

that description has usually been thought of as a non-supporter. Thus, non-traditional approaches to support for consumerism such as those of Schooler and Jarvis³ have not been encompassed by the ideology of the movement.

In addition to stated conceptual differences toward support of consumerism by different authors, a smattering of research has likewise suggested consistent and diverse approaches to consumerism. Thorelli's study of the readership of Consumer Reports, for instance, identifies an important group of non-traditional supporters. He contends that they are a distinct group not only as far as their purchase behavior is concerned but also in regard to their views toward consumer policy issues. He summarizes his results with the following profile of an "information seeker":

"He is something of a consumer activist, showing an interest in increased activity over a broad range of consumer help measures both by government and private initiative. In keeping with his information sensitive nature, he has the greatest enthusiasm for measures which would bring him additional information (testing, labeling, product quality standards) or more truthful information (preventing misleading advertising) and least enthusiastic for measures which would bring him help from outside sources (protection, help with complaints, etc.)..." (Thorelli, 1975).

The consumer described above is a supporter of the movement in the sense that he perceives the need for a power transfer from business to consumers. However, unlike traditional consumerists who have emphasized benefit rights in the form of mandated standards, information seekers prefer an opportunity rights (i.e., free choice, more information) approach to consumer problems. Furthermore, Thorelli speculates that information seekers "...may well be the first wave of a sizeable new breed..."

The Model and Its Implications⁴

The authors have argued that various aspects of the consumer movement have recently been ascending while certain traditional elements have been waning. However, the attempt here has not only been to identify recent trends but to expand on the traditional conception of the movement which fails to encompass them. Table 1 summarizes important characteristics of traditional consumerism while presenting corresponding conceptual alternatives which incorporate the new trends. The proposed (new) rationale is also presented in the following definitional form:

Consumerism is a social movement precipitated and advanced by those who perceive a societal power

³That is, anti-tax advocate Howard Jarvis who is often referred to in the press as a "consumerist" but who would not likely be recognized as such by traditional consumerists.

imbalance between consumer roles (i.e., non-producer, personal economic roles) and any others which may conflict with them (e.g., producer and government roles). Greater balance is sought through advocating improved opportunity and/or benefit rights for consumers while acknowledging some mix of personal and/or social consumer responsibilities.

The authors believe that the model presented above has heuristic value in generating important questions based on the noted distinctions. For instance, concerning consumer antagonist groups: What are the historical precedents for consumer movements whose major antagonist group is not business? Is traditional consumerism's preoccupation with business abuses a Twentieth Century phenomena spawned by limited government and growing private sector monopoly power? If the power of government continues to grow vis a vis big business, will the former increasingly become a target of consumer frustrations?

Likewise, questions concerning issue type preferences include: Do non-economic issues (e.g., safety issues) gain in importance during periods of rising incomes and expectations? Do economic issues (e.g., tax issues) become more important in periods of declining incomes and expectations?

Examples of questions concerning approach preferences: Is the approach type which is preferred (i.e., benefit vs. opportunity rights approach) largely dependent on issue type (e.g., safety vs. quality)? Does preference for benefit rights solutions grow during periods of unexpected income growth and/or periods of growing compassion for disadvantaged groups?

Some questions concerning consumer types who exhibit consistent approaches to consumerism issues: Do many people tend to have consistent attitudes toward the movement? How consistent are they? What issue types are most likely to lead to inconsistency? What demographics can be associated with different supporter types? What psychosocial variables can help explain consistent orientations toward the movement?⁴

The questions posed above concern positive issues of possible interest to consumer scientists, educators, and advocates. However, educators and advocates must also ultimately be concerned with normative issues. In the case of consumer educators, relevant questions implied by the analysis presented here include: should more emphasis be placed on alerting consumers to potential conflict with marketplace participants other than business (e.g., government, labor, farmers, professional groups and foreign resource suppliers)? Should more emphasis be placed on educating consumers in macro-economic policy issues (i.e., fiscal and monetary policy)? Should educators spend more time discussing costs as well as the benefits of

⁴The authors are currently in the process of an empirical investigation of some hypotheses based on this last group of questions.

various solutions to consumer problems?

In the case of traditional consumer advocates, normative questions of interest generated here may include: to what extent, if any, should the movements' leadership and organizations adjust to trends in consumer sentiment toward perceived antagonist groups, opportunity or benefit rights approaches, and issues of interest? Can a more generic approach to the movement help stabilize and expand support as external conditions cause certain of its traditional elements to wane in popularity while related elements gain? (Support for the traditionally conceived movement, of course, has historically been cyclical or intermittent.) And finally, regardless of changing economic and social conditions, should an attempt be made to encompass latent supporter groups into the mainstream of the movement by the adoption of a more comprehensive ideology as suggested here?

TABLE 1. The New Consumerism

<u>Traditional Consumerism</u>	<u>The New Consumerism</u>
primarily concerned with conflict of interests between consumers and business	concerned with conflict of interests between consumers and any other economic system participant including business, government, unions, professional groups, and farmers
primarily concerned with non-economic issues (such as product safety and quality of health care) as opposed to economic issues (such as taxes and inflation)	concerned with both non-economic and economic issues depending upon their relative importance at a given point in time
emphasizes benefit rights (i.e., protection) approaches to consumer problems as opposed to opportunity rights (i.e., choice) approaches	recognizes the advantages and disadvantages of both benefit and opportunity rights approaches depending on the issue and the groups affected
views supporters of consumerism as a monolithic group	views support for the movement as coming from groups with overlapping yet distinguishable approaches some of which have not been encompassed by the traditional ideology

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CONSUMER EDUCATION: PRIVATE OR SOCIETAL DECISION MAKING?

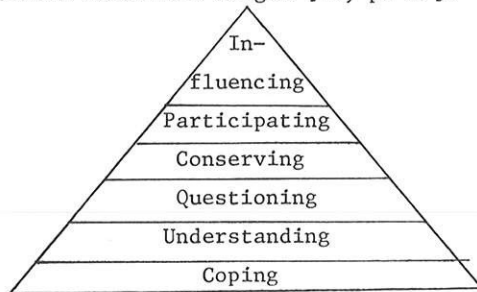
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Consumers must improve their ability to make decisions. Most will agree with this statement. The divergence of opinion probably occurs when the discussion turns to the specific decisions consumers need to make. This paper seeks to address the topic of the emphasis and priorities of consumer educators. The thesis is that consumers need to make two types of decisions. One type relates to decisions which have a personal and household impact -- private or micro decision making. However, consumers are also being encouraged to help make decisions which will affect all of society -- societal or macro decision making.

The objectives of consumer education will be presented before we move into a specific discussion of these two types of decisions.

Objectives of Consumer Education

In the past few years a lot of time, thought, and money have been spent in trying to define and clarify the objectives which should guide consumer education. A frequently cited [5,10] example of this effort was the pyramid of objectives developed by the National Consumers League [11, p. 57].



Each of the objectives will be discussed in turn, starting at the bottom of the pyramid. The use of consumer credit will be used to illustrate the type of decision at each level.

Coping

This objective covers the most fundamental skills for consumer survival. People must learn to evaluate two things. What do they want out of life? What is the best way to obtain satisfaction for these life goals? Fundamentally, this area concerns value definition, buying versus not buying and buymanship skills and techniques.

Using the credit example, consumers must first decide if they want to spend tomorrow's earnings today. If they choose to do this, they then need to shop for the best source of credit.

Understanding

At this level, consumers need to perceive how their individual decisions have an impact on society as

well as on themselves. Consumers must understand basic economics.

By using credit, consumers need to know that they may be adding to demand-push inflation. The demands on productive capacity may exceed the marketplaces' ability to supply goods and services. Therefore, rising prices and shortages may be one result of increased demand.

Questioning

Consumers need to speculate as to whether they are achieving the most satisfaction from the marketplace. Is the current system the best? Are consumers having problems with current methods of marketplace operation?

The credit market before the Truth-In-Lending legislation is a good example. It was difficult, if not impossible, for some consumers to judge their true cost of credit before Truth-In-Lending. As people experience this problem in comparison shopping, they should have seriously questioned the rules or lack of rules governing how creditors stated their interest charges.

Conserving

Some resources are or will be in short supply. Consumers have a responsibility to make informed decisions as to the use of dwindling resources. They must first anticipate shortages and then lay plans to avoid or reduce the impact of these shortages.

Consumers must compete with business and government for part of the credit pool. As business and governments' needs increase, the availability of credit to consumers will decrease and the cost will increase. Before the credit crunch happens, people need to have plans which enable them to reduce or eliminate the use of borrowed money. In fact, they may find a strategy of delayed consumption -- savings; preferable to a plan of accelerated consumption -- use of debt.

Participating

As problems in the marketplace are experienced, consumers must be active in governmental and business decision making. Their first step is to make sure their needs and demands are heard. They need to make decision makers in the other two sectors aware of consumer problems.

The current turmoil in the mortgage lending market is certainly one area where consumers must be heard. Serious potential problems exist for home buyers who must finance with a 2 to 3 year rollover type mortgage. What happens to these borrowers if interest rates jump so high in the short-term they

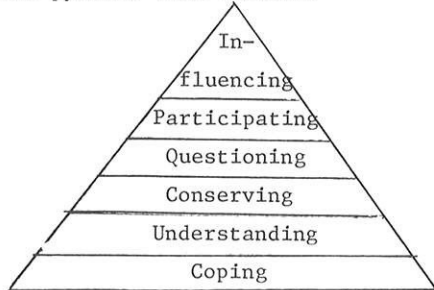
can't afford their house? The concerns of informed consumers must be presented to financial institution executives as well as to state and federal banking regulators.

Influencing

Not only should consumers be heard, they must also present their alternative solutions to problems. Acceptance of all or part of these solutions is the final step in this consumer education hierarchy.

Again, when considering the current mortgage market, consumers should be developing and proposing alternatives to the short-term rollover mortgage. The obvious problem here, as with most problems, is that there is no ideal solution. However, consumers must insure that the solutions that are developed are in their interest as well as the interest of the financial institutions.

For the purposes of the following discussion, I would like to switch two elements of this hierarchy. I believe that conserving comes before questioning. The revised pyramid then becomes:



The rationale for this switch is that attempts at conserving may lead to questioning the current economic or marketplace systems. Credit is now largely allocated on the basis of price - interest rate fluctuations. This has led to a serious impact on the housing market. Due to the high interest rates, consumers are being required to conserve on housing demands or in other parts of their household budget. Perhaps this is not the best way to allocate or conserve credit.

The basic thesis of the remainder of the paper is that consumers need to be able to make private decisions before they make societal decisions. To an extent, conserving like understanding and coping, is part of this private decision making framework. This idea will be developed in the next section.

Private Vs Societal Decisionmaking

Consumer decisions can be categorized two ways. First, people make personal or household decisions. When to buy, how to buy, should they buy, are examples of the general headings of decisions in this area. Of course, these micro-consumer decisions have an impact on societal decisions. However, the intent of consumers is to obtain satisfaction for themselves or for a close group of family or friends. Second, consumers make decisions which have a societal or public impact. The intent of these decisions is to satisfy a general group of fellow consumers. Again, personal satisfaction is also a

goal, but it is secondary to making the marketplace more responsive to consumer needs.

When applying the above decision making dicotomy to the consumer education objectives hierarchy; coping, understanding, conserving and the beginning of questioning make up private decision making. Public decision making is composed of questioning, participating and influencing. Few, certainly none in the consumer movement, would disagree with the proposition that consumers should be actively involved in participating and influencing public decisions which will affect them in the marketplace. My concern is with the sequence and priorities assigned to the two types of decisions.

My belief is that consumers must first know how to make effective personal decisions before they can attempt to shape public decision making. Consumers must first evaluate and understand their own values and needs. Next, they need to decide if these needs are best served by participating in the marketplace. If the marketplace is the source of satisfaction, they need to know how to obtain the greatest economic benefits. As consumers are frustrated in completing this process, they should become active in shaping public decision making. If consumers are not knowledgeable about their personal decision making, how can they have the knowledge to participate in and influence public decisions?

Why do I take this position? Because I believe that fundamentally our economic system works. This system is based on the belief that a series of private decisions will best shape the direction of the economy. The rebuttal is that big business, big labor, big government and maybe big consumer groups do not allow this independent allocation system to work. I agree these distortions do occur. Consumers must then become active in public decision making. But at what point do we determine that consumers are being frustrated by outside forces or by their own inability to function in the marketplace?

If we can assume that most consumers know how to make effective private decisions and if these people still are not obtaining satisfaction, the implication is that they must now become active in societal decision making. The barriers to their private decision making must be removed. The question then is: Have we as educators prepared consumers for private decision making? Unfortunately, the answer is no. "Many, if not most, of these (consumer) problems could have been avoided if consumers were better equipped with coping skills." [11, p. 54] This lack of basic consumer economics or personal financial knowledge is not limited to the disadvantaged or poorly educated. While working on a research project, two of my best students asked me what the difference was between endowment, whole life, and term insurance. Each of us can cite similar examples where we were surprised by the lack of knowledge of our friends, family and students. The general public also feels they are inadequately prepared as consumers. In fact, they overwhelmingly believe consumer education should be a required secondary school course. [7]

Priorities

Consumer educators' first priority should be development of personal decision making abilities. Consumers must first crawl before they walk; walk before they run. People must first understand what they want in life and the best way to obtain it. As they discover that they are not satisfied, and they all will sooner or later, they must then begin to question, participate and influence.

This means that the first course in consumer education should cover personal decision making. This does not mean teaching buymanship -- at least not totally. Students must learn to define goals, the necessity and ways to conserve, and the places to obtain information about and redress related to consumer problems. Of course, secondary teachers can say they are doing this educating already. But is it effective?

The reports are somewhat mixed, but generally it appears students are not learning consumer economics and personal finance [3] even in states which require consumer education of all students [8]. Even if students may learn it in school, it appears they forget it rapidly and do not use it when they graduate [2]. Of course, some researchers have found students do learn [4,1], but these findings are limited and it should not be construed to mean students are ready to move on to learning about public decision making.

Does the preceding discussion mean consumer public decision making should be limited to college level students? No. Remy presents a case that societal decision making can be taught in secondary school civics classes [6]. Students can learn consumer participation and influencing skills as a part of these classes. Certainly one beneficial application of public decision making in a civics class could be applied to consumer problems.

Should college students start their consumer course work in public decision making? Again, the answer is negative. Remember, many of our students take consumer courses so they can be better consumers. Frequently they come from states which do not require consumer education. Therefore, college students also need course work in private decision making. Also, some of the students will graduate and work in cooperative extension and secondary education. They need a strong background in private decision making so they can teach their entry level consumers.

Just as all students in high school need consumer education, all college students also need to study this area. I am not sure if all college students should be required to take a course in consumer education in their basic education core, but no student should be denied the opportunity to take the course work. Some schools, notably business schools, prohibit their majors from taking personal finance and in some cases, consumer education courses. This is very myopic. Many of my students need these courses, but are denied access because we mistakenly believe they learn these principles in their business courses.

A final point to consider in the debate over personal versus public decision making is the role of government regulation during the remainder of this century. The mood of the country, and consumers are certainly part of this country, is swinging towards less government regulation. People are becoming more conservative. They want to emphasize personal rights and freedom. They seem to want less government regulation and control of their lives. If this is the case, we need to educate consumers to protect themselves. We may be heading to an era where we will require the marketplace to provide all the information necessary for personal decision making. Nutrition labeling and truth-in-lending are examples. [9]. However, once the information is provided, it is the consumer's responsibility to make their own informed choice. The role of consumer educators is to first make sure consumers know what they want and how to use the available resources to achieve their goals. We must teach consumers how to efficiently operate in the marketplace. Because if government reduces its role as a protector; consumers must be prepared to protect themselves.

CONCLUSIONS

There are six objectives of consumer education. Consumers need to learn to cope, understand, conserve, question, participate and influence. These objectives can be divided into two types of decision making. The first three concern private decision making. The second three relate to societal decision making.

Consumers must first be taught personal decision making skills. They need to know how to manage and direct their own lives before they do these activities for other consumers. At both the secondary and college level, the first course in consumer education should deal with private decision making. For secondary school students, public decisions making can be a second course or part of a course in civics. At the college level, later courses in consumer education must address the topics of societal decision making.

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THE AUTOMOBILE SHARED MARKET: RECENT DEVELOPMENTS

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Abstract

The automobile insurance shared market should be viewed as a long-term entity. While there have been recent declines in the size of the shared market, cyclical decreases have occurred before. This paper considers these issues: (1) future size, (2) the demographics, and (3) recent mechanism developments of the shared market.

Introduction

The automobile insurance shared market occupies a focal position in the property-liability industry. The automobile insurance industry in 1980 had a combined underwriting loss of \$860,000,000. However, the overall property-liability insurance industry was profitable because of investment income. Nevertheless, the sizeable amounts of investment income have been sufficient to cause underwriting standards to be lowered as evidenced by substantial price decreases in selected markets and a general decrease in the size of the shared market (for automobile insurance).

While the shared market has experienced a decline during 1980, as illustrated by Exhibit 1, it continues to occupy a position of extreme significance for the industry and for consumers. The significance is due, in part, to the losses which continue to be sustained by the shared market and the very real spectre of a sizeable increase in this market if interest rates should decline during the upcoming months and if insurers follow the declines in interest rates by increasing selectivity, and thereby potentially increasing the size of the shared market.

Assuming that the cyclical nature of the shared market will not undergo significant change, several issues become of great importance to companies, regulators and consumers. The initial issue that should be considered is that of the future size of the shared market. When future developments in a market (or any other factor) are forecasted, it is generally recognized that there is substantial risk of error. However, regard to long-range planning requirements for individual companies and for companies operating in a shared market, it is important to determine what products and markets will exist, what customers will be purchasing the product, what will be the basic determinants of demand and what significant trends will develop. These questions are posed in a following part of this paper, which presents data developed through a recent Delphi research project produced by this writer.

The second issue that should be considered is that of the general population of the shared market. There has been, during recent years, considerable controversy over what types of drivers have been placed through the shared market. From this controversy has developed a form of conventional wisdom as to the groups insured through this market. However, as indicated in a subsequent section of this paper, the conventional wisdom has not always been accurate.

A third issue which should be discussed and analyzed concerns recent changes in the approaches through which the automobile insurance shared market is serviced. Several jurisdictions have recently undergone changes in approach and it is important to understand the reasons for, the nature of, and the possible impacts of such change.

Exhibit 1
Size of Shared Market*

Date	Liability Applications**	Commercial Liability	Total Physical Damage
1977	\$2,949,871	---	---
1978	3,000,443	\$157,145	\$726,243
1979	2,674,275	162,540	718,760
1980	2,634,992	156,083	767,547

*Source: NIC Circular #NIC 81-4 (January 19, 1981)

**Does not include Alternative Plan states: Florida, Hawaii, Maryland, Massachusetts, Missouri, New Hampshire, North Carolina, South Carolina

The automobile shared market should be viewed as a long term entity. While there have been declines in the size of that market in 1980, this is not a new phenomenon as there have been other short-term declines. Nevertheless, the short-term declines have been consistently followed by increases in the market, and during the 1970's, the decrease have been followed consistently by increases which placed the proportionate size of the shared market at a higher level than occurred in the previous peak of the cycle.

Forecasting Changes in the Residual Market

Forecasting the size of the shared market in the future is a perilous activity. Because of the central nature of the shared market, there are a number of significant factors which are very likely to influence, over time, the size of such markets. One such factor is the underwriting cycle which is said to exist in automobile insurance. According to a recent speech by Mr. F.

Dean Fildebrandt, Jr., entitled "Cycles in Automobile Insurance," the underwriting results for automobile insurance in 1980 were shown to be similar to those in 1979. That is, there was a continuation of the rather poor loss results in underwriting that began in automobile insurance in early 1978, and is a manifestation of one of the five underwriting cycles which have existed in the United States since World War II. These cycles have ranged in length from five to seven years. Some analysts believe that the underwriting cycle will result in a peak in the combined loss ratio occurring in 1981 or 1982. If this, in fact, occurs, there should be a rather substantial increase in the rates for automobile insurance and a corresponding subsequent increase in the size of the shared market. If the growth in the size of the shared market is consistent with previous cycles, the net result should be an increase in the proportion of risks going into the shared market which is higher than that of the preceding cycle. Thus, in terms of a secular trend, the size of the shared market would be increasing. Since the cycles of the shared market lag behind the underwriting cycle by about two years, the peak in the shared market should be reached sometime during 1983-1985.

A second factor which may significantly influence the size of the shared market in the future is a reduction in the number of underwriting variables which are allowed insurers. That is, there has been in recent years a relatively strong movement toward disallowing the use of variables such as age and sex in the classification of automobile insurance risks. If the trend toward homogenization in the number and types of factors continues, it is probable that the size of the shared market will increase as insurance companies attempt to remain reasonably profitable by moving larger numbers of relatively undesired risks into the shared market.

A third factor that may influence the size of the residual market over time is the general increase in regulatory authority and activity. There has been, in recent years, significant activity in states such as Massachusetts and North Carolina which has had the impact of substantially homogenizing rates. This homogenization has had the impact of creating significant subsidies in the market place and also has been associated with rather substantial increases in the size of the shared market. For example, in 1981, it is estimated that the current proportionate size of the shared market in Massachusetts is approximately 38-42 percent and in North Carolina approximately 30 percent. These two states exceed the national average by a wide margin. If such activity expands to other states, it can be expected that, over the long run, the size of the shared market should increase significantly.

Two other factors which may influence the size of the shared market in the near future are the greater damageability of automobiles and increasing theft rates. The frequency of automobile losses has declined since the inception of the oil and energy crisis. After the oil embargo and the

energy crisis which can be said to have begun in the early 1970's, accident frequency declined. A good portion of the increase or the decrease may be attributed to the legislation of a 55 mile an hour speed limit. The energy crisis has, however, caused a new variable to enter the loss statistics of insurance companies. That is, while the frequency has declined, severity has begun to increase and will probably continue to increase as automobiles become lighter and thus less resistant to damage from accidents. If insurance rates do not keep abreast of changes in the severity rates of automobile accidents, it is probable that insurers will attempt to reduce the quantity of their voluntary writings and to place more risk units into the shared market.

An additional factor which may cause the size of the residual market to increase, particularly in certain areas, is the incidence of increasing thefts. Thefts have recently become a major problem in certain metropolitan areas, such as Boston and New York. In those areas, and others, the rates for comprehensive insurance have increased. Nevertheless, the portion of the automobile insurance rate which is allocated to thefts will be increasingly more inadequate if theft losses continue to increase at current rates. To offset the financial impact of these increasing thefts, it is possible that insurers will attempt to increase rates or will be required to underwrite more restrictively in theft areas. Should this underwriting and rate activity not be successful, it is highly probable that the size of the shared market will increase as insurers become unwilling to write such business voluntarily.

One factor which may cause the size of the shared market to decline during the next few years is inflation. While inflation does significantly harm many groups of persons in our society, it is clearly beneficial to those who have significant debt and is also beneficial to persons who have high cash flow and who can invest such cash flow into high yielding securities that accompany inflation. The automobile insurance industry is no exception. During 1979, 1980, and into 1981, interest rates have been at historically high levels. Insurance companies have been able to receive cash flow from actively writing insurance and have been able to invest those funds at historically high rates. As a result, the industry, while unprofitable from an underwriting standpoint in the automobile insurance area, has been profitable on an investment return basis. It is clear that many insurers today are underwriting competitively in order to increase cash flow for the investment return. This is true even in the automobile insurance area; this factor may cause the proportion of voluntary writings to increase with an associated decrement in the size of the shared market. The most important question is how long the high interest rates will continue to influence the size of the shared market.

As is evident from prior discussion, many factors will influence the size of the shared market. The overall impact is not clear. However, one recent study suggests the following:

Considering only insurance written through the private insurance market, the panel forecasts that 83% will be written through the voluntary market while 17% will be written through the shared or residual market. The anticipated increase in the size of the shared market is significant. Currently less than 6% of the automobile insurance market is shared; other coverage areas have significantly lower percentages covered through the shared markets.

Presumably the increases in the shared market proportions are expected to be concentrated in the personal lines (and probably in automobile and perhaps residential fire insurance lines).

The above quotation was taken from a study entitled "Entering the 21st Century...An Insurance Forecast" published in 1980. The publication is a product of a Delphi project which attempted to utilize the opinions and forecasts of many insurance experts. The fact that the consensus of the panel of which the Delphi was composed was that 17 percent of the entire private insurance market would be shared is a strong indication of the potential significance of this market.

Population Characteristics

The demographic and driving characteristics of various groups of insureds are currently topics of concern and study. Discussions of this subject often have been controversial and have been subjected to limitations resulting from a lack of data, especially with respect to insureds whose coverage has been placed through the shared market.

Conventional Wisdom

Critics of the shared market, both within and outside of the insurance industry, have asserted that the shared market is disproportionately populated by a number of identifiable groups:

1. clean risks
2. youthful drivers
3. males
4. students and military personnel
5. single persons (not married)
6. residents of urban areas

In the past two years, several studies have been undertaken by the National Industry Committee to determine the validity of the conventional wisdom relative to the shared market. These studies to date have been made in four states: Virginia, Florida, Kansas and California. The shared market of a fifth state, Pennsylvania, is currently being analyzed. Data from these studies clearly illustrate that much of the conventional wisdom is inaccurate.

Insureds in the Shared Market

Perhaps the most serious charge levied on the shared market, generally by external critics, is that the market is composed of a significant majority of risks which can be considered to be clean. This allegation raises two particularly significant questions: (1) the definition of a clean risk, and (2) the actual proportion of clean risks in the shared market.

The subject of clean risks cannot be treated with a single definition. In fact, there are many definitions that could be used including the following which were presented in the National Industry Committee studies indicated previously:

1. Clean/not-clean based on application only.
2. Clean/not-clean based on MVR only.
3. Clean/not-clean based on application and MVR.
4. Clean/not-clean based on application and motor vehicle report and no operator licensed under three years.
5. Clean/not-clean based on application and MVR, and no operator licensed under three years and the applicant has had prior insurance.
6. Clean/not-clean based on surcharge versus non-surcharge risks.

The results of the analyses in the four states mentioned previously establish that the proportions of clean risks vary by definitions, but illustrate that the proportion of clean risks by the most appropriate underwriting definitions, i.e., #5 (from a risk posture) fall far below the estimates of market critics. The data are illustrated in Exhibit 2. Additionally, the evidence that the number of surcharged policies are significantly below the proportions of non-clean risks (as defined by other bases) supports an argument that the surcharge systems are unable to identify non-clean risks on an adequate level and, further, the

Exhibit 2
Proportion of Clean/Not-Clean Risk Applications
By Various Definitions

Definitions	Virginia	Florida	Kansas	California
#1 Application only	40.8%	67.9%	58.5%	35.3%
#2 MVR only	37.9%	38.6%	33.4%	23.3%
#3 Application and MVR	37.3%	36.9%	32.0%	21.9%
#4 Application and MVR and no inexperienced operator	27.9%	20.4%	24.0%	13.5%
#5 Application and MVR and no inexperienced operator and prior insurance	12.6%	6.4%	11.4%	5.7%
#6 Surcharge vs. Non-Surcharged	45.8%	54.1%	64.4%	27.6%

amounts of surcharges are inadequate to deliver an appropriate amount of overall premiums to insurers. In another sense, some risks are not being charged premiums that are commensurate with the risk and are, thereby, being subsidized to what is perhaps a significant extent by other drivers in the marketplace.

The issue of youthful drivers being placed in the shared market in largely disproportionate numbers was also analyzed by the recent National Industry Committee studies. The evidence supports the contention that the young drivers are, in fact, somewhat over-represented in that market.

Much of this over-representation can be attributed to the inexperience of these young drivers. Inexperience, defined as less than three years of driving experience, is considered to be a major factor influencing automobile insurance losses. And, as might be expected, the data from the four states illustrate that age and driving experience are highly interrelated.

The sex issue has also concerned a number of analysts. The data illustrates that males are relatively over-represented in the states for which analyses have been undertaken. When total operators included on the applications were analyzed, the proportions of males generally were above general population proportions. However, the differences are relatively small and probably relate rather closely to automobile ownership, use, and the proportions of registered operators.

represented only 3.7 percent of the entire sample. Retired persons accounted for 7.5 percent of the entire group sampled and those unemployed represented 4.0 percent. When these data were compared to the approximate proportion of Kansas citizens classified as students, unemployed and retired in 1978, based on data developed from 1970 census and the Kansas Statistical Abstract - 1978, no pronounced differences were found. In fact, unemployed and retired persons were under-represented in the sample relative to the population, while there was almost equal representation in the student classification. This type of result surfaced in each of the states analyzed.

The automobile insurance shared market has, on occasion, been described as an urban operation. From the data gathered in the four states analyzed, it is clear that this market is not an urban problem. For example, California is generally considered to be fairly urban. The geographical distribution by zip codes of insureds in the California Plan was obtained through the sampling process. To compare insureds in the sample with other California citizens, a standard was required, preferably the proportions of licensed drivers residing in each zip code location. However, these data are unavailable, and other data published by the United States Government were utilized. The data along with the results of the sample are illustrated in Exhibit 3.

The slight differences in urban proportions result from the use of two different definitions. For

Exhibit 3
Urban/Non-Urban Proportions - California
(U.S. Government Census Data)

Year	Central City Areas	Non-Central City Areas	California Plan	
			Urban	Non-Urban
1960	35.2%	64.8%	---	---
1970	36.4%	63.6%	---	---
1980 (Est.)	38.0%	62.0%	41.7%	58.3%

The application process in all of the states studied also permitted the group of applicants to be analyzed by occupation. Of the applicants included in the four samples, approximately two out of three indicated that their occupation was one which was not included in the survey except in the category "All Other." Upon analysis of the data developed through the sample, however, it can be said that occupation does not play an important or even a relatively meaningful role in the distribution of operators in the shared market on a country-wide basis.

The groups that are generally thought to dominate a shared market plan, regardless of the mechanism, simply do not appear in disproportionate numbers in any of the four states studied. For example, it has been asserted in the past that the shared market is over-represented in the categories of students, military personnel and unemployed persons. None of these groups, however, appear to dominate in any plan. For example, Kansas, the student category represents 3.7 percent of the entire plan while the military grouping (both officers and enlisted personnel)

example, the Census data utilizes the concept of central cities or heavily populated areas to classify persons living in an urban area. This study, on the other hand, used zip code data for definitional purposes.

The zip code data in California were categorized as "urban" and "non-urban," urban being defined as any single area (city or municipality) having three or more zip codes. As Exhibit 3 illustrates, only 41.7 percent of the applicants sampled were found to reside in areas defined as urban while 58.3 percent were included as residents of non-urban regions.

Thus, the data are similar to the "central city" concept. According to the Census, 35.2 percent of the California population was defined as being in central cities in 1960. In 1970, the percentage was 36.4 percent. These urban data approximate very closely the 1980 results found for the California Plan. Since the central city proportions can be expected to change very slowly, it is concluded that the data developed in the 1930 study are quite comparable to the current central city population.

In summary, from an analysis of the data in the four states studied, it is evident that there are some elements in the population that are over-represented in the shared market. These are: (1) young drivers, (2) inexperienced drivers, and (3) single persons. However, many groups appear to be reasonably represented or underrepresented. Some of these groups are: (1) clean risks, (2) students and military persons, and (3) urban residents.

Recent Mechanism Changes

There have been, during the past two years, several changes in shared market mechanisms. While there are relatively few changes in the fundamental concept of dealing with the shared market, the technical change and implications are significant. The following changes in mechanisms have occurred in the following states:

- (A) Virginia - from an Automobile Insurance Plan to a Limited Assignment Distribution for private passenger cars (1981)
- (B) Rhode Island - to a Service Center operating within an Automobile Insurance Plan (1978)
- (C) Michigan - from an Automobile Insurance Plan to a Joint Underwriting Association (Essential Insurance 1980-1981).

Virginia - The Limited Assignment Distribution

The basic concept of the Limited Assignment Distribution (L.A.D.) program recently introduced in Virginia is, first, to incorporate the generally accepted characteristics of the Automobile Insurance Plan (no pooling-assignment of risks) and then to reduce, to a manageable or more reasonable extent, the number of insurance companies operating in the shared market and to continue to make individual insurers fully responsible on a financial basis for their claims handling. As is well known, the distribution of risks written in all states including Virginia prior to the L.A.D. is highly skewed with approximately ten to twenty-five companies (depending on the state) writing approximately three-fourths of the total business and the remaining business being distributed over the remaining one hundred or more companies.

Assumptions Underlying the L.A.D. Approach. The L.A.D. system is predicated on several fundamental or basic assumptions:

- (a) that a smaller number of carriers will provide superior service to the market than will a large number of carriers;
- (b) that pooling of shared market losses is costly, inefficient, generally not desired and potentially leads toward a larger aggregate insured loss;
- (c) that insuring organizations that do not operate within the shared market will incur as a result of an L.A.D. measurable cost savings and no associated inequities or inefficiencies;

- (d) that companies not participating in the shared market should pay a fee for their absence of participation;
- (e) that utilization in the shared market of a reasonably sized sub-set of the industry is conceptually simple, efficient and flexible.

Implementation of an L.A.D. The L.A.D. program in Virginia was implemented utilizing the following general provisions:

- (a) Subsequent to the implementation, there are two groups of companies. First, there are servicing companies that operate in the shared market. These companies were specified according to size for eligibility purposes. It was determined that, to qualify as a servicing carrier, the company would have previously been writing at least 1.0 percent of the voluntary market. In Virginia, on January 1, 1981, there were fifteen companies writing as much as 1 percent of the automobile insurance market. Of the fifteen companies, six have elected status as servicing carriers. The second type of company is one that would not operate in the Virginia shared market. That is, these insurers have no responsibility for servicing, in any manner, shared market business. Because the lack of servicing residual market business should result in a reduction in underwriting such business, companies not servicing shared market risks are expected to compensate the servicing companies accordingly.
- (b) The program was implemented on a voluntary basis. That is, companies in Virginia were allowed to determine whether or not they would become servicing carriers or whether they would remain outside of the shared market.
- (c) The charges made to a non-servicing company was found to be a difficult, but not insurmountable problem. The charge (which was developed by AIPSO which is a rate making organization which serves the shared market) was predicated on the expense savings of the non-servicing company plus the differential loss costs expected to be incurred by the servicing company.

The advantages of the L.A.D. program in Virginia appear to be substantial. Interviews with insurance managements and officials of the L.A.D. program indicate that consumer complaints have generally declined or at least not increased, producers are apparently satisfied, and processing appears simpler. Of course, at the time this article is being written, the program has been in effect only five weeks. Thus, it is possible that some problems may appear in the future. Some of these problems or limitations as well as some selected advantages are illustrated in Exhibit 4.

The Service Center

The Service Center is a second shared market approach which has been recently introduced. This approach, currently used in Rhode Island, incorporates the general characteristics of an Automobile Insurance Plan. There is no risk pooling

Exhibit 4

Alleged Advantages and Limitations of the L.A.D.

<u>Potential Advantages</u>	<u>Potential Limitations</u>
1. Reduce fraud by encouraging companies to exercise better loss control.	1. Insurers, both servicing companies and non-servicing companies, may be unwilling to participate in voluntary program.
2. Improved service and more uniform service by having fewer companies in shared market.	2. Level of fee paid and received may be questioned as to equity.
3. Improved service to agent-producers by having fewer companies in shared market.	3. May not reduce the size of the shared market.
4. Potential ability to develop data more quickly and more efficiently.	

and insureds are assigned to companies on the basis of proportionate insurance volume. There is, however, an entity which is positioned between the consumer and insurers; this is termed the Service Center. Under the Rhode Island Service Center approach, an organization, which is administered by A.I.P.S.O., has been developed to handle some or all of the "front-end" operations of the shared market. Thus, the Service Center has become a single organization for servicing the shared market. While business enters the insurance system through the traditional agent-producer, all rating, underwriting, policy writing, premium collections, distributions to the insurers are undertaken by the Service Center. The companies (insurers) perform or relate to the public in only one fundamental situation, i.e., in the claims function. In all other operations (except investments), the function is handled on behalf of insurers by the Service Center.

Advantages and Disadvantages of the Service Center. One of the alleged advantages of the Rhode Island Service Center is the centralization and standardization of operations and procedures. Standardization developed by operating from a central entity has the potential to improve the quality of service to insureds and to producers functioning within the shared market. Since one of the alleged disadvantages or limitations of all shared markets has been the quality of service, this advantage would be assumed to be an important one.

The quality of service has been maintained through the Rhode Island Service Center by periodic audits of both companies and producers, as well as the Service Center itself. Performance standards have been established for the Service Center and for producers.

There are also several disadvantages or limitations that have been discussed with regard to the Service Center. One important disadvantage

or potential disadvantage of the Service Center operation is the potential duplication and dual tracking of records by the Service Center and the insurance companies as well. The problem associated with duplication generally concerns the fact that while the Rhode Island Service Center does all billing, it is still necessary that individual records be established within the insurance company for each insured. Consequently, separate records must be established each month in every company upon receipt of the monthly transmittal from the Service Center. Additionally, there must be separate and dual record keeping concerning claim verification, statistical conversion (dealing with the statistical agents) and for any other data requirements that an insurance company might have.

Finally, a possible disadvantage of the service center concerns the size of operation (particularly the number of employees) that has been required to establish and maintain such a center. However, it is equitable to recognize that the expenses of the Rhode Island Service Center have been modest in amount; this would tend to diminish the "personnel" and "organizational size" criticisms.

The Michigan Plan (Essential Insurance)

The Essential Insurance Program recently developed in Michigan presents a distinctive plan of insurance for the personal lines (automobile and residential insurance). The program has been devised to provide almost unlimited availability of insurance for those lines of covered defined as necessary for minimal financial security.

The Michigan program first prescribes a "take-all-comers" provision. By legislation, every insurance company operating in the state of Michigan is required to sell automobile and residential coverage (assuming that the carrier sells those products) to each customer who meets the legal standards of an "eligible person." These standards are defined by the legislation.

The "take-all-comers" provision is hardly new to these companies writing automobile insurance. Many states, such as Florida, North Carolina, Massachusetts and others currently have such laws. It is highly unlikely that any problems developed out of this part of the legislation will be anticipated by insurers operating in the state.

A second, and perhaps more significant, part of the Michigan program concerns required reforms and many restrictions on the rating of personal lines insurance. For example, in the automobile insurance area, insurers are required to use only those factors which were termed "objective" under the legislation. For example, an insured's place of residence can only be used to a limited extent for the rating of either automobile or residential coverage. The factors that can not be used include:

- (1) age and/or driving experience;
- (2) principal or secondary drivership;
- (3) use of the vehicle (for example, farm versus business uses);
- (4) type of vehicle;
- (5) mileage driven;
- (6) number of automobiles in the household, and
- (7) amount of insurance.

The above factors are used for liability coverage. In addition to the above factors, the costs of repair or replacement of the automobile are also used in the rating of physical damage coverage. In no case can either operator sex or marital status be utilized as a rating variable.

Territorial distinctions are generally an important part of the rating process in automobile insurance. Such is not the case in Michigan after passage of the recent legislation. For example, the bill has mandated that a maximum of twenty different territorial base rates can be utilized. Moreover, an insurer is not allowed to use a territorial base rate less than 45 percent of the highest territorial base rate for the same policy and cannot use a rate in any territory which is less than 90 percent of the base rate used in any adjacent territory for the same type of policy. This process is certain to cause a cross territory subsidy as it severely restricts the ability of the industry to base their rates on the differential costs between and among territories.

The advantages and disadvantages of the Michigan Plan should be similar to those of the Virginia Plan. That is, the Plan calls for a limited number of insurers to handle the shared market. Additionally, the Michigan Plan has further introduced a number of rating factors that can be used and others that are prohibited. Perhaps the most questionable portion of the program deals with the territorial factors. It is clear that the legislation has mandated a homogenization of territorial base rates. As a consequence, it is possible that the size of the Michigan shared market will increase. This has been the case in Massachusetts where similar homogenization has occurred.

Consumer Satisfaction in the Shared Market

The question of how consumers view the shared market and more broadly, the general automobile insurance market has been investigated by a number of researchers. One study entitled Servicing the Shared Automobile Insurance Market attempted to determine directly how insureds perceived the market.

Based upon the consumer returns in the Servicing study, it was relatively clear that consumers do not view automobile insurance in a favorable manner. Almost 50 percent of the respondents indicated that they were not satisfied with the automobile insurance situation in their state. Needless to say, a rate of dissatisfaction to this degree should be disquieting to other consumers, persons in the insurance industry, and of course, regulators.

The level of general dissatisfaction was tested against several other variables. For example, consumers were questioned about availability of insurance. Many of the respondents, approximately one-half, had no knowledge concerning whether or not automobile insurance was freely available in their state. An even greater proportion were unsure as to whether or not insurance was immediately available upon request. Only 20 percent of consumers questioned knew if they could buy large amounts of coverage in the shared market. Further, almost 60 percent were unaware of pricing relationships.

From a more positive position, a substantial majority of insureds who experienced an automobile accident were favorably impressed with the speed of service and with the general fairness of settlements. Thus, persons who actually came into contact with the most significant part of the insurance process, e.g., claims, tended to be highly satisfied.

The contrast in satisfaction between persons who were involved in automobile accidents (those actually using their insurance) and the general population is difficult to comprehend. However, based upon further research in the Servicing study, it is rather conclusive that the general consumer's basic complaint was cost. That is, the consumer does not appear to be concerned over the types or amounts of coverage or the process through which coverages are delivered. Service, for those who use it, appears satisfactory. However, the cost factor, as conceived by insureds, is excessive and is the major dissatisfaction. Since insurers in the automobile insurance field, and most particularly in the shared market have consistently suffered underwriting losses (for example, automobile insurers in the alternative plan states lost \$333,250,334 for the twelve months ending September 30, 1980), it is unlikely that premiums will decline. Until the factors which cause losses to increase (accidents, costs of automobile repair, excessive jury awards and significant administrative-legal costs) are controlled, there will most likely be increasing premiums and lowered satisfaction.

CONSUMER ISSUES OF THE 80'S

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Abstract

The 1960's and 1970's saw much activity in the consumer movement at all levels including private consumer organizations, consumer education and government consumer action. Many consumer issues have been attended to in those two decades. This paper presents one person's thoughts on the consumer issues that will confront consumers in the decade of the 80's.

A basic question in determining the consumer issues of the 1980's is whether the consumer issues of the 80's will really be significantly different than the consumer issues of the 70's, the 60's? The late President Kennedy stated these issues as the rights of the consumer in the first consumer message ever presented to a United States Congress, in 1962. These rights have been quoted many, many times, and I would like to quote them again (Kennedy, 1962):

*The right to safety - to be protected against the marketing of goods that are hazardous to health or life.

*The right to be informed - to be protected against fraudulent, deceitful, or grossly misleading information, advertising, labeling, or other practices, and to be given the facts needed to make informed choices.

*The right to choose - to be assured, wherever possible, access to a variety of products and services at competitive prices; and in those industries in which competition is not workable and government regulation is substituted, an assurance of satisfactory quality and service at fair prices.

*The right to be heard - to be assured that consumer interests will receive full and sympathetic consideration in the formulation of government policy and fair and expeditious treatment in the government's administrative tribunals.

President Johnson sent a message on consumer interests to Congress in which he reiterated the four consumer rights enunciated by President Kennedy. President Nixon sent a message to Congress in which he added the consumers' right to register dissatisfaction and have their complaints heard and weighed (Nixon, 1969). In 1975 President Ford stated that consumers should also have

the right to consumer education (Ford, 1975). And, in 1977 President Carter appointed many consumer activists to key positions in the Federal government.

The 60's and early 70's saw a wave of consumer legislation passed by Congress: Truth in Lending Act, Fair Packaging and Labeling Act, Wholesome Meat Act, Consumer Product Safety Act, and the Magnuson-Moss Warranty Act to mention the key ones. During the past few years there has been a marked slow down in consumer legislation for two reasons: One reason is that many significant needs of consumers have been met in whole or in part by the legislation that has been passed; and second, and in some respects more importantly, that there has been a growing resentment on the part of many people against more and more government regulations. This second point I believe is one that will be most significant in terms of what will be done in the area of government action for consumers in the 80's.

I think it is unfortunate that we are seeing today a "knee-jerk" reaction by many against government regulations with little or no thought as to the need or desirability of the regulation being considered. I would like to quote from a speech given by Harold M. Williams, chairman of the United States Securities and Exchange Commission, who I believe comes to grips in a very balanced way concerning government regulations (Williams, 1980).

My theme today is not that we need more regulation to ensure a more just society - or less to guarantee a more productive one. Rather, it is a warning that we lack a well developed philosophy within which to evaluate the interaction between a free market economic system and the increasing governmental and political involvement in that system. Whether under the banner of regulatory reform or some other, we need to develop a coherent set of principles aimed at creating an equilibrium between the energies of a free, private economy and the meliorating effects of regulation. That equilibrium must not fetter the private sector and prevent it from continuing to provide us with the wealth necessary to attain our national aspirations. Similarly, however, we must take care not to denigrate government's role in satisfying the deep-rooted belief that private economic power must be accountable to the public good. Reforms - regulatory or otherwise - which fail to strike a reasoned balance between these precepts will, in my judgment, prove inherently unstable.

What we have seen developing is an antagonism against government regulation by individuals and

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businesses because there have been some gross, stupid and costly regulations perpetrated on the public which are indefensible. For example, in spite of much good that has been done by the Occupational Safety and Health Administration (OSHA), it has been its picyunish, petty regulations that have gotten the attention of the media. For example: OSHA regulators have done some knit-picking that has been both costly and non-productive in terms of reducing injuries or saving lives. OSHA regulators required that guard rails around dangerous areas must be raised or lowered a few inches to meet the precision of the regulations, that fire extinguishers must be raised or lowered, again to meet the precise requirements of some bureaucratic regulator's unreasonable decision. A brochure was put out by OSHA warning farm workers to be careful in walking around the barn because manure is slippery and they might fall. A regulation required that toilet facilities should be within close proximity to farm hands, which almost made it necessary to have a "port-a-john" toted around. It is unfortunate that similar attention has not been given by the news media to actions that have been taken by OSHA that have been successful in reducing the number of injuries and which have saved lives.

A similar situation exists with regard to the Consumer Product Safety Commission (CPSC). CPSC was ridiculed on the Public Broadcasting System-TV series by Milton and Rose Friedman "Free to Choose," because CPSC tested the noise level of play guns for children. What the Friedmans did not say or know was how many children have had their hearing impaired by play guns that made too much noise.

A few examples will illustrate that there is some good from "good" government regulations (Pittle, 1978).

Consider a few examples of the benefits resulting from some of today's health and safety regulations:

*In the regulated products groups, safety packaging requirements have produced a 40 percent drop in ingestions of poisons by children over a four-year period. There are children who would not be alive today but for those regulations.

*Since the safety standard for cribs became effective in 1974, deaths by strangulation in cribs have fallen by half and injuries by 45 percent.

*According to a Government Accounting Office report, 28,000 lives were saved between 1966 and 1974 because of Federal motor vehicle safety regulations. The same report showed that in one state where a detailed analysis was conducted there was also a substantial reduction in the frequency and severity of injuries. With auto accidents the number one cause of paraplegia

in the United States, these figures are quite significant.

*The Shriners Burn Institute in Boston reported that in 1971 - prior to the children's sleepwear standards - 34 percent of its flame-burn injuries involved sleepwear. In 1977, the figure was 0.

Peter Drucker, probably the most famous management consultant in the country, wrote an article a number of years ago in which he called, "Consumerism the shame of marketing" (Drucker, 1969). He stated that if the marketing community had been doing its job right, consumerism would have never developed. Recent years have shown us that the marketing community has not done all it should, so there is still much to be done and the decade of the 80's is not too soon to accomplish more for consumers.

The issues that confronted consumers in 1776 continue to be somewhat similar to the issues facing consumers in the 1980's. This is substantiated in the famous quotation of Adam Smith, which is just as applicable today as it was when he wrote it in 1776 in his magnum opus, An Inquiry into the Nature and Causes of the Wealth of Nations (Smith, 1776):

Consumption is the sole end purpose of all production; and the interest of the producer ought to be attended to, only so far as it may be necessary for promoting that of the consumer. The maxim is so perfectly self-evident, that it would be absurd to attempt to prove it. But in the mercantile system, the interest of the consumer is almost constantly sacrificed to that of the producer; and it seems to consider production, and not consumption, as the ultimate end and object of all industry and commerce.

Another area of concern and a continuing consumer issue in the safety area deals with automobiles. Congress passes legislation mandating a maximum speed limit of 55 miles per hour, not to save lives, but to save gasoline. Pressure has been building in Congress to postpone the implementation of passive restraint systems in automobiles, and at the present time the consumer who is concerned with safety does not even have the option to buy an automobile equipped with an airbag. In our disregard for safety, are we going to be remembered as the generation that saved the whales and saved the trees, but ignored our own kind?

A number of consumer issues have been mentioned. Two of the most important consumer issues of the 1980's I will only mention in passing. Each could be a lecture in and of itself - inflation and energy. Does anyone really need to be told that these are and will continue to be major consumer issues? But, there are other consumer issues, not of such magnitude, but still deserving of attention.

A very present concern is whether much of the gain that has been accomplished in the last two decades is to be dismembered in the 80's by budget cuts.

How serious will the budget cutting of consumer programs actually be? What programs will be reduced and what programs will be eliminated? Just a few examples illustrate the potential budget cuts that will have effects on consumers. Cuts have been budgeted for the U. S. Office of Consumer Affairs, the Consumer Product Safety Commission, and the Federal Trade Commission. Budget cuts would eliminate the National Consumer Cooperative Bank, the Legal Services Corporation, and the U. S. Office of Consumers' Education. These are consumer concerns.

Problem areas which raise questions about the direction and strength of the consumer movement have been well detailed by Arthur E. Rowse in Con\$umer New\$weekly (Rowse, 1980):

*Failure of Congress to approve a separate consumer agency or pass any major piece of consumer legislation for several years, plus its severe restrictions on the Federal Trade Commission, the nation's chief agency of consumer protection in the marketplace. Voting records compiled by the Consumer Federation of America show the 96th Congress as the worst in many years.

*Loss of key consumer leaders, culminating in last week's resignation of Ralph Nader, the patron saint of the consumer movement, from active control of Public Citizen Inc., the organizational base of his lobbying work. Although he will still run the Center for Study of Responsive Law and other groups, the change marks a much lower profile for Nader as he turns over the administrative duties to Dr. Sidney Wolfe, longtime head of Nader's Health Research Group. Earlier this year, Mark Green resigned as head of Nader's Congress Watch, a further blow to consumer fortunes on Capitol Hill. After the election, Esther Peterson is expected to end a career as chief consumer advocate in government dating back to 1964. The consumer movement has never recovered from the loss of many leaders to government duties in the early days of the Carter Administration.

*Disorganization of consumer organizations, examples of which include the loss of \$1,469,000 on the latest year's operations by Consumers Union, leaving a deficit of \$3,344,000 for the organization that funds many other consumer groups; the takeover of Consumers' Research Magazine by Stanton Evans, a well known lecturer and writer for conservative causes, whose first issue featured pro-nuclear and anti-air bag articles; the inability of the National Consumers League to find any more active consumer champions for its "Trumpeter" award than Averell Harriman and the late Lyndon B. Johnson; and the failure of the Consumer Federation to issue its 1980 Congress-

sional Voting Record until a week before the election.

Esther Peterson, Special Assistant for Consumer Affairs to both Presidents Johnson and Carter, presented some very forceful comments on consumer issues for the 80's, which are deserving of careful attention (Cohen, 1981). She believes that consumerism has to nourish its grass roots before it will regain ground lost in the 1980 election. This opinion is supported by the Consumer Federation of America that plans to work more diligently on organizing local consumer groups and doing less in the area of lobbying for specific consumer legislation. Mrs. Peterson, concerning the 1980 election, stated, "I think people did not vote away the regulation of safety. They did not vote to take away information on food. They did not vote to take away the kind of controls we have in medicine."

Another major concern of Mrs. Peterson is the rising support of labor for protection from foreign competition. She sees the need for a new coalition emerging that will bring together consumerists, environmentalists, "socially accountable businesses," church groups and others. "People are writing me and saying, 'Well, Esther, we can't rely on government anymore. We have got to begin to do this ourselves.'"

In talking about consumer issues of the 80's, I would like to digress a bit, but in reality it is not a digression. It is discussion about an area that should be of concern to all consumers who are in the labor force, and a concern which is all too frequently overlooked by consumerists. This area of concern was discussed by A. Edward Miller, president of Berlitz Schools of Languages, who emphasized, "Consumerism's Other Half" (A. Edward Miller, 1972).

This focus on consumerism has been a valid first step, it falls short of building a totally effective consumer movement; for it paints a picture of the consumer as victim, helpless except through the negative means of protest to control the quality of his life. Producerism, I believe is capable of injecting the necessary element of positivism into the consumer movement. It is hard to say just when pride in accomplishment as a widespread concept came to an end - but it did. We must regenerate that sense of pleasure in accomplishment, motivate consumers to aim for high quality in their producer roles.

If we are to have an effective consumer revolution, we must effect such a producer revolution. Almost every consuming unit in our population is also a producing unit, capable through greater care and efficiency, of influencing the quality and price of a product or service.

Along similar lines, since we have been talking about consumers' responsibilities when they are producers, there is another pressing need to

emphasize - the consumers' responsibility to help in raising the level of morality of consumers. Consumers want business to be honest. Well, consumers should be honest and fair in dealing with business. It won't do too much good if during the 80's we see improvements in the level of business morality, but consumers continue to steal literally billions of dollars from retailers; damage and soil merchandise in the store; fail to pay off debts; and, so forth. America badly needs a higher level of morality on the part of both business and consumers, if we wish to avoid having the marketplace become a place where everybody is "ripping off" everybody.

Going back to the consumer issues as enumerated by President Kennedy, I think it is all too frequent that we still see lacking in the marketplace the implementation of certain consumer rights which would give consumers the information they have a right to, which in turn would prove beneficial to those businesses wanting to do right by the consumer, and in turn would make the marketplace much more honest and productive. These are consumer rights for which we have been fighting now for decades. We still do not have a Federal Truth in Saving Act. There needs to be continued stress on informative and truthful advertising. We still do not have adequate nutritional labeling on most food products. We still do not have adequate open-dating information. We still do not have adequate ingredient labeling on food products. We still do not have percentage ingredient labeling on food products. We still do not have adequate drained weight labeling for canned food products. We still cannot buy most food products by understandable grades based on adequate standards. We still do not have products packaged in even weights. We still do not have universal unit pricing. We are slowly seeing item pricing being eliminated. We still do not have the right to know who makes the products we buy at all times. Yes, we do have the right to know either the name of the manufacturer or the distributor, but not the name of the manufacturer if the distributor's name is given.

Have you ever given much thought as to how significant it is for producers to persuade consumers that products are different. Much of American marketing is based upon product differentiation (otherwise known as monopolistic competition). With standards and grade labeling, more selling would have to focus on competition based upon price, quality, and service, all of which benefit the consumer, instead of promotional competition which adds no value to the product, but adds to cost. Wouldn't this really change the marketplace?

For example, a canner is processing canned corn. A label of one distributor or retailer is put on the cans. Then the assembly line is stopped and a different label is placed on the next batch of cans going through. The attempt here is to differentiate in the mind of the consumer between identical products. The same is true with appliances and a variety of other products.

What would the marketplace be like if consumers were able to make comparisons between products strictly on the basis of quality, and not have to be dependent upon brand names, advertising and inadequate labeling? The marketplace would truly be a different place serving the best interests of consumers and rewarding those businesses doing the best job.

The right to consumer redress continues to be a consumer issue. Progress is being made in this area with more and more companies establishing consumer complaint offices; with CAPS (Consumer Action Panels) being established in many areas of the country; and, with better business bureaus in many areas setting up arbitration panels. More needs to be done. For example, consideration I think should be given to whether a consumer should not only get redress for a defective product, but whether he or she should get restitution for time expended and costs involved in getting a problem corrected, when it is not the consumer's fault. For example, I purchased three smoke detectors from Sears. I took them home and only two worked properly when I tested them. Sears is a twenty-mile round trip for me. How much is my time worth and how much are transportation costs? Is just a replacement enough for time, extra costs, and aggravation? I think not.

Another troublesome area to consumers and a most controversial subject deals with the steel and automobile industries' request for more government regulation in the international trade field. Should the freedom to choose of a possible 500,000 consumers, at a cost of hundreds of millions of dollars to automobile buyers in general, be restricted by limiting the number of Japanese cars permitted to be imported?

I have enumerated a variety of consumer issues. I am sure each one of you could add to this list.

American consumers have been blessed with a most productive, relatively free enterprise system that serves us remarkably well, but it does not represent perfection, and a significant consumer issue of the 80's is to see that the marketplace serves the consumer better. Paraphrasing Adam Smith, "Consumption should be the sole end and purpose of all production, and the interest of the producer ought to be attended to, only so far as it may be necessary for promoting that of the consumer."

There are many consumer issues for the 80's. What are you going to do about them?

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PROFESSIONAL DEVELOPMENT: EXPLORING THE AMERICAN
STATISTICAL ASSOCIATION FOR IMPLICATIONS FOR ACCI

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Abstract

The American Statistical Association is involved in co-sponsored activities with other professional associations and government agencies. Continuing education includes pre- and post-conference tutorials, regional conferences, and other co-sponsored activities. Publications, fellowship and award programs, and efforts to impact public policy and practice are other activities. ACCI may want to explore these for professional development potential.

The American Statistical Association (ASA) has more than 140 years of experience and a membership of over 14,000 to provide the basis of its programs. It includes a network of 64 chapters (in the United States, Canada, and Puerto Rico) with a diversity of individual, corporate and institutional members.

Its governance structure includes nearly 50 committees that deal with association administration (e.g., constitution, elections), policy concerns (e.g., energy statistics, privacy and confidentiality), professional development (e.g., short courses, minorities in statistics), development of the discipline (preservation of documents of distinguished statisticians, curriculum in statistics and probability) and interaction with other groups (e.g., presidents of statistical societies, international relations).

Members have the option to identify with one or more of the ten subject sections or subsections in addition to a geographic chapter (region, state or city depending on concentration of members). Annual individual dues are 32 dollars.

Publications

Three regular publications are provided to the membership--ten issues annually of "Amstat News" (a lengthy newsletter), quarterly issues of the Journal of the American Statistical Association (JASA) and the American Statistician (five issues annually). These three publications include paid advertising with the majority of it in the newsletter. The JASA is developing a special applications section with guest editors in lieu of developing new specialized journals.

Other publications include newsletters and proceedings (from the annual conference) by subject matter section, bibliographies on educational topics (as audio-visual materials, etc.), quarterly tables on the survey of national economic conditions, a membership directory, a Current Index to Statistics and specialized items. Two included in the latter group include "Careers in Statistics" and "What Is A Survey." This last publication may

be of interest to ACCI members both as an example of what another organization has done and also as a tool in research efforts. It is a concise presentation of the fine points important in the development and implementation of quality survey research. ASA's purpose in doing this publication was to make it available to a 'wide readership' of 'nonspecialists'. The achievement of this has been facilitated by making copies available on request, and allowing reproduction by others who find its content of interest. "What Is A Survey" has been translated into Spanish and plans are for six other translations. It is an example of a professional organization's intent to educate others on a topic where there is a lack of general understanding.

Professional Development Activities

Cooperative efforts or co-sponsorship characterize many of ASA's professional development activities. These, which could be termed continuing education, include national and regional pre- and post-conference tutorials and workshops, videotapes of individual lectures of noted professionals and of two-day short courses. Proposals are sought from the membership to conduct the tutorials and the videotapes of the short courses are available at a fee to members and other groups. Continuing education efforts are for members and non-members, statisticians and nonstatisticians. Currently ASA does not provide continuing education credits (CEU's). The 1981 budget included the addition of a full-time Director of Continuing Education and appropriate staff.

Fellowship and traineeship programs are co-sponsored with Census Research, USDA Statistical Survey Institute and the Environmental Protection Agency. Annual conferences are also part of some of these contractual agreements.

Implications for ACCI

Viewing other organizations provides ideas that ACCI may want to explore for the professional development of members. The experience of other organizations may not indicate whether ACCI should take on a given activity nor is their success experience indicative of what ACCI should expect. Membership composition, needs and other variables make exploration and evaluation of the ideas generated essential to implementation.

These specific implications are seen.

1. Professional development activities require the time of individuals and committees. With ACCI's staff resources and member commitment, is a major professional development effort feasible?

2. Subject matter sections and chapters with programs and activities including selected publications may indicate that membership needs are more varied than ACCI has fostered. Yet, how many members or potential members are needed to optimize overall organizational as well as sub-unit purposes?

3. Professional development activities of ASA range from those which may serve most members (publications) to those that serve more global purposes ("What Is A Survey" and government agency interaction). Where in this range should ACCI maximize its service to members and/or its impact on the broader picture of 'consumer interests'?

4. Continuing education efforts whether pre- or post-conference or regional must be self-supporting (including provision of resources to meet demands placed on staff). Do ACCI members and others constitute a large enough pool with identifiable common interests to make continuing education efforts feasible?

5. The ASA and/or its sections have identified liaisons with other organizations and agencies where the common denominator is statistics. Do 'consumer interests' agencies and organizations have a similar unfilled need for cooperative activities and efforts? What should ACCI's role be in this?

These implications can only be responded to by answering the question of whether ACCI should have an expanded professional development program and the determination of the purpose of that program.

Specific Suggestions

It is exciting to see what other organizations have done and are doing. From this exploration, I would like to recommend that ACCI give consideration to selected professional development activities. After study of compatibility with the organization's purposes, the cost-benefits and available resources, the feasibility of one or more of these may be explored.

1. Pre- or post-conference continuing education workshops related to research, program development and/or evaluation or policy analysis.

2. Specialized publications with appeal to professionals (ACCI members and non-members) in positions related to the consumer interest.

3. Use of small, dedicated committees to develop and implement professional development activities subject to Board review.

ALLOCATION OF TIME--AN ALTERNATIVE: THE JOINT PRODUCTION CASE

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Abstract

With increased value placed upon time, it may be advantageous to engage in production of more than one output with the same time input. This paper outlines a model of household production which includes the possibility of joint home production. Joint home production may bring with it increased stress and decreased quality of commodities, however, when time costs increase, there is a point when joint production becomes more advantageous than single production.

Introduction

Because American society tends to be time oriented, it is not surprising that the decreasing amount of time spent in home production should attract attention. When more time is allocated to work in the market, less time is available for home production and leisure. Trends toward labor-saving appliances and eating away from home are examples of decreased home production. Numerous studies have been devoted to these trends, but related phenomenon, the performance of simultaneous activities, has attracted little study (Gronau, 1977; Robinson, 1977; Strober & Weinberg, 1980; Walker, 1973). That is, one may conserve time by performing several home production tasks at the same time, or in conjunction with leisure activities. The performance of simultaneous activities can be treated as joint production. Because time allocation patterns and demand for joint production are related, the purpose of this study was to develop and test a time allocation model for the joint production case.

In the joint production case, two outputs are produced simultaneously, as in the case of cooking while watching children.² Under increasing time pressures, households may engage in increased amounts of joint production, even though certain additional costs are involved. With joint production, stress levels are likely to increase and quality of product decrease (Nolan & Tuttle, 1959; Zussman). However, these additional costs may be acceptable if they are less than the savings in time. When time is limited, it may be preferable to obtain two less desirable commodities through a joint production process rather than accept one, preferred, singly produced commodity.

The Model

Although the bulk of labor economic analysis has been on work in the market, Becker said more empha-

sis should be given to non-market time because more time is devoted to non-market activity. He emphasized the importance of time costs, developing the idea of commodities as combinations which provide satisfaction, according to Becker (1965).

Time enters the analysis at two levels. First, time is required to obtain the goods inputs, either directly through home production or indirectly through work in the market. Secondly, consumption or enjoyment itself takes time (Becker, 1965; Leibowitz, 1974; Moore, 1963). Becker developed a household production function which viewed families as producing units, where satisfaction is a function of commodities obtained by using inputs both of goods and time (1965).

Extensions of Becker's model have been developed to include distinction among work at home, leisure and environmental variables (Gronau, 1977; Michael, 1972). The household production function is by now an established part of economic theory (Bloch, 1973; Ghez & Becker, 1975; Gramm, 1974; Grossman, 1971). Previous models have assumed no joint production for simplicity sake; thus joint production has received little attention in the literature. Pollak and Wachter stated that the household production function approach is not useful in the joint production case. However, they viewed joint production as production-consumption (1975). In this sense, joint production means doing both home production and consumption in the same activity, rather than producing two outputs with the same time input. Borsodi realized that more than one activity could be done simultaneously. He also recognized production-consumption, however, he did not develop an economic model of either (1933). Steidl also investigated joint production in household work, but did not use an economic model. She documented the existence of home joint production but did not identify which variables affected joint production (1963).

A model of joint production must relate the production of at least two commodities using the same input or inputs. With singly produced goods, one selects the least costly input combination in producing a desired output (or commodity). In the case of joint production, an individual produces more than one output from a common input; thus, in addition to input combinations, the proportions of commodities to be produced must be considered (Ferguson 1975; Grossman, 1971; Henderson & Quandt, 1971). That is the analysis must include the rate at which one commodity must be sacrificed to obtain more of another. For singly produced commodities equilibrium occurs when the ratio of the marginal productivities or inputs equals the price ratio of those inputs. With joint production, equilibrium requires that the rate of product transformation must be equal to the marginal productivity of the common input in the production of one commodity to

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²Production-consumption, combining leisure and home production, is a closely related idea (e.g., watching television while washing dishes.) It was treated and discussed as part of joint production.

the marginal productivity of that same input in the production of the other commodity.

The following model was developed with utility (satisfaction) defined as a function of four commodities: Z_1, Z_2, Z_3 and Z_4 , and consumption time, L . In the model commodities are produced using both goods inputs, x_i and time inputs, h_i , where $i = 1, 2, 3$.

$$(1) U = U(Z_1, Z_2, Z_3, Z_4, L)$$

$$(2) Z_1 = f(x_1, h_1)$$

$$(3) Z_2 = g(x_2, h_2)$$

$$(4) Z_3, Z_4 = F(x_3, h_3)$$

A family faces both time and budget constraints. The budget constraint was written as follows:

$$(5) V + Nw \geq p_i (x_1 + x_2 + x_3) \quad i = 1, 2, 3$$

where p_i is the price of each goods input, N is the time spent working in the market, w is the market wage rate and V is non-earned income.³ The time constraint was written as follows:

$$(6) T \geq N + L + H,$$

where T represents total time, L is the time devoted to leisure activities and H is the time devoted to home production in the production of Z 's. In this model, only four commodities can be produced with the amount of H , therefore:

$$(6.1) H = h_1 + h_2 + h_3,$$

thus equation (6) becomes:

$$(6.2) T \geq N + L + (h_1 + h_2 + h_3)$$

It was assumed that Z_3 is a substitute for Z_1 , and Z_4 is a substitute for Z_2 . An individual would produce either Z_1 or produce jointly Z_3 and Z_4 during a given time period. That is, the individual would do either joint production or production of a single commodity at one time, but not both. Z_1 and Z_2 are preferred to Z_3 and Z_4 because, as noted earlier, the latter have the negative features (lower quality and stress) associated with joint production.

Utility is maximized subject to the time and budget constraints and the production functions. For maximization the following equation is formulated from equations (1) through (6.2).

$$(7) \phi = U \{f(x_1, h_1), g(x_2, h_2), F(x_3, h_3), L\} + \lambda_1 \{V + Nw - p(x_1 + x_2 + x_3)\} + \lambda_2 \{T - N - L - (h_1 + h_2 + h_3)\}$$

If the price of producing Z_1 plus the price of producing Z_2 is less than or equal to the price of jointly producing (Z_3, Z_4) , then one would always

produce Z_1 and Z_2 singly, because the commodities singly produced are preferred. However, prices are not always equal. More time is required to singly produce Z_1 and Z_2 than is required to jointly produce Z_3 and Z_4 . Thus Z_1 and Z_2 possess greater time costs relative to Z_3 and Z_4 . Certain factors, such as employment status and market wage rate, may cause time costs to increase or decrease. As time becomes more and more expensive, there will be some point where an individual shifts from single production of Z_1 or Z_2 to joint production of Z_3 and Z_4 . If the ratio of marginal utilities to price is greater for (Z_3, Z_4) than for Z_1 plus Z_2 , then one will choose to do joint production. The following relationship indicates that situation:

$$(8) \frac{MU_{Z_3, Z_4}}{P_{Z_3, Z_4}} > \frac{MU_{Z_1}}{P_{Z_1}} + \frac{MU_{Z_2}}{P_{Z_2}}$$

Empirical Testing of the Model

The model was used to identify a set of hypotheses about the degree to which households engaged in joint production. It was hypothesized that increases in the following variables increase joint production: market wage rate, education, number of children, hours worked in the market, unearned income and size of house. Furthermore, women were expected to engage in more joint production than men because historically women have done much more production than men (Blake, 1974; Handbook of Labor Statistics, 1976; Ryder, 1974). Ages of children were also analyzed to determine their effect upon the amount of time devoted to joint production. It was expected that families with younger children would engage in more joint production than families with older children, because younger children require more care.

Tests of the model were undertaken with time-budget data from the Survey Research Center, Institute for Social Research of the University of Michigan. The national probability sample consisted of 1,519 respondents interviewed in 1975 and 1976. Only the 603 married respondents were considered in this analysis. Each respondent filled out a time-use diary. One column in the diary was used for reporting the amount of time devoted to a primary activity, and another column was for reporting any secondary activities. A secondary activity was defined to be one which was done in conjunction with something else. It was the secondary time use which this study addressed.

Results of a T-test showed that there was no significant difference in educational level between men and women. However, there were significant differences between males and females for hours worked per week in the market, wage earned per hour and time spent in joint production. Men worked in the market more than twice as many hours per week as women and earned almost twice as much money per hour. Women devoted more time to joint production than men. Note Table 1.

³Relative prices of goods were not crucial to this analysis. It was assumed that price x_1 equals price of x_2 equals price x_3 .

TABLE 1. Descriptive Statistics and T-values For Selected Variables:
Married Respondents from National Probability Sample of
Time Use

Variable	Sample Size	Mean	Standard Deviation	t-values	Degrees of Freedom	Probability
Education						
number of years						
Males--	289	12.6	2.38	1.59	527	.113
Females-	313	12.2	2.49			
Hours worked per week in market						
Males--	287	37.2	21.27	12.91	594	.000
Females-	309	15.6	19.45			
Wage/hour						
Males--	174	\$6.73	4.80	7.64	273	.000
Females-	113	\$3.43	2.48			
Average total secondary time, minutes						
Males--	290	380.6	150.90	-2.79	601	.005
Females-	313	413.9	142.81			

Regression programs were used to test the effects of the independent variables (education, wage rate, hours worked in market, unearned income, size of house, and number of children) on the time spent on joint production (the dependent variable). Results with significant variables are summarized in Table 2.

TABLE 2. Results for Average Total Secondary Time: Married Respondents from National Probably Sample of American's Time Use

Variable	Sample Size	Regression Coefficient	R ²	Significance
Education; Number of Years				
Males	289	9.79	0.048	0.000
Females	313	8.05	0.020	0.013
Unearned Income				
Males	207	0.00	0.002	0.280
Females	252	0.02	0.031	0.005
Hours Worked Per Week in the Market				
Males	287	2.08	0.086	0.000
Females	309	0.43	0.004	0.301
Number of Children in Household				
Males	290	7.50	0.006	0.099
Females	313	7.51	0.005	0.194

Four variables were significant: education, unearned income, hours worked in the market and number of children. The hypotheses were supported with all four, in that increases in the variables were associated with increased joint production. Education emerged as the most significant independent variable. There are two primary reasons why

those with higher education are more likely to perform joint production. One reason is that increased education is associated with increased productivity, not only in the market but also in the home; hence joint production would increase because that is one way of increasing productivity (Michael, 1972). The other reason is that people

with higher educations generally earn higher wages and work more hours in the market and those factors also may lead to increased joint production.

Unearned income was defined to be all income not earned by the respondent; thus, it included earnings of the spouse. This definition is consistent with previous research interpretations (Gronou, 1977). High unearned income may be associated with more hours worked in the market by the spouse, and higher educational levels which also affect amount of time devoted to joint production. Also, the higher the unearned income, the more ability the family has to purchase time-saving appliances which lead to a decrease in home production time, but also may allow more joint production.

Simple linear regression with one independent variable showed that number of children and number of hours worked in the market were significant when the entire sample was analyzed, but not significant when only females were included in the analyses. The fact that number of children and hours worked in the market were not significant when only females were included may be due to the fact that home production is generally the women's function. In other words, women may have to do so much joint production anyway that the above variables do not significantly alter the amount of joint production time. However, when all four significant variables (education, unearned income, hours worked/week and number of children) were entered into the regression equation, all four variables were significant for the entire sample, for males alone and for females alone. Thus number of children and hours worked in the market were significant for females, as well as the entire sample. As the number of children increase there is a greater demand for joint production because child care is often done in conjunction with other activities. Hours worked in the market are also directly associated with joint production, in that the more hours worked in the market, the less time for home production and hence a greater demand for joint production.

Respondents with children less than five years old did the most joint production, and respondents without children or with teenagers did the least amount of joint production. An analysis of variance test showed that there were significant difference among respondents grouped according to children's ages.

Because the effect of children was suspected to be an important variable, the presence of children was controlled, and work in the market was analyzed using analysis of variance to see if there were significant differences in joint production between employed and non-employed women. When employed women without children were compared to non-employed women who had no children, there were significant differences in the amount of joint production time. Women who worked in the market devoted more time to joint production than women who did not work in the market. However, when looking at women with children there were no significant differences in amount of time devoted to joint production between those who worked in the market and those who did not. Employed women with children did do more joint production than non-

employed women with children, but the difference was not significant. An explanation may be that the presence of children places such great demands upon joint production that working in the market makes little difference; i.e., joint production must be performed whether one works in the market or not.

Summary and Implications

This study supports the notion that increased labor force participation does increase the demand for joint production, especially when the individual has a high educational level. However, the increased demand for joint production is significant when children are not present in the household.

The reader should note that there are some interactions among the independent variables. For instance, higher educational levels are associated with higher wages which are associated with an increase in hours worked per week. Thus it is difficult to fully determine the effects of a particular variable upon the demand for joint production. However, the author concludes that with women's educations increasing and more women entering the labor force and the corresponding decrease in family size, there will be less time allocated to home production but more time allocated to joint production. The data did not permit identification of the kinds of joint production tasks; thus that was a limitation of the study.

Implications of this study can also be extended to single parents. If individuals who work in the market engage in more joint production than those who do not work in the market, and more hours worked in the market are associated with increased amounts of joint production, then single-parent households may not have much choice, but to do joint production. The reason for this is that with single parent households there is less choice over whether to work in the market or not. For that reason, only married respondents were included in this analysis. With the increase in number of single parent families and increases with women entering the labor force, then the demand for joint production will increase.

Increased amounts of joint production have also been tied to increased stress (Nolan & Tuttle, 1959; Zussman). There may be an emerging need to help families deal with additional stress related to joint production, given decreasing amounts of time available for home production.

Home management literature in the past which focused on dovetailing of tasks (doing more than one task within the same time period) may be even more useful today than in the past (Steidl, 1963). An effort to update this type of literature could be advantageous in helping families cope with the need for increased joint production.

Time use, especially time devoted to joint production, is difficult to measure, as reporting tends to be less than absolutely accurate. Oftentimes an individual may be engaging in more than one activity, such as child care along with some other

task but not realize that he/she is performing two functions. This study demonstrated that there is some increase in joint production as a result of increasing time pressures and a decrease in time allocated to home production.

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