HO	STD DEV Under HO	Mean Score
Solar Homeowners	101	8965.50	9999.00	399.98	88.77
Solar Experts	96	10537.50	9504.00	399.98	109.77

Prob $> |z| = .01$ T-test approx. significance = .01

analysis was then used to determine if there was a relationship between the perceived extent of specific problems and solar involvement as a homeowner or expert. The only problem signifi-

cantly related ($P < .05$) to solar involvement was the problem of exaggerated claims by dealers (See Table 3). A significantly larger proportion of solar experts than homeowners perceived this

TABLE 3. Association Between Involvement with Solar as a Consumer or Expert and Perceived Extent of Possible Problem

Problem	N	Degree of Freedom	Chi-square Value	Significance Level
Exaggerated claims by dealers	190	3	9.32	.03
Undependable dealers	189	3	3.75	.29
Inadequate warranty coverage	185	3	2.70	.44
Unavailability of service, repairs	191	3	2.27	.52
Present solar systems becoming obsolete very soon	193	3	1.04	.79
Unpredictable performance	192	3	2.61	.46
Equipment not durable	192	3	4.41	.22
Not enough heat, hot water	191	3	3.32	.34
Safety of solar systems	195	3	4.13	.25

to be a problem. This finding has intuitive appeal as it is likely that solar experts, many of whom are dealers, would be particularly sensitive to the problem of exaggerated claims, as such claims would be viewed as unfair competition and perhaps detrimental to the reputation of the profession as a whole. A relationship between the perceived problem of predictable performance and solar involvement as a homeowner or expert was not indicated as had been predicted. Thus, for individual problems, while the median for eight of the problems is higher for solar experts than solar homeowners, statistical analyses do not indicate a relationship between perceived extent of each of these problems and whether or not the respondent is a solar homeowner or expert (See Table 1).

Discussion

A primary concern of both solar homeowners and solar experts is marketplace problems related to the solar retail sector. Exaggerated claims being made by dealers who are not always dependable are identified by many as a problem. The existence of this problem is not surprising as the emergence of the solar retail area is relatively recent; thus, many of the dealers do not have the benefits of past experience. To reduce the seriousness of this problem, a number of alternatives could be considered and evaluated. The solar industry itself, through an association, could monitor its members, both in terms of advertising and in terms of offering dependable service. Some form of certification could be awarded to members who adhere to association standards. Another alternative is for government to establish standards for advertising solar heating systems. This could be mandatory or used as voluntary guidelines that could be monitored through such organizations as the Better Business Bureau. The potential solar consumer could be educated by information provided by a number of sources (State Solar Offices, continuing education workshops, consumer education classes, publications by government and industry) to realistically assess cost/benefits of solar heating systems and to evaluate dependability of solar dealers. The most effective and efficient means to counteract the perceived marketplace problem of exaggerated claims and undependable dealers probably lie in some combination of these alternatives. Therefore, it is important that the problem is recognized so that different segments of society can address it in the most effective way.

Many solar homeowners and solar experts also perceive a problem related to inadequate warranties and unavailable service. While this problem is not considered serious by as many solar consumers and experts as undependable dealers making exaggerated claims, it is a

problem that may demand early attention. Well-designed warranties and available service will become increasingly relevant and important as solar consumers who presently own solar heating systems begin to experience more defects, over time, and as more consumers purchase solar heating systems. Designers of these warranties will need to consider provisions to protect the consumer, yet not be so comprehensive that retailers and manufacturers are over-burdened, causing them to withdraw from an area which is new and somewhat uncertain.

Between one-fourth and one-third of the solar homeowners and experts perceived problems connected with the product as early obsolescence, unpredictable performance, nondurable equipment and production of an adequate supply of heat and hot water. Because there are a variety of solar heating systems/designs and products, the problems identified may exist with some, but not others. Further investigation is needed, wherein types of solar systems are specifically stated and then problems associated with each system are identified. With this kind of information, action can be taken to concurrently improve the product or design and educate the consumer as to the relative advantages and disadvantages of the products and designs on the market.

The findings of this study did not indicate a difference in perceptions of extent of marketplace problems by urban-rural location of marketplace, or by income or educational level of the solar consumer. Because perceptions of the extent of the problem do not appear to differ by market location or market segment, it appears that solar-related problems can be addressed at the state and industry level. At this time, it does not appear that special concern needs to be focused on specific problems of certain market locations or market segments (at least in the state of Nebraska).

The research findings indicate an overall tendency for solar experts to perceive a greater extent of solar-related problems in the marketplace than solar consumers. More experts do perceive a problem with exaggerated claims of dealers, a perspective which may provide impetus for the industry to devise methods of monitoring the behavior of their members. When perceptions of consumers and experts are compared in relation to specific problems, both groups appear to have similar views as to the extent of each of the other problems. This finding lends credibility to the identification of the nature and extent of problems presently existing in the marketplace in relation to solar heating systems, designs and existing delivery systems.

In conclusion, solar homeowners and solar experts appear to have similar perceptions about the extent of most marketplace problem connected

with solar heating systems. While both delivery system and product-related problems are perceived, delivery system problems tend to be more serious. Types and extent of marketplace problems do not appear to be related to marketplace location or market segment involved, suggesting that these problems can be addressed at the state and industry level. The next step in the research process is to identify the specific characteristics of these marketplace problems, thereby providing additional information so that the solar industry, government and consumer educators can reduce the seriousness of these problems, utilizing the most effective and efficient means.

References

1. Combs, E. Raedene, Attitudes of Nebraska Residents, Solar Homeowners and Experts Concerning the Use of Solar Energy for Home Heating Systems, Report No. 81-1, Department of Education and Family Resources and Nebraska Agricultural Experiment Station, University of Nebraska, Lincoln, August 1981.
2. Cook, Jeffrey, W. Thomas Conelly, and Billy G. Garret, Solar Consumers: An Investigation toward Commercialization, Tempe, AZ: College of Architecture, Arizona State University, 1977.
3. Festinger, Leon, A Theory of Cognitive Dissonance, Evanston, IL: Row, Peterson, 1959.
4. Leonard-Barton, Dorothy, The Diffusion and Adoption of Solar Equipment Among California Homeowners: Report on a Pretest Study, Stanford, CA: Institute for Communications Research, Stanford University, 1978.
5. Marylander Marketing Research, Inc., San Diego Gas and Electric Solar Water Heating Initial Purchaser Analysis, Sherman Oaks, CA: Marylander Marketing Research, Inc., 1978.
6. Pilgrim, Barbara Farhar, Charles T. Unseld and Jerome Williams, The National Study of the Residential Solar Consumer: Decision-Factors and Experiences, Golden, Colorado: Solar Energy Research Institute, May 1981.
7. Real Estate Research Corporation, Selling the Solar Home: Some Preliminary Findings, Residential Solar Program Report #1, Washington, D.C.: U.S. Dept. of Housing and Urban Development; U.S. Department of Energy, 1978.
8. Sawyer, Stephen W., A Survey of Solar Consumers in Northeastern and Southwestern United States, College Park, MD: Department of Geography, University of Maryland, 1979.
9. Sparrow, F.T., Seymour Warkov, and Robert C. Kass, "Socioeconomic Factors Affecting the Adoption of Household Solar Technology," In Seymour Warkov, Editor, Energy Policy in the United States: Social and Behavioral Dimensions, New York: Praeger Publishers, 1978.
10. Subcommittee on Oversight and Investigations, Committee on Interstate and Foreign Commerce, U.S. House of Representatives, Solar Energy and Today's Consumer, Washington, D.C.: U.S. House of Representatives, 1978.
11. Unseld, Charles T., and Robin Crews, Residential Solar Energy Users: A Review of Empirical Research and Related Literature, Springfield, VA: National Technical Information Service, 1980.
12. Wilson, Sandra, Missouri Solar Consumer Survey, Jefferson City, MO: Solar Program, Division of Policy Development, Missouri Department of Natural Resources, 1979.
13. Yarosh, M.M. and A.H. Litka, Solar Commercialization: The Consumer Experience, Cape Canaveral, FL: Florida Solar Energy Center, 1978.

THE RELATIONSHIP OF ECONOMIC WELFARE AND PERCEIVED FINANCIAL ADEQUACY
AND SATISFACTION OF MIDWESTERN URBAN, RETIRED FAMILIES

Sheran L. Cramer, University of Nebraska-Omaha¹

Abstract

The purpose of this study was to determine the relationship of economic welfare and perceived financial adequacy and satisfaction of selected Midwestern urban, retired families/individuals. Secondary objectives were to examine the relationship between economic welfare and perceived adequacy and satisfaction and selected demographic factors and between income and economic welfare as measures of economic situation.

Introduction

A major change in our society is the rising number and proportion of the retired. Due to increased longevity and decreased birth rate, the United States is no longer a nation of young people -- a nation as enamored of the youth culture as it used to be. America is aging rapidly with the number of retired growing sevenfold since 1900. From three million in 1900, this segment of the population has increased to twenty-two and one half million people today, and is predicted to increase to thirty and one-half million by the year 2000. Since 1940, this population has risen three to four million per decade (10).

Research on the economics of retiring aids in the clarification of current needs and the development of programs to meet them. Such information can play a vital role in defining social and economic issues affecting retired persons/families and assist in policy formation.

The literature revealed that subjective evaluation of one's financial situation was a primary factor affecting satisfaction, an important component of total well-being. Researchers have validated that one's perception of financial adequacy is a superior indicator of life satisfaction, particularly for retirees, compared to objective measures such as amount of income. Perception of income adequacy has been shown to have a significant relationship to well-being which has been described as one component of life satisfaction. The majority of the research on the economics of retirement, however, has been that of objective economic status or condition. An adequate base of knowledge concerning economic welfare and perceived financial satisfaction is necessary if effective retirement and preretirement educational programs are to be planned and implemented.

What determines economic satisfaction? A review of the literature revealed a limited amount of studies concerning the application of satisfac-

tion in microeconomic analysis. Streib and Schneider (14) focused on older people, relating income and life satisfaction. This longitudinal study revealed a decline in feelings of income adequacy and then a leveling off after the first year of retirement. Spreitzer and Snyder (13) identified financial satisfaction as a significantly stronger predictor of life satisfaction for older compared to younger persons. Low satisfaction with standard of living was found to be a frequent source of marital conflict by Burgess and Locke (1). Goode (4) and Williamson (19) revealed that high satisfaction with standard of living was association with positive marital adjustment. Cuming and Henry's study (2) revealed that increased financial independence of elderly persons living with children showed a direct relationship to morale. Medley's investigation (8) examined a hypothesized causative chain between financial situation, health satisfaction, satisfaction with standard of living, family life and life as a whole. Satisfaction with standard of living was second most important variable for women. Medley's study demonstrated the value of examining the interrelationships among variables rather than simply identifying significant correlations and suggested that satisfaction with standard of living may be of greater importance to an individual's outlook on life than financial condition.

Strumpel, Curtin and Schwartz's study partially explains satisfaction of retirement income, as affected by preretirement income structure. Blue-collar workers receive peak income early in life and experience income losses as early as their forties and fifties while white-collar workers begin at relatively low salaries and reach peak earnings often just prior to retirement. Satisfaction with standard of living has largely been a response to change rather than to the level of income and standard of living.

Studies observing consistently significant correlation between life satisfaction and socioeconomic status include: Gurin, Veroff and Feld, (5) Hansen and Yoshioka (6), Kutner et al., (7). Research indicated that the higher the family income the greater the satisfaction with standard of living. Edward and Klemmack's study (3) revealed that the indicators of socioeconomic status showed a direct relationship to life satisfaction with family income having the highest correlation with it. A primary determinant of life satisfaction was socioeconomic status and socioeconomic variables as a category were identified as efficient predictors of variation in life satisfaction.

Income alone does not determine a retired person's subjective evaluation of his

1. Assistant Professor - Department of Education and Family Resources

financial situation though there is a positive correlation between the two factors (6, 11, 12, 16, 17, 20). Although differing viewpoints exist concerning the use of satisfaction as an indicator of well-being and the relationship of specific economic factors to satisfaction and adequacy, there is ample evidence to indicate perceived financial adequacy is a stronger predictor of life satisfaction than objective indicators of socioeconomic status and thus was selected as the framework for this study.

Family economists have recognized the inherent problems in using money income as a measure of financial well-being and recently have attempted to develop a measure of "well-being" and analyze the various components of it. Progress in the development of such a measure can be traced primarily to Moon (9) and Weisbrod and Hansen (18). Money income, useful in narrowly defined terms, is not sufficient for analyzing the economic situation of the retired. According to Moon, Weisbrod and Hansen, economic welfare, a measure of potential consumption, is superior to current annual money income as a measure of economic status. As a comprehensive measure, economic welfare is a complex concept which can most adequately be described in terms of the standard utility function. Resources available to a family/individual can be used to extend the budget constraints of the family and increase its potential for consumption, restricted only by preferences expressed in terms of the family's utility function. The measure reflects the level of attainable rather than attained consumption. Weisbrod and Hansen (18) delineated economic welfare as a measure which combined income and net worth by conversion of net worth into an annuity value and the addition of this value to current income. Economic welfare was defined for this study as a measure of potential consumption derived by adding current annual income to an annual lifetime annuity value calculated from current net worth, life expectancy and rate of return.

The purpose of this study was to determine the relationship of economic welfare and perceived financial adequacy and satisfaction of selected Midwestern urban, retired families/individuals. Specific questions addressed in the study were: (1) Is there a difference between current income and economic welfare as measures of a family's financial situation? (2) What are the predictors of economic welfare? (3) Is there a difference between objectively and subjectively measured income adequacy? (4) Is perceived financial adequacy and perceived financial satisfaction related to economic welfare? (5) What are the predictors of perceived financial adequacy and perceived financial satisfaction?

Methodology

Cluster sampling was used to select 300 retirees of varied living situations, ethnic backgrounds and economic levels. Participants completed

a questionnaire providing information necessary for the computation of the economic welfare measure and the determination of perceived financial adequacy and satisfaction.

Economic welfare and income were examined by the Pearson product moment correlation coefficient and chi-square to determine whether significant differences existed between them as measures of financial situation. Economic welfare was then used as a dependent variable in a multiple regression procedure with independent variables of marital status, sex, age, education, extent of retirement, health, income, home and automobile ownership, amount of mortgage, stability of residence and level of debt to identify predictors of economic welfare.

Income adequacy was assessed by three objective measures including the Social Security Administration's Index of Poverty, the Bureau of Labor Statistics Model Budget for Retired Couples adapted for individuals, and a preretirement retirement ratio of earnings. Responses of participants identified as having adequate income by the preretirement retirement ratio were compared to responses indicating perceived financial adequacy by use of the chi-square test to determine if a significant relationship existed between actual adequacy, objectively determined, and perceived adequacy.

Fifteen items predetermined as indicative of adequacy or satisfaction were analyzed in relation to economic welfare to determine if there was a significant relationship between economic welfare and perceptions of financial adequacy and satisfaction. Perceived Financial Adequacy (PFA) and Perceived Financial Satisfaction (PFS) were then used as dependent variables in the discriminant analysis process. Independent variables included economic welfare, marital status, sex, extent of retirement (full or partial), health, and home and automobile ownership, stability of residence, and level of debt.

Economic welfare and income were compared as independent variables in the discriminant analysis procedure to determine if differences existed in their predictive power of determining perceived financial adequacy and satisfaction. Discriminant functions were derived revealing the independent variables which were predictors of the dependent variables.

Results and Discussions

Profile of respondents

Sixty percent of the respondents were women. As to marital status, 45 percent were married, while racially, 84 percent were White. The largest proportion of respondents and their spouses was in the intermediate age group between 66 and 75 years of age. Completion of high school was the mean level of educational attainment. One and two member families were about equally divided

with health being ranked as good or excellent for 62 percent, fair for 27 percent and poor for 8 percent. Eighty-seven percent were fully retired; 83 percent retired voluntarily. Approximately one half of the respondents had been retired less than 10 years while 20 percent had been retired between 10 and 15 years and an additional 20 percent 20 years or longer. Slightly less than one-third had retired early.

Low, moderate and high income levels resulted in respective percentages of 37, 30 and 27 for each with the mean income range for the entire group between \$7000 and \$9999. Approximately 60 percent owned homes with an average value range of \$18,000 to \$19,000. Slightly less than one half had no outstanding mortgage. Two-thirds of the retirees owned automobiles with a mean value of \$1500. Slightly over one-fifth owned investments in the form of farms, businesses, real estate other than house, and recreational vehicles ranging in value from zero to \$1,200,000 with a mean value of \$22,409. Stocks, bonds, and mutual funds and cash in banks or savings accounts were two categories of liquid assets held by the largest proportion of respondents with the mean value of each slightly over \$1000. About three-fourths of the sample indicated some debt of which over half responded to a level of less than \$100. Less than five percent of respondents had debts in excess of \$1000. Food stamps and discounts to senior citizens contributed only slightly to the economic profile of the retirees. Social Security, Railroad Retirement, and other government payments were the major sources of income for 92 percent of the sample with interest, dividends and employee retirement plans secondary in importance.

Comparison of income and economic welfare as measures of financial situation revealed that the mean value of economic welfare was about two times that of income approximately \$22,000 and \$11,000 respectively. With use of the economic welfare measure, compared to current income, the percent of retirees categorized in the low level was reduced by 15 percent and the moderate group by 11 percent while the high category increased by 18 percent. The use of economic welfare resulted in an improved economic classification for about 45 percent of the retirees thus leading to the conclusion that a difference did exist between income and economic welfare as a measure of financial situation.

Predictors of Economic Welfare

Economic welfare and selected demographic characteristics were analyzed by a two step multiple regression analysis to identify predictors of economic welfare. The combined variables of sex, age, education, extent of retirement, health, income, home and automobile ownership, stability of residence and level of debt accounted for about one-third of the variation of economic welfare (Table 3).

TABLE 1. Multiple Regression Analysis of Economic Welfare by Demographic Characteristics

Dependent Variable	Independent Variables	R ²	F
Economic Welfare	Sex	.040	12.51*
	Age	.046	
	Education	.133	
	Retirement	.136	
	Health	.148	
	Income	.148	
	Home Net Worth	.151	
	Automobile Net Worth	.323	
	Stability of Residence	.333	
	Debt	.334	

*p < .05.

Step-wise multiple regression excluded, sex, age, and income as significant predictors. Automobile ownership and educational level were two major predictive variables accounting for 27 and 4 percent of the variation respectively (Table 2).

TABLE 2. Step-Wise Multiple Regression Analysis of Economic Welfare by Demographic Characteristics

Dependent Variable	Independent Variables	R ²	F
Economic Welfare	Automobile	.267	94.36*
	Education	.311	58.40*
	Stability of Residence	.324	41.09*
	Health	.330	25.15*
	Home	.332	18.02*
	Debt	.333	15.75*
	Extent of Retirement	.333	13.96*

*p < .05.

Measures of Income Adequacy

Application of three objective standards of income adequacy revealed that approximately 50 percent of single individuals and 25 percent of the married couples in the lower economic welfare category (LEW) were classified as income adequate by the index of poverty standard. However, the small number of married couples in this category lacked conclusive evidence. The Bureau of Labor Statistics Budget for Retired Couples adapted for individuals revealed that 92 and 94 percent of the moderate and high economic welfare groups respectively were categorized as income adequate with no respondents in the low economic welfare group. Thirty-five percent of the LEW singles were classified as income adequate while all of the moderate and high levels were classified as such. Of the total sample, 94 percent of the married and about 80 percent of singles had adequate income by this measure.

The preretirement, retirement earnings ratio placed just slightly under one half of the total

respondents in the income adequate category with respective percentages of 25, 26 and 49 for the lower, moderate and higher income groups.

The Relationship of Adequacy and Perceived Adequacy

The relationship of perceived adequacy and objectively determined adequacy by the poverty index showed that about 65 percent of single individuals and 100 percent of married couples classified as income adequate likewise indicated perceived financial adequacy. Almost 80 percent of the total single respondents, classified as income adequate, indicated perceptions of income inadequacy compared to none of the married couples. Perceptions of financial adequacy by married couples were more positive than those of single individuals.

Comparison of adequacy based on the BLS Model Budget, and perceived adequacy revealed a direct relationship with economic welfare level for both married couples and single individual families. There was an inverse relationship between economic welfare level and perceived adequacy for both individuals and couples classified as having inadequate economic welfare. An improved economic situation was related directly to perceptions of adequacy. Thus it was concluded that there was a significant relationship between objectively and subjectively measured adequacy.

The Relationship of Economic Welfare and Perceived Adequacy and Satisfaction

Nine items, predetermined as depicting perceived adequacy, were examined by chi-square in relation to economic welfare and a significant difference was found for all of them. Perceptions of adequacy indicated through ability to buy items needed, money left over at the end of the month, adequate financial resources for doctor and dentist and medical expenses, avoidance of dipping into savings for monthly expenditures and adding to savings significantly differed among the three economic welfare levels. In addition, having discretionary income as opposed to a major proportion allocated to basic needs such as shelter, and utilities, planning adequately in advance for retirement, sensing that needs were covered adequately or better and evaluating financial situation as very good or fair revealed significant differences between the lower, moderate and high economic welfare levels (Table 3).

Seven items representative of perceived satisfaction were analyzed in relation to economic welfare by chi-square. A significant difference existed for six of the seven thus providing evidence of a relationship between economic welfare and perceived financial satisfaction, (Table 4). Perceived financial satisfaction (PFS) as indicated through being able to live the way desired, lack of a desire for additional money with which to live, for having saved adequate financial resources prior to retirement, ability to buy items wanted, and a level of

satisfaction depicted as pretty well or more or less satisfied revealed significant differences between the low, moderate and higher economic welfare levels.

TABLE 3. Chi-Square Relationship of Perceived Adequacy and Economic Welfare Level

Item	X of Respondents by Economic Welfare Level				df	Chi-Square
	Lower	Moderate	Higher	Total		
Would you say that your financial situation is: very good, fair, poor.	77	93	98	92	4	75.01*
During the past year I added to savings or investments.	13	44	70	51	2	55.50*
Are your financial needs covered?	71	89	97	89	4	52.62*
Most of my money goes for food and utilities.	22	36	69	50	2	43.05*
I need more money for medical expenses.	44	63	88	72	2	41.93*
I usually have money left at end of the month.	34	52	76	61	2	34.01*
Over the past year I dipped into savings to meet monthly expenses.	61	53	87	73	2	29.89*
I'm able to buy the things I/we need.	71	87	96	88	2	27.37*
I believe I/we planned adequately for retirement.	42	56	76	64	2	20.74*

*p < .001.

TABLE 4. Chi-Square Relationship of Perceived Satisfaction and Economic Welfare Level

Item	X of Respondents by Economic Welfare Level				df	Chi-Square
	Lower	Moderate	Higher	Total		
I'm able to live the way I want and do the things I want	15	18	67	61	2	31.38*
I have enough money to travel	8	17	75	53	2	58.55*
I wish I had more money	9	13	79	39	2	41.99*
Are you pretty well satisfied, more or less satisfied or not satisfied at all?	73	82	95	87	4	40.92*
I'm able to buy the things I want.	14	19	67	50	2	29.47*
I wish I/we had saved more before retiring.	8	12	80	28	2	26.56*

*p < .001

Predictors of Perceived Adequacy and Satisfaction

Discriminant analysis was employed to distinguish between retirees whose perceptions indicated financial adequacy compared to those who perceived their financial situation as inadequate. Perceived financial adequacy and satisfaction as dependent variables were analyzed with nine selected demographic variables. Six variables, economic welfare, level of debt, net worth of automobile, extent of retirement, health and sex were found as significant predictors of perceived financial adequacy (Table 5).

Additional analysis identified the significant function as accounting for approximately 96 percent of the variance with economic welfare and level of debt the two significant factors within the function (Table 6).

Comparison of economic welfare and income as predictors of perceived financial adequacy showed that economic welfare was a slightly better predictor based on 96 and 91 percent of variance respectively (Table 7). As individual factors within the significant function, 34 percent of the variance was attributed to economic welfare compared to 25 percent accounted for by current income. Economic welfare and level of debt were the two significant variables within the function based on