Do Printed Advertisements in Children's Magazines Comply With Guidelines of the Children's Advertising Review Unit? An Exploratory Study

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Only a small amount of research has investigated printed advertisements directed at children under the age of twelve. This pilot study tested the compliance of printed advertisements in a selected group of children's magazines with the CARU guidelines. Problems were identified in the areas of disclosures, endorsements and premiums.

During the past two decades children have begun to be viewed as three separate consumer markets: a current one, an influential one and a future market. (McNeal, 1990; Stipp, 1988) As advertisers and marketers have realized the importance of the relationship between children and the marketplace, more of their marketing effort has been aimed directly at the child audience. (Selling America's Kids, Commerical Pressures on Kids for the 90's, 1990).

While an extensive variety of research studies has focused on children and advertising, the vast majority of the studies has investigated some facet of television advertising. (Adler, 1980; McNeal, 1987;) This emphasis may be understandable given the heavy exposure of children to television advertisements, estimates are that children view approximately 30,000 advertisements per year on television, an average of 55 commercials each day. (Selling American's Kids, Commercial Pressures on Kids for the 90's, 1990 However, little is known of the nature of advertisements to which children are exposed in the print media. For children ages 13 and under, there are an estimated 92 magazines published and in one year alone, seven new magazines were initiated just for preschoolers. (Cleaver, 1986) According to Koback (1990) a typical U.S. household received 5.9 different magazines in 1988 with a total of 125 copies of those magazines during the year. However, he suggested that the field of magazines focusing on infants and children has declined with 34 magazines now available for children with a total estimated circulation of 9.2 million.

The Children's Television Advertising Guidelines were developed in 1972 by the Association of National Advertisers to encourage accurate and truthful advertising to children. (Self Regulatory Guidelines for Children's Advertising, 1983) Following the establishment of the Children's Advertising Review Unit (CARU) in 1974 by the Council of Better Business Bureau's National Advertising Division, the guidelines were edited, republished and renamed as Self Regulatory Guidelines for Children's Advertising. Subsequently the guidelines have been revised twice. The goal of the CARU is to promote truthful, accurate advertising to children which is sensitive to the special nature of the child audience. The guidelines are intended to help advertisers deal honestly with children, without depriving the advertisers of the benefits of innovative advertising approaches.

Five broad principles provide the basis for the guidelines. The first two principles stipulate that advertisers should consider the level of knowledge, sophistication, and maturity of the child audience and not exploit the imaginative qualities of children. The third one requires that product information contained in an advertisement should be communicated in a truthful and accurate manner. A fourth principle requires advertisers to use the potential advertising has to influence social behavior, and develop advertisements that address positive and beneficial social standards. Lastly, advertisements should contribute to the parent child relation in a positive manner.

From these five principles a set of more detailed guidelines was developed under the following seven headings: product presentation and claims; sales pressure; disclosures and disclaimers;

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comparative claims; endorsements and promotions by program or editorial characters; premiums and safety. These guidelines apply to all advertising addressed to children under twelve years of age, including print, broadcast and cable television advertising.

Between 1974 and 1982, the CARU staff investigated 154 cases with the majority of those cases involving television advertisements (62.6%). Comic book advertisements accounted for another quarter of the cases (25.2%) with only ten percent from other print media. Some aspect of product presentation was the major violation in a significant majority of the cases (67.4%). In only one case did a violation of the comparative claim guideline occur and in two cases the violations were related to claim substantiation. In only three advertisements were there violations related to promotion by a character or a personal endorsement and violations of premium advertising occurred in seven cases. (Armstrong, 1984)

The purposes of this exploratory study were threefold: the first was to test the use of an instrument based on the CARU guidelines; and the second, to determine if the advertisements found in children's magazines and comic books available on newsstands in the spring of 1990 complied with the CARU guidelines. The third purpose was to analyze the following: the type of product; the settings in the advertisements; the type of spokesperson most often used; the size of the advertisements and the frequency of coupons or discounts in the advertisements.

Sample

Eleven children's magazines and three comic books were chosen from local retail outlets in early 1990. To be selected, the magazine had to be written for children age twelve or under and contain advertisements. Publications which did not contain advertisements or were available only by subscription were not considered for this study. The publications selected were: Alf, Barbie, Duck Tales, G.I. Joe, Ghostbusters, Gobots, Mickey Mouse, Muppets, Robocop (comic book), She-Ra Princess of Power, Snoopy, Sports Illustrated for Kids, Superman (comic book), and Teenage Mutant Ninja Turtles (comic book). One hundred forty-two advertisements were available from these sources for analysis.

Method

The CARU guidelines were converted into an instrument by the authors. There were a total of eight categories with the five broad principles grouped under a category entitled, "general". Each CARU guideline was written as a separate item. The items were then organized by the major categories of the CARU guidelines with the five broad principles grouped under a category, "General". A five point scale of the Likert type was used. Items were worded so that compliance with the guidelines yielded the highest number of points. Not applicable (NA) was marked if the item did not apply to the particular advertisement.

Each advertisement was analyzed with points assigned to a choice as follows: Strongly Agree (5) points; Agree (4) points; Neutral (3) points; Disagree (2) points and Strongly Disagree (1) point. No points were assigned for Not Applicable. Percentages were calculated for the responses for each guideline. Following the initial analysis the categories of choices were combined because there were reported difficulties in distinguishing between the extremes of "strongly agree" and "agree" and "strongly disagree" and "disagree". The concept of "neutral" meant that the copy of the advertisement did not contain substantive or affirmative language which met the guideline nor did it contain language which substantiated a clear violation of the guideline. The response of "agree" meant that the advertising copy contained specific and/or affirmative language which met the guidelines while "disagree" meant the lack of specific and/or affirmative language.

Results

General

The first set of items was applicable to all 142 advertisements in the sample. Only about one third of the advertisements (34.5%) were in compliance with the first item that the level of knowledge, sophistication, and maturity of the intended audience had been considered. There appeared to be greater compliance with the next two items: 62.7 percent of the advertisements did not exploit the imaginative quality of the child reader and 64.1 percent of the advertisements did not stimulate either directly or indirectly unreasonable expectations of product quality. Almost half of the advertisements (47.9%) met the item of communicating product information in a truthful and accurate manner. Less positive assessments were given however, for the compliance with the last two items in this section. Using advertising to realize the potential to influence social behavior through positive and beneficial social standards occurred in only a small percent of the advertisements (12.5%) and a much smaller percent (4.2%) were deemed to focus on the parent-child relationship in a positive and constructive manner.

Product Presentation

The focus of the second category of the CARU guidelines is on the advertisement not being misleading about product or performance characteristics or perceived benefits from the use of the product. All 142 advertisements were analyzed using this category of items. Slightly over half (56.3%) of the advertisements complied with the first item that the visual presentation was not misleading about the product nor performance characteristics. A higher percent of the advertisements (72.5%) were considered as not misleading children about perceived benefits from the use of the product. Almost two thirds (63.4%) of the advertisements, did not exploit the imagination of children. The performance and use of the product could be duplicated by the child for whom the product was intended (61.3%) and the product was shown in a safe environment. (88%) Less than one-third of the advertisements complied with the item requiring that what is included and excluded in the initial purchase be clearly disclosed. Only one question from this category concerned food products and 19 (13.4%) advertisements were for food or beverage products. Slightly better than a quarter (26.3%) of the food advertisements complied with the item which requires that representations of food products should be made so as to encourage sound usage of the product with a view toward healthy development of the child and development of good nutritional practices.

Over eighty-three percent of the advertisements were not presented in a manner which would frighten children or provoke anxiety. The advertisements did not comply as favorably with the last item which requires that objective claims about product or performance characteristics be supported by appropriate and adequate substantiation as 63.2% were considered neutral.

Sales Pressure

Sales pressure was the focus of the third category of items. Over two-thirds of the advertisements complied with the first two items. Children were not being urged to engage in product request behavior nor was the impression conveyed that possession of the product would result in greater peer acceptance. For the third item on clear price representation, 59.6 percent of the responses were judged as being in compliance.

Disclosures/Disclaimers

Forty-six of the advertisements contained some form of a disclosure or disclaimer. The first item requires that any disclosures or disclaimers be expressed in language understandable by child audiences. Over half (56.5%) of the 46 advertisements did not comply with this requirement. The second item which requires a clear statement that the unassembled product must be put together to be used properly was applicable to only four advertisements. Half of those advertisements were in compliance with this item while one was deemed to not be in compliance and the other was questionable.

The third item requires that there be a clear disclosure that an item essential to the use of the product, for example batteries, is not included in the product. However, 94.2% of the 34 advertisements analyzed did not comply with the item. Similarly, there was poor compliance with the fourth item which requires clear disclosure that additional accessories for the product must be purchased separately as 94.3% of the advertisements did not comply.

Comparative Claims

Only three advertisements contained comparative claims. None of the advertisements complied with the first item which requires that the comparative advertisement provide factual information. For the item which requires that comparative claims be presented in a way that a child can clearly understand, one advertisement was rated as neutral while two advertisements did not comply. None of the advertisements complied with the third item requiring appropriate and adequate substantiation of comparative claims.

Endorsements

Fifteen advertisements (10.6%) contained endorsements or promotion of a product by program or editorial characters. In the majority of these advertisements (86.6%) the endorsement was by a fantasy/cartoon character such as Snoopy or Mickey Mouse. Since these endorsers are fantasy creations the first item which requires that all personal endorsements reflect the actual experiences and beliefs of the endorser is not applicable. For the two advertisements which did include people celebrities, one advertisement was in compliance and one was not. Similarly, the second item requires that the endorser represent, either directly or indirectly, the qualifications appropriate to the particular expertise depicted in the endorsement. Fantasy or cartoon characters do not have qualifications or areas of expertise. For the two advertisements containing the celebrity endorsements, one was deemed in compliance and one was considered neutral. The third item which deals with host-selling requires that program personalities (live or animated) do not promote products, premiums or services in or adjacent to programs primarily directed to children in which the same personality or character appears is not applicable to printed advertisements. However, the fourth item essentially duplicates the third item only for print media. This item specifies that a character or personality associated with the editorial content of the publciation has not been used to promote products, premiums or services in the same publication. All fifteen advertisements were analyzed and eighty percent did not comply. It appears that too much host-selling is being used to promote products in these children's magazines.

Premiums

Premiums were offered in seventeen (11.9%) advertisements. Two items relate directly to premiums. The first requires that care be taken to focus the child's attention primarily on the product. In slightly less than a quarter of the advertisements (23.5%), this occurred. In 41% of the advertisements, however, the focus was on the premium not on the product. A second requirement is that the conditions of a premium offer must be stated simply and clearly, a majority of the advertisements (52.9%) did not comply with the item.

Safety

The final category of items deals with safety issues. All of the advertisements were analyzed by the five items contained in this section. Better than two-thirds (69%) of these advertisements complied with the first item which requires that the product be an appropriate one to advertise directly to children. The second item which requires that the children shown using the product be in the appropriate age range was applicable to only 32 advertisements where children were used as spokespersons. More than three quarters (81.2) of these 32 advertisements were deemed in compliance. For the third item, which deals with products involving an obvious safety risk and adults shown as supervising the children, only four advertisements were appropriate. Three of the four advertisements did not comply with this item and one was neutral. Over eighty-five percent of the advertisements were considered in compliance with the item requiring that there be no portrayal of adults or children in unsafe acts, situations or conditions or in acts harmful to others. Similarly an even greater percent of the advertisements (92.3%) was deemed in compliance with the last item which requires that the advertisement avoid demonstrations which encourage dangerous or inappropriate use or misuse of the product.

Advertisements

In the fourteen magazines used in this study, the most common types of products advertised were: books and magazines, 28 advertisements (19.7%); toys, 22 advertisements (15.5%); foods and beverages, 16 advertisements (11.3%); with a miscellaneous grouping of 21 advertisements (14.8%). The most common type of setting in the advertisements was a photograph of a real product or person, 63 advertisements (46.5%). Cartoons with a fantasy orientation were used in 51 advertisements (35.2%). A significant majority of the advertisements were full-page (83.1%) with coupons or discounts present in only 15 advertisements (10.6%). A spokesperson was used in half of the advertisements (51.4%) with cartoon or fantasy characters being the most common type, 38 advertisements (26.1%). Children were portrayed in 26 advertisements (19.7%) with male children (39.3%) being more common than female children (28.6%). Three advertisements contained adults only and another three contained adults with children.

Conclusions

An instrument derived from the CARU guidelines does provide a means of assessing the compliance of printed advertisements in children's magazines with those guidelines. A Likert scale with three measures did prove useful although assessing some advertisements as "neutral", leaves doubt as to the advertiser's actual compliance.

In the first General Category, the greatest compliance was with the items of care being taken not to exploit the imaginative quality of children and not stimulating unreasonable expectations of product quality or performance. However, the advertisements did not contain copy which influenced positive social behavior and contributed to the parent-child relationship in a constructive manner.

For the Product Presentation Category, a majority of the advertisements complied with seven of the ten items. For three items, the response of neutral occurred the most frequently; what is included and what is excluded in the initial purchase; objective, substantiated claims about the product; and representations of food products to encourage good nutrition.

In the Safety Category, there was high compliance for four of the five items. Only four of the advertisements involved a product with a obvious safety risk. However, three of the advertisements for such products did not comply with the appropriate item.

Only a small number of the advertisements included in these children's magazines contained comparative claims. While the items require that such claims be adequately supported, clearly presented and provide factual information, none of the three advertisements complied. It appears that advertisers could greatly improve this type of advertisement. Premium offers in advertisements were a second area where there were few advertisements and compliance was low. In only 23.5% of these advertisements was the focus on the product as the CARU guidelines required. Similarly, as with disclosures/disclaimers, the premium conditions were not expressed in language easily understood by the child reader.

The highest number of violations occurred in the category of disclosures/ disclaimers. While it is encouraging that some of the advertisements did make necessary disclosures/disclaimers, it appears that more advertisements should include disclosures or disclaimers. For example, in the Product Presentation Category, 72.5% of the advertisements were classified as "neutral" or "disagree" for the item requiring clear establishment of what is included or excluded in this initial purchase, nor were the disclosures/disclaimers expressed in vocabulary that children would understand. Further the advertisements failed to disclose the most crucial information such as assembly required or accessories must be purchased separately.

A second area needing improvement is endorsements by program or editorial characters. It may be that a change in the CARU guidelines is necessary since a significant number of the endorsements were by fantasy/cartoon characters and the guidelines simply were not appropriate in those cases. Additionally, in a significant number of the advertisements the characters related to the editorial content of the publications were used as the endorsers. Thus, the question is raised whether these publications are truly children's magazines or simply cleverly done advertisements for the products with a little additional copy.

Extensive research has been conducted for many facets of television advertising directed toward the child. Far less research has been conducted on printed advertisements aimed at children. This pilot study explored the use of an instrument based upon the CARU guidelines. Areas of improvement for the guidelines have been noted. Additional research should be done to validate the instrument and assess the perceptions of other adult groups.

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A Normative Shopping System

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A normative shopping system is introduced that takes advantage of the behavior of business elements in the marketplace. Search is an ongoing process designed to benefit from price differences of retailers at one point in time and over time. An acceptable set of brand, stores, and prices are determined a priori. Purchase is triggered by a low price. The ramifications of the system are discussed.

Consumer education has historically focused on teaching individuals to make *rational* marketplace decisions. It has rested heavily on the premise that if consumers would follow the *rational* model--problem recognition, information search, evaluate alternatives simultaneously, and then make a purchase decision based on quasi-optimal information, they would achieve higher levels of satisfaction with marketplace transactions, and *maximize* their economic utility. However, in spite of more than fifty years of consumer eduction, purchasing by households has not changed significantly from what it was in 1912 when Wesley Mitchell wrote "The Backward Art of Spending Money." In fact, different literatures are replete with evidence that consumers do not use thoughtful decision processes. There is also evidence that consumers are buying more on impulse today than at any time in the past (Schlossberg 1990).

This current failure of consumers to follow planned processes may be attributed to changes in the nature and structure of the shopping environment such as increased product alternatives, high tech products; it might also be attributed to changes in the household. Dual earner couples are short the time to manage the day-to-day operation of the household and raising the children, much have less time for shopping activities. Moreover households requiring two earners to meet expenses have an excuse for not obtaining the best value for their shopping dollar. They chalk off the higher prices paid to the fact that they do not have the time to deliberate each decision.

This paper proposes a shopping system that would benefit most households in aiding them to increase their purchasing power. The system is flexible with respect to the desired level of shopping effort and makes no claim to optimality, often the goal of normative decision strategies.

Background

Individuals and households might approach shopping in numerous ways depending upon variables such as the type of goods sought, knowledge of or interest in product category, and attitudes toward the activity itself. Over time "rules of thumb," or heuristics have been integrated into our decision processes that enable us to shorten the search process. Thus, consumers might buy convenience or the lowest price (Cude 1989) and conversely "always buy top of the line" when considering durable goods (Maynes 1976). Consumers who dislike shopping or lack knowledge may delegate the "choice" or decision to someone else (Olshavsky 1988), to an *information seeker* or other opinion leader or rely fully on the advice of a person or group that is socially important (Thorelli and Sentell 1982). They may also follow recommendations of friends, sales people, a product testing organization or some combination of such, or they may simply imitate the purchase behavior of those who they believe to be acting "optimally" (Olshavsky 1988). In particular instances some of the above behaviors may be "optimal" and would, therefore, limit the necessity and usefulness of extended search.

In many contexts consumers seeking a "best" decision may feel that optimization is an illusion, and hence engage in some form of satisficing behavior without an attempt to optimize (Simon 1957). Some observers feel that there is a "flat" optimum so that the search is for broad ranges rather than single points of optimality (Edwards 1984).

Optimization with respect to consumer decisions has been investigated using the concepts of consumer efficiency, decision qualities, and choice accuracies (Sproles 1983). According to Sproles, an efficient consumer is seen as one who *correctly* identifies and chooses the relative qualities of a feasible set of alternative choices given the relevant constraints. The attention of the optimizing consumer is focused on making the best single purchase at one point in time. Decision quality and choice accuracy are synonymous. These are conceptualized as the degree to which the actual choice of an item by a person approaches the a priori subjectively determined ideal choice of that person (Sproles, Geistfeld and Badenhop 1980). The consumer determines his/her standards or aspirations and then attempts to choose the item which is subjectively closest to those standards.

Buyer Behavior Theory

Theory on consumer buying behavior is derived largely from economics which has devised some normative concepts of "economic man" and his/her rational behavior. Some basic assumptions about behavior are that more of a good should be preferred to less. lower prices to higher prices, and higher quality to lower quality. The environmental assumptions of economics specify that buyers possess perfect information about products and prices, that they are certain of their own stable tastes and preferences, and that they are capable of perfectly processing information. And, finally, that they are able to express preferences between goods and bundles of goods without cost (Schwartz 1986). The framework for the consumer decision process is based on these assumptions and on the further assumptions endemic to the *economic man* who engages in an orderly process in consideration of goods for their primary function.

Perspectives of Consumer Educators

The economic principles and model of rational decision making have formed the backbone of consumer education. The recommendations of the educators are largely concentrated on teaching the consumer to formalize decision making (Deacon and Firebaugh 1989), to engage in search until it is no longer profitable, and to reap consumer surplus either by buying a higher quality product for the same price, or the same level of quality for a lower price (Maynes 1976:7).

Consumer educators recommendations include some general guidelines as well suggestions for specific situations. For example, processing by attributes (comparison of brands one attribute at a time) rather than by brands (comparison of brands one attribute at a time) is recommended as the former is more efficient; however, the comparisons should be simultaneous (Sproles, et al. 1978). Garman (1991) has portrayed the do's and don'ts of purchasing as have Herrmann, Tsai, and Warland (1988) in delineating nine food buying practices[1].

Writers are in general against impulse and emotional buying. Careful analysis, thought and planning is favored. Price and quality are key considerations with the recommendation being that the consumer should use a marginal rule starting with the lowest quality specimen As s/he moves up on quality the consumer asks "is the improvement in quality worth the increased cost?" (Maynes 1976:66).

Many of the suggested rules are designed to impose discipline on the shopper to minimize the extent to which the business system can take advantage of these consumers. Consumer educators and consumer economists generally distrust the behavior and motives of firms and business executives (Garman 1991; Mayer 1990).[2] The consumer is often seen as in revolt against the hostile environment in which they operate. The emphasis is frequently on pointing to the failures of the system (see, for example, Uhl (1982) on couponing; Garman (1991) on advertising, as well as Cude (1988b) and Maynes and Assum (1982) on price dispersion as a manifestation of the inefficiency of the system), rather than on teaching consumers to "honestly" compete against parts of the marketing system. Consumers who are unaware of the marketplace competition are at a distinct disadvantage.

Environmental and Consumer Factors

Consumer economists and consumer educators fail to account for marketing mechanisms and to develop an understanding in students of how the market is structured, how it works, and how to take advantage of its highly competitive operation. This was not always the case. Margaret Reid and Jessie V. Coles, in their 1938 Consumer and the Market textbooks allocated ample space to market structure and marketing mechanisms. Coles (1938) allocated 52 pages to the consumer interest, 150 pages to understanding the market from manufacturer to the costs of marketing, and 100 pages to understanding retailing institution. Reid stated that "consumers often fail to appreciate the highly complex nature of the productive process which influences prices and the kind and quality of goods offered.... it is necessary to go behind the retailer....to perceive the complete functioning of the market system and to understand policies and practice that affect consumer interests (Reid 1938:viii). Two considerations, price variations at one point in time and price variations over time are central to our shopping system and also relate to the lack of realism of the assumptions of much economic theory.

Price Variation at One Point in Time

Research shows that prices differ among retail outlets at one point in time (Cude 1987; Eastwood 1988; Maynes 1989). Numerous studies in specific product areas have observed dramatic price differences at one point in time. For example, Kirby and Dardis (1986) suggest that merchandise purchased in department stores cost the consumer 40 percent more than the same merchandise purchased in off-price stores. Hawkins and McCain (1979) found substantial price differences for products such as cameras, blenders, televisions, and freezers.

Price Variation Over Time

Those studying consumer behavior are conscious of the importance of elements of time (Becker 1965, Linder 1970). There is substantial evidence that households can save

[1]It is interesting to note that virtually all consumer educators/economists recommend "making a list before grocery shopping.... and not deviating from the list." As early as 1986, it was reported that only 19.3% of shoppers rely on a list (Marketing News, 1986).

[2]Many marketing people believe that firms that do not organize to satisfy consumers are acting against their own interest (Engel 1970).

a significant percent of their purchase dollar by time oriented shopping strategies. For instance, Kirby and Dardis (1986) found that over a 13 week period, average prices in department stores for 20 items decreased from $81.18 to $67.01. Seasonal variation in supermarket prices as well as traditional sales (e.g. January White Sales) have been noted by consumer education textbook authors.

Substantial price differentials over time may be created by legitimate sales and clearances; loss leaders in retail advertising; couponing; extra value couponing such as double couponing (Bhasin and Dickinson, 1987); promotional activities of retail and the supplier for store openings; blue-light specials of Kmart and the red-light specials of Wal-Mart; and important changes in supplier cost, e.g. for seasonal variations. Furthermore there is evidence that fashion merchandise markdowns are far larger than they were in former years (Pashigian 1988:947).

If the significance of price variations over time is recognized, we will suggest that the focus of suggested purchasing systems should be changed. The emphasis in most of the literature is on the purchase, that is, the customer recognizes a need and then goes out to fill that need in a reasonable time period. When, however, price variations over time are substantial it becomes useful for a consumer to consider his/her needs over a longer time horizon and seek to minimize the purchase bill by time oriented shopping strategies.

Some Changed Environmental Factors

Changes in the marketing environment in recent years provide opportunities for consumers to reap a surplus as they utilize the marketing system to their advantage.

1) The retailer is more powerful in many industries than the retailer used to be (Bucklin and Schmalensee 1987; Stern 1987). The retailer has induced substantial concessions from suppliers, including lower cost (Felgner 1989).
2) Sales promotion activities today have increased dramatically in importance (Bhasin, Dickinson, Hauri and Robinson 1989). Important components of sales promotion are couponing and short term price discounts. Both clearly relate to the variability of retail price over time. In 1988 221.7 billion coupons were offered, up from 163.2 billion in 1984 (Lipman 1989) and since 1987 redemptions have increased by 15 percent (Marketing News 1991).

3) Markdowns taken by retailers in fashion merchandise have increased substantially in recent years For example, markdowns relative to sales from 1965 to 1984 increased from 10.2 percent to 19.2 percent in women's fashion apparel and accessories. (Pashigian 1988). Markdowns taken by retailers directly relate to differential prices over time.

4) There is evidence that variability in the quality of products not radically new on the market has declined over many years, perhaps through the efforts of such organizations as Consumers Union. In recent years the quality level has increased and the variance has probably decreased in areas such as cars, standard television, radios and tires (White 1990; Consumer Reports 1991).

5) The number of products and product variants has been increasing at a faster pace than at any point in time. For example, the typical supermarket in 1977 carried 9000 items (Gordon and Lee 1977:247). Since 1987, more than 25,000 new food and grocery products were introduced, many of which were competing brands of the same product (Blythe 1990) and the typical supermarket now carries 25,000 items which the consumer scans in a shopping trip averaging twenty minutes (Schlossberg 1990). During the same period (1977-1990) the number of automobile models sold in the United States increased from 400 to nearly 600 (Ingrassia and Patterson 1990). In addition, choices are becoming more complex as the consumer is forced to consider *hi tech* goods for the home such as VCR's, Compact Disc players, Video cameras and the like. In addition, the number of stores selling every category of merchandise has increased.

The household, too, has changed over time in ways that have altered shopping activities. Two career families have less time available for shopping activities. Having less time for planning individual purchases, they are forced to buy on short notice. Fewer consumers appear to be shopping for leisure because, they do not have the energy and/or interest in "dressing up to go out shopping" and few would choose to spend a free hour poking through the merchandise (Schwadel 1990).

Fragmentation of the work place has increased automobile travel and has changed the out of pocket costs (and perhaps utility) of a shopping trip for the household. Indeed household members pass supermarkets as well as stores selling fashion and specialty goods daily and could pass many more by altering their routes and/or time without substantive additional mileage. Economists have tended to assume that travel and distance are substantial net costs even when out of pocket costs are zero. Indeed these net costs may or may not be positive.

The number and type of sellers has changed; competition within and across store types has increased dramatically. Consumers frequently fail to understand seller behavior, particularly the competitive nature of the marketplace, and the costs of doing business. Not being cognizant of different pricing and markdown strategies of various retail outlets impedes efforts to maximize purchasing power.

The Normative Shopping System

The overall goal of the system is to obtain good value (better than presently received) for the money spent on the goods in relevant merchandise categories recognizing that optimization is not a feasible alternative. In order to achieve these goals, the households have to establish minimum quality standards within relevant merchandise categories. The system is designed to take advantage of the substantial variability of retail prices at one point in time and over time. It will tend to be most useful for the kinds of items found in supermarkets, general merchandise and specialty stores. It will not be equally useful in situation where the final price is negotiated because the final prices may not be known without extensive negotiation. The search process for one product interacts with the search process for other products; consumer behavior of shoppers is integrated with an understanding of the behavior of retailers (Dickson and Urbany 1989). A model for the proposed normative shopping system is shown in Figure 1.

point in time and over time.

3. Household Needs. The set of household needs to be covered by the system would most likely include regularly purchased items, i.e. supermarket items, staple clothing items, and other products for home and lawn that are purchased cyclically. The earlier the need is recognized, ceteris paribus, the more the household unit will have an opportunity to take advantage of the retail system.[3] The relevant time period might be as long as one year for some nonperishable items.

4. A set of Acceptable Brands. These brands or product variants meet the household's minimum standards for quality and performance. The more alternatives that remain in the acceptable set, the probability of obtaining a better value. The

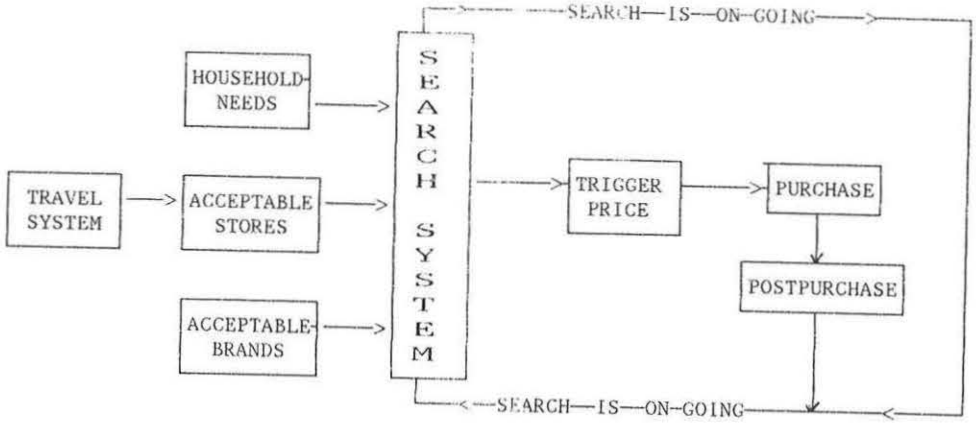

Figure 1: MODEL FOR A NORMATIVE SHOPPING SYSTEM

As shown in the model, the system requires:

1. A travel system. The benefits to a household will be larger if one or more members of the household travel by car on a regular basis to and from work, leisure or other family activities and the like. Household members pass by retail outlets in the process of normal day-to-day living. The net effect is that there are negligible out-of-pocket travel costs for the household.

2. Acceptable Stores. The stores which can be passed in route to and from other activities would comprise the evoked set of stores. The stores, due to price and merchandise policies would be placed into two groups, acceptable and not acceptable. The benefits to the household will be larger if there are sets of retailers to which price tends to be an important variable. Price will tend to be important in large metropolitan areas. Variability of price policies among retailers will add to the potential benefits of the system, For example, if supermarkets have different strategies such as everyday low prices; a deep discount loss leader(s); extra value couponing; high service; or varying combinations of these. Shopping strategies of consumers can be evolved to take advantage of these retailer strategies at one

quality decision is simplified by putting goods into two quality levels, acceptable and not acceptable.

5. The Search System Search, in the model, encompasses the purchase process and it is on-going. Those goods and stores which constitute the acceptable set are routinely searched for value. Trigger prices, determined a priori, are "rules of thumb" which trigger a purchase. The search cues to the system would be, "I have six cats to feed; I routinely pass stores A, B, C, D; brands X, Y, Z, ZZ are acceptable." A price of 5 cans/$1.00 of brand Z might be a trigger to purchase of a quantity sufficient fur a designated time period. During postpurchase the good is consumed and the quality of the brand assessed. The price behavior of the retailer in the product category is observed. Additional examples of trigger prices would be to purchase an apparel item only when the price is reduced by 70% or a certain size of toothpaste only when the final price will be 10 cents (after double or triple value couponing).

[3]The system is playing the market, playing retailer against retailer, and a retailer against itself over time.

Implementing the System

The benefits of the system relate to four assumptions: (1) There is no cost of travel, search/shopping is a by-product of other travel activity. (2) The individual derives as much utility from the shopping process related to the created system as s/he would derive from doing anything else. (3) The consumer is disciplined in purchasing, not inclined to (unplanned) impulse buying. (4) The household has the necessary resources to pursue the system. Consumers meeting these criteria will benefit from using a shopping system to purchase some categories.

The shopping system requires that a household specify the types of goods to be covered, as well as acceptable quality levels. Additionally, one or more household members must be willing (and able) to routinely search the acceptable stores. The search system becomes a three-stage process: (1) A need is recognized. (2) The need is integrated system. (3) The purchase trigger is activated by acceptable price reduction of an acceptable brand or item.

Household members involved in implementing the system should develop an understanding of how prices of specific goods change in his/her geographic area over time. Consumers will also get a feel for the value and timing of coupons offered in given merchandise categories. Additional information should be integrated into the system where appropriate.

The decision system proposed here can be simpler to implement than the alternative of evaluating the quality and price of each relevant option in the marketplace. There are, however, some additional complexities introduced by such a system. The handling, storage and inventory costs are important to the household (Granzin and Bahn 1989). Storage implies time and there is the time value of the resources that are tied up (Morgan and Duncan 1980). Some questions raised are: What is the cost of capital for a specific household? What are the opportunity costs of time to a highly paid executive if he has no options for extra income? For those desiring to increase their benefits from the system above zero (extra) travel, how does one calculate the costs of travel and weigh these against the anticipated benefits? Will there be better buys tomorrow, next week, next store? A further complexity is that a modicum of planning and budgeting is required--as traditionally these elements have always been integral to family financial management.

An important characteristic of our shopping system is that the household can evolve the system to the level of complexity that it can and desires to handle. The system can be limited to a small number of frequently purchased products. A shopping system could be implemented just one day a week. One member of the household could do all the shopping. Alternatively the system may also be informal in that consumers may use insights obtained from understanding the retailer behavior and the shopping opportunities presented by the economic system. One can "skim the system," i.e. , pick and choose the elements that are seen as desirable.

It is also possible to approach the shopping system dynamically over time, in other words to take specific cognizance of learning. Howard (1963) has argued that more search and effort may be required in the initial stages, in terms of extensive shopping effort. As one learns, the amount of time necessary to get the same benefits from the system is less. Dickson and Urbany (1989) outline this in terms of high initial fixed costs and lower variable costs as the household learns. Spreng and Olshavsky (forthcoming) suggest that high knowledge consumers have a greater ability to process information.

Implications

The proposed shopping system is designed to enable consumers to "get a bigger bang for the buck" in relevant product categories. It is postured from a positive and offensive perspective on the market. A key distinction is that time is treated in a way so that the consumer will take advantage of both price variations among retailers at one point in time and within one retailer and the system over time for as long a time as feasible, considering the costs of time related factors, such as storage, the planning horizon of the consumer, limited resources, and the difficulty in recognizing wants. But while the differences in the treatment of time in the context of the shopping system may not appear major, the impacts on the decision rules and behavior of consumers adopting such systems would be large. Further if many consumers purchased in a manner suggested by our shopping system, the impact on the marketing, retail, and economic system might be significant. Some changes with respect to the consumer purchase process are now indicated.

Goals of the prepurchase process become twofold. First, given a need, the goal in most instances is not to establish the best buy or indeed to trade off price and quality at one point in time. The goal is to develop an acceptable level of quality or performance. Thus, rather than employing the *optimal* compensatory rule, the system calls for the sub-optimal, but simpler, conjunctive rule. The consumer eliminates brands or products which are not satisfactory either in terms of meeting functional and/or psychological needs. The second goal is to establish specific trigger rules for a particular purchase.

There is an advantage to the consumer of not focussing on the best buy. A general, often inherent, disadvantage of identifying best buys is that the high rating is likely to increase demand and without an almost immediate quantity increase, the price must go up or the item becomes out of stock or both. Specifying those brands that will not do the job is unlikely to focus demand on one or two items. The more alternatives that satisfy the consumer in the context of The focus of market offerings in the set of retailers, the better.

Search becomes a continuous activity in that consumers are integrating search into their day-to-day activities. It emphasizes the deliberate and systematic acquisition of information (Mazis 1988). Shoppers can think of elements of this activity as continually updating their locational and competitive maps (Dickson and Urbany, 1989:17). As suggested previously the sooner the want is recognized the greater the opportunity that the consumer will get a better buy from the retail system.

Search is also changed in that the search process does not culminate in a decision. Present decision making implies that the decision should be made from among A, B, and C after an appropriate search time. While this decision perspective may be partly relevant even in the shopping system for time pressed decisions, more frequently, the trigger should be the value suggested by a designated low price. Individual purchases will be made without substantial immediate prior search.

Maynes has stated (1976) that consumers should attempt to purchase the same quality product at a lower price or to obtain a higher quality at the same price. By contrast, the important aspect of quality is not the relative ranking of the products, it is absolute variance in quality that is of major importance (and more frequently a semi-variance to the down side). If a decision maker is willing to make the assumption that quality among eight items or three items in the set evoked is reasonably close then the other relevant variables, perhaps price, become the primary attributes. The focus remains on the eliminating products in the quality range that is not acceptable from purchase consideration.

In this era of time pressed dual earner families, the time is right for the appropriate use of the proposed normative shopping system. Faced with the proliferation of products on the shelves, less time available for shopping activities and an increased number of decisions, consumers appear to be more in need of *buymanship* than at any previous time. The literature of the past twenty years is replete with evidence that consumers did not follow the rational decision model advocated by consumer educators. Clearly, today's consumers have neither the time nor inclination to follow extensive guidelines of do's and don'ts, nor do they seek out information and weigh alternatives for each purchase. Thus, a normative shopping system which allows for individual tastes and preferences, suggests a priori decisions regarding acceptable quality and price, and can reduce the cost of time in search and purchase, should be acceptable and readily implemented by a large number of households.

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Reaching and Teaching Low Reading Level Consumers

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Members of ACCI's Consumer Education Committee have a long-time concern regarding the difficulties in both reaching and teaching consumers with limited reading skills. Even when we arrange for work-site lessons, pre-release sessions at correctional institutions, housing authority programs, or other ways of reaching a few members of this audience, most consumer educators lack the multidisciplinary expertise for effective teaching.

The problems for individuals, their families, employers, the community and society as a whole are spelled out in the study, "Workplace Competencies: The Need to Improve Literacy and Employment Readiness" (Office of Education Research and Improvement, US Department of Education, 1990) and many other reports of the impact on the society of having so many adults with limited literacy skills.

My first exposure to the interface between literacy and consumer education occurred in the mid-70s. In a fifth-grade classroom in suburban St. Louis, a consumer education unit was added to the curriculum of one group of youngsters. Measurements were then made of both the test and control group. Both reading and computational skills of the test group had risen beyond those of the control group -- presumably because of greater interest in the subject matter. Several years later, a module was published by the Michigan Consumer Education Center on using consumer education content to teach reading. And the 1987-91 focus of the Cooperative Extension System on Family and Economic Well-Being highlighted the financial/consumer problems of many "working poor" families with limited income and literacy.

In our search within North Carolina for sites and settings in which teachable moments with low-reading-level audiences might occur, we also seek to find suitable materials to use, and/or to learn how to go about developing such materials. Any of you who have gone down this path know that we are NOT going to tell you we found easy answers. But we will describe two very different approaches to the problem -- and allow time for discussion on how you might go about deciding what course to take in your situation.

a. Literacy Specialist. This expert looks at persons with limited reading skills (for whatever reasons), is most concerned about the severe impact of that limitation, and focuses on trying to improve literacy skills as the primary objective. A literacy specialist may or may not choose to use consumer education materials.

b. Consumer Educator. This expert looks at persons with limited reading skills and sees their need for consumer education -- or coping skills -- or life skills -- and tries to provide the consumer knowledge, attitudes and skills involved. The results are usually print materials intended to communicate to the audience at a low reading level. Improvement in reading and other literacy skills may or may not occur. The need for multiple forms of expertise is frequently lacking -- literacy itself, various aspects of communication (conceptual, perceptual, visual, written) and graphic designers, unless a team of experts and users is part of the development process.

Our first presenter represents the latter approach. Gail Baron is a Program Developer with Alberta Consumer and Corporate Affairs, a Canadian provincial department. She organized the teams which developed the "Consumer Talk" program for use with low-reading level audiences, including provincial literacy programs.

Rena Soifer is a literacy specialist, and is the director of the Workplace Academy operating out of Eastern Michigan University.

[1] Extension Specialist Family Resource Management

"Consumer Talk": Development of a Canadian low-literacy consumer education program

Gail Baron, Alberta Consumer and Corporate Affairs, Edmonton, Alberta, Canada[1]

This video presentation describes consumer education materials developed especially for a low-literacy, low-income audence by Alberta Consumer and Corporate Affairs (a department of the provincial government in the province of Alberta, Canada).

Project Overview

"Consumer Talk" is a series of consumer information sheets written in Basic English and presented in tabloid-newspaper format. The series currently includes 12 issues: Advertising, Banking, Buying a Used Car, Car Repairs, Credit, Returns (store return policies), Shop Around, Shopping at Home, Tenants: Moving In, Tenants: Living There, Tenants: Moving Out, and Trouble with Credit.

Target Audience

"Consumer Talk" was developed for adult basic readers. Basic readers do not read routinely for work or pleasure and have a difficult time with everyday reading. This audience may include new Canadians learning to read English as well as adult literacy and basic education students. The series was designed for use in a formal educational setting under the guidance of a facilitator, and it is also appropriate for adults reading independently at a basic level.

What is Basic English?

Basic English is characterized by:

- use of common words
- prevalent use of simple sentences
- ample use of illustrations, including examples of forms and letters
- frequent use of personal stories to explain concepts. Photostories are especially helpful.
- special design features, including careful control of the amount of information presented under a single heading; page design that cues the reader on information that belongs together; and type face and size that allow maximum ease in reading.

Rationale

The Department's regular collection of print consumer education material serves a literate (high school reading level) audience. The "Consumer Talk" series allows the Department to provide consumer education materials to an expanded audience.

Objectives

"Consumer Talk" will help readers to develop: an awareness of their rights and responsibilities as consumers; some personal strategies for dealing with consumer problems; and an awareness of sources of consumer information and help.

Worksheets

A set of worksheets is available to supplement each issue of "Consumer Talk." The worksheets comprise a variety of exercises that require the learner to read "Consumer Talk" and reflect on his or her own experience.

Distribution

The publications are distributed through a variety of outlets, including community agencies that work with the target audience (e.g. immigrant aid groups, social services organizations), adult basic educators, teachers of English as a second language, volunteer literacy tutors, educational programs in correctional institutions, public libraries, and the Department's own offices.

Recommended resources

Baldwin, R. (1990) Clear Writing and Literacy. Toronto, Canada: Ontario Literacy Coalition.

Cutts, M. & Maher, C. (1980) Writing plain English. Stockport, U.K.: Plain English Campaign.

Doak, C.C., Doak, L.G., & Root, J.H. (1985) Teaching patients with low literacy skills. Philadelphia, Pennsylvania: J.B. Lippincott Co.

Sample copies of the tabloids and the worksheets are available from the author.

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Interest in the Consuming Interests of Youth: Research, Marketing, Education and Policy Perspectives

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Youths' consumption-related activities occupy a particular place among all their experiences as developing individuals. This paper summarizes selected studies on youthful consumers and uses an expanded conception of consumer well-being encompassing effective, efficient micro-consumer decisions and a healthy development of the individual. Suggestions for consumer interest researchers and educators include addressing macro-consumption sensibilities: a concern for the global society, considering impacts of individual actions on the environment, and concerns for distributive justice.

Research Approaches

How youth consumer issues are studied reflects the particular focus of the investigator and disciplinary boundaries. Some research has used theoretical and multi-theoretical frameworks; other works have been criticized as a-theoretical or as imposing theory upon data rather than a priori to the design (Rossiter, 1978; Kuhlmann, 1983; Rettig and Morteson, 1986). Heinzerling (1990) identified twenty specific theoretical frameworks that could and/or have guided research on children as consumers including: cognitive components, processes and quality theory, decision-making, learning, situational variables, values and perception theories.

Marketing research on children and adolescents is driven by an interest in the effectiveness of marketing activities and by a need for information upon which to plan new activities. Marketing focuses on directional influence or persuasion and does not take the individual consumer viewpoint (Wilkie, 1988). Youths' marketplace activities and expenditure changes over time have been tracked and offer insights about spending potential (McNeal, 1987). Research tied more closely to consumer interests as opposed to marketing to consumer interests, has studied the development of financial management competence of youth and the consumer lifecycle (Rettig and Morteson, 1986; Stamphl, 1978, 1979).

Youth Consumer Socialization Studies

Socialization research has attempted to explain and predict youths' acquisition of consumer skills and media use associated with consumption. Consumer socialization has been referred to as the process of acquiring and developing consumer values, attitudes, norms, skills, behaviors, motives and knowledge which are related to consumption and family financial management (Kuo, 1987; Rettig and Morteson, 1986). Stemming initially from an approach to studying television advertising effects, socialization research has been used by consumer educators and family management scholars as well as within ongoing consumer marketing research (McNeal, 1987; Moschis, 1987; Ward, Klees and Wackman, 1990). Moschis (1987) identified three major types of theoretical approaches that could be used to explain consumer socialization. Developmental or lifespan theories address changes in the individual's priorities and the other social, physical and psychological changes one experiences over a lifecycle. Social learning theory emphasizes external controls over the socialization process. Studies look at socialization agents: stimulus-response situations, influences of reinforcement, social interaction, modeling and role theory. The third approach to explaining socialization, that of social systems, emphasizes the individual within his or her group affiliations and behaviors within cultures or subcultures. Norms and processes within different cultures will affect socialization learning outcomes.

How various forces and individuals impact on a child's consumer socialization is influenced by the child's stage of development, economic class of the family, opportunities for contact, and other factors. Peers, family members, the marketplace, advertising, educational programs and messages, and employment are all potential socialization agents or mediators for children in the

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development of consumer attitudes, skills and knowledge.

Family Socialization Influences

The importance of family interactions and parents in the development of the youthful consumer is clear as one reviews studies of the socialization process. Parental influence on consumer socialization of children is often incidental; parents seem to expect their children to learn through observation or "osmosis" (Birckmayer, 1984). Usually discussions about consumption behavior are initiated by the child's request for a product. Parents teach skills directly through prohibiting actions or purchases, giving lectures, holding discussions, and indirectly by acting as an example and allowing the child to learn from experiences (Ward, Wackman and Wartella, 1977).

Kuo's (1987) three school survey of 7th, 10th and 12th graders found support for parental role modeling in social learning of consumer skills. Pippidis's (1989) study that surveyed teenager and parent pairs suggested the importance of the family environment, teen experiences and the parent-teen relationship in the development of financial management competencies of youth. Marshall and Magruder (1960) reported that children are more knowledgeable about the use of money when given wide experience and opportunities in saving and spending and when parents handle the family income wisely. Turner and Brandt (1978) found that children learned consumer skills when they are given opportunities to participate in consumer decision-making and share family responsibilities. In a survey of over 400 Georgia middle school children, Doss (1990) found that how children used money was influenced by their income source and amount. Savings and giving increased with the amount of income from earnings.

In general, findings seem to indicate the value of positive experiences with money income. Across studies, more earnings and a regular income seem to support greater knowledge on consumer and money topics and a greater propensity to save (Marshall and Magruder, 1960; Dale, 1973; Turner and Brandt, 1978; Hollister, Rapp and Goldsmith, 1986; Hampton, Bouton and Huggans, 1988; Pippidis, 1989; Doss, 1990).

Socialization studies have paid the most attention to purchasing and marketplace interactions. How the family uses and consumes goods, the relative importance of consumption as an experience for the developing child, and social learning about non-consumption issues such as savings has received much less emphasis (Kulhmann, 1983; Rettig and Morteson, 1986; Ward, et al., 1990). McNeal (1990) found that children aged twelve and under have been increasing their overall savings rate. Between 1968 and 1984, the average rate was quite steady at 15%; in 1989 it was up to an average of 30%. He suggested that with increased financial resources, children might be learning the virtue of savings and/or may be encouraged by parents to establish a better savings habit.

The family is also important as a mediator of the affect of other socializing agents. Parent-child communications have been found to have some influence over time on the development of adolescent brand preferences and the ability to distinguish facts from exaggerations in advertising messages (Moore and Moschis, 1981). Robertson, Rossitier and Gleason (1979) found that families mediate the effect of TV viewing.

Youth as a Consumer Market

Teens' economic power has been tracked by market researchers such as the Rand Youth Poll, Scholastic and Seventeen magazines, Teenage Research Unlimited, and the Roper Organization (Walsh, 1985; Hauser, 1986; Between Parents and Children, 1989). The majority of teenagers' spending continues to be on themselves, is discretionary, and their financial resources are substantial. Spending is often on high ticket items such as cars, video and other electronic equipment. The more traditional teen-age purchasing continues as well--snacks, movies, clothing, cosmetics (Caprino, 1990).

National teenage earnings in 1990 were reported by Teenage Research Unlimited, (TRU),to be at $101 billion up from $89 billion in 1989 ("New Breed," 1991). The Rand Youth Poll estimate for spending by 13-19 year olds in 1987 was $53.7 billion per year on themselves and $27 million on family food. Teenagers also influence how their parents spent $142 billion ("Teen Spenders," 1988). TRU estimated the average teenager's income in 1989 was $60 per week, (Charboneau, 1989).

The economic power of teenagers has raised concerns about their premature affluence (Bachman, 1983). Their consumption level and style is beyond their productive capacity in an independent adult world. Child development experts are concerned that teenagers acquire social maturity through consumer goods such as automobiles but lack the psychological maturity of adulthhood (Greenberger and Steinberg, 1986).

Also of concern is the amount of time teenagers commit to earning money and an overly materialistic orientation to adult life. Greenberger and Steinberg (1986) found that many of the service-sector jobs held by teenagers had minimal training associated with them, and the skill requirements were bare minimum. So reinforcement of school learning and skill development often are missing in jobs held by teenagers. Teenagers with excessive workplace involvement may lack enough opportunities to experiment with other, non-employment roles such as volunteering and to explore their identities, both important developmental tasks in adolescence.

Children 12 years of age and under are seen as an important market themselves. McNeal (1990) estimated that the 32.2 million 4 to 12 year olds in the U.S. spent $5.15 billion in 1989. Six year olds spent an average of $2.59 per week and 12 year olds spent $6.90. Children's annual expenditures were concentrated in five major categories: snacks and sweets ($2 billion); toys and games ($1.9 billion); clothing ($700 million); movies, entertainment and souvenirs ($600 million); and video games and arcades ($486 million).

Companies that market to children use highly creative promotional strategies such as kids clubs, product tie-ins, direct mail relationships and premiums to capture young people's attention and sales (Sains, 1989). Selling America's Kids (1990), a recent Consumers Union study, is a critical examination of promotions that are directed at children. The study described burgeoning product licensing promotions with sales of $64 million in 1989, a proliferation of merchandise cross-selling, product placements in movies and videos, the use of celebrities to sell products, and classroom materials with commercial messages, all as illustrations of how promotions permeate young people's daily routines. A vast array of products are promoted including the familiar children's products like cereals and toys as well as kiddie cosmetics, frozen dinners, cameras for children, shoes and clothing, videos and electronic equipment (Sellers, 1989; Moore, 1990).

Children are also of economic interest because of their future role as adult consumers and their influence on the consumption practices of their parents and family. Marketing strategies are directed at capturing loyalties early in life since they are reported to be carried into adulthood. Reverse socialization, the influence of children and adolescents on adult consumer practices, is an emerging area of investigation (Between Parents and Children, 1989; Ekstrom, Tanserhaj and Foxman, 1987; Mangleburg, 1990).

The Roper Organization's survey on U.S. family decision making, Between Parents and Children, (1989) interviewed parents with children 7 to 17 years of age and asked how children influenced consumer choices made. Children were reported to exert the greatest influence (74-79% having a lot or a fair amount to say about the decision) on television program choice, where to go for fast food, what to do together for fun, and clothes the children wear. Parents viewed their children as much more involved in family decisions than they were as children. One study recommendation is that marketers direct advertising messages for a wider array of products and services directly to children.

Youth Consumer Education

School courses historically have covered aspects of consumer education when emphasizing life problems and buymanship (Green, 1988). In the 1970s through the mid 1980s, a national, systematic approach to consumer education for children and adolescents was conducted and curricula and courses were instituted. Disagreement continues on the content, focus and appropriateness of this education. Research findings conflict as to whether consumer education curricula and programs make a difference (Green, 1988).

What is clear is that children have already acquired knowledge, attitudes and motives on most subjects that might be included in education about the consumer role before coming to the classroom (Kuhlmann, 1983). Belk, Bahn and Mayer (1982) found that children had already developed stereotypes about consumption symbols by the second grade. It seems that consumer learning begins early with the socialization of preschoolers, is significantly built within the family throughout childhood, is affected by other socialization agents such as the media and peers, and can be supplemented in schools and through other educational programs and experiences.

Consumer education can be criticized as containing adults' perceptions of what children ought to know. Alternatively, consumer education could be based on children's needs, reflecting an understanding of children's cognitive abilities and consumer-behavior patterns. Approaches for children could be based on information processing skills, explanations of the persuasive intent of advertising and how to find product information. Knowledge, behaviors and skill-building can be emphasized. Older children and adolescents could deal with more abstract attributes of consumer decision-making and the marketplace and different strategies for evaluating products. They also are capable of critical reflection on the use of goods to construct meaning of one's self and the world. Marketing research on children's cognitive abilities within consumer situations offers ideas for designing education programs (Macklin and Machlert, 1989; Peracchio and Mita, 1989; Roedder-John and Cole, 1986; Roedder-John and Whitney, 1986; Soldow, 1985). Visualizations, supporting memory strategies, using scripting techniques to learn effective consumer behaviors and basing program approaches on significant environmental factors can strengthen educational interventions directed at children.

Education could supplement parental training which occurs indirectly and irregularly. Classroom and out-of-school educational programs might be devised in which parents undertake some consumer training activities. This would reinforce and support family communications, experiences, and teaching related to consumption which include both economic and sociological aspects. Kourilsky and Murray (1981) reported the effectiveness of economic education with kindergartners was due, in great part, to the participation of the family and to discussions within the family. Armstrong and Brucks (1988) built a rationale for adult education programs on advertising to increase parents' effectiveness as socialization agents.

Some educational materials offered for use in schools by businesses and some entire school programs have been criticized as being too commercial or too centered on consumption (Harty, 1979; "Selling America's Kids," 1990). A 1984 content analysis of free curriculum materials found that business-sponsored materials contained significantly more commercial content and advertising than materials from nonbusiness sponsors (Rudd and Buttolph, 1987). Consumer education has also been criticized as anti-business and/or lacking in economic understanding. Teachers responsible for courses may lack even elementary training in economics. The goals of consumer education have been recommended as those that would prepare youths for their adult consumer role in the economy with a sound basis in economic principles and an understanding of the marketplace (Bymers, 1983; Robinson, 1988).

In addition to enriching consumer education through more direct use of consumer and related research findings and better application of economic theory and family resource management principles, some critics want to change and/or broaden what is included in the curriculum and how it is taught. Metzen (1988) recommended including household choice-making, proper use and maintenance of products, and nonconsumption experiences. The understanding of all resources and their value, in addition to monetary resources, as well as the ethical and societal responsibilities associated with consumption, have been proposed as important concepts within comprehensive consumer education. Copa and Schuler (1987) want to stretch and develop curricula further by supporting more developed ways of thinking. They suggested that consumer issues be taught using a human concerns approach to develop critical thinking about practical consumer dilemmas.

Leming (1983) suggested two interpretations for social dimensions within consumer education curricula. The social/political interpretation focuses on consumer participation in the social determination of consumption. Education could emphasize the complexity of the market, forces acting upon consumers, and how, through social and political action, to maximize individual and societal well-being. A second social dimension to consumer education is one of a personal/moral interpretation. Leming believes the latter interpretation is of greatest interest to adolescents who can understand principles involved in personal decisions about available resources, and who can observe the consequences of their consumer choices on the well-being, dignity and happiness of others.

Also supporting a moral interpretation, Peterson (1987) suggested research and teaching about the ethical aspects of consumption based upon John Rawls' theory of justice. She criticized family economics/consumption theory as culture-centric and ignoring duty and obligation. Ethical inquiry within consumer education would analyze issues such as inter-generational trade-offs, resource depletion and environmental pollution, and moral questions related to advertising and hazardous substances. Metzen (1988) noted that problems related to trade-offs between satisfaction of present consumers and the needs of future consumers are of great significance and should be a part of the consumer conscience.

Youth Consumer Interest Policies

Understanding the developmental needs of youth suggests directions for policies. Voluntary and mandatory market protection measures may be required to protect the safety of children buying and using certain products and services. Exclusion of children from certain markets has been mandated, for example, cigarettes, alcohol and some toxic materials. Information disclosure and educational programs to be useful to children and adolescents, must include presentation in an understandable manner given the level of cognitive development. Retailer practices and advertising messages aimed at children should reflect children's abilities and needs.

Children experience special problems in the marketplace. Stamphl's (1978) Consumer Elements by Consumer Lifecycle Stage lists typical marketplace problems of children. They have underdeveloped cognitive responses to ads, want everything and are unable to articulate questions or get usable explanations from parents or teachers. Children also lack knowledge and understanding of the marketplace and have limited and unorganized product knowledge. Adolescents, compared to younger children, are gaining experiences in the marketplace and developing more sophisticated understandings about consumption. Teenagers' marketplace problems, according to Stamphl's framework, include difficulty in identifying significant product differences and a weak understanding of both the value of money and their own tastes and preferences.

The marketplace itself is designed primarily for adults and so are its products and services. Eye-level displays may be out of sight for young customers. Some merchants are unresponsive and even hostile towards children unaccompanied by adults. Adult clerks and customers may express frustration and impatience with children who take a lot of time making purchase choices. Retailers offer merchandise which is harmful and inappropriate for children (McNeal, 1987).

Public and private policies related to youth as consumers have been proposed, implemented, rescinded, and revised as in the case of limiting television advertising to children (Carnevale, 1991). Ethical and legal policy issues attend to the rights, vulnerabilities and needs of youth and the interests and responsibilities of society for youth (Armstrong and Brucks, 1988; Paine, 1984; Reece, 1986; Selling America's Kids, 1990). Ethics will direct business towards marketing activities based on veracity rather than an absence of deception, or fairness, and will reflect a respect for and an avoidance of harm to children (Paine, 1984).

The practice of studying and marketing to children for profit has been criticized on legal and ethical grounds (Charren, 1990; Hite and Eck, 1987). A large proportion of research on children as consumers is devoted to the role and influence of advertisements, especially television advertising. The effect of television ads is cited here as a societal concern and also addressed as an information source and a point of interaction between parent and child.

In the future, youth-focused consumer education and research must also attend to the special needs of at-risk populations. For example, there may be unique consumer problems and educational needs of non-college bound youth as described in the W.T. Grant Foundation Commission report The Forgotten Half (1988). Although the report emphasized needs for employment and training opportunities, effective consumption behavior and sound consumer understandings could substantially contribute to a successful independent life for these individuals. The draft summary report of the Consumer Competency Roundtable (1991) placed high priority on consumer education for minority and other special groups. Minorities, low income and younger consumers tended to score lower on consumer knowledge in the 1990 Consumer Federation of America's Consumer Competency Survey. The Roundtable recommended developing a national strategy and products for teaching consumer life skills to youths in out-of-school community settings.

The big question of what the marketplace does to children remains

(Becker, 1987). It has only been raised here and in most research on children as consumers (Ward, et al., 1990). Social and environmental responsibilities can be related to consumer decisions through integrated curricula and reinforced informally by parents within the family.

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Should We Ask or Watch?
Data Collection Methods for Researching Young Consumers

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The economic impact of young consumers increases each year as do the marketing activities to influence this spending. Research efforts to create and implement consumer education programs and public policies need to consider the research setting, interviewer influence, and verbal limitations when selecting a data collection method.

Consumers between the ages of 5 and 12 influence over $70 billion of annual spending in our society (Berry 1990; Newcomb 1990). This includes both what they spend, and what is spent on them. Because of this fact, marketing researchers have taken extensive efforts to investigate the behaviors, motivation, and interests of this market segment. These young consumers receive a constant barrage of promotions and product offerings in the form of:

* television programs featuring characters associated with various products (toys, food, clothing, videos, and audio tapes);
* in-school promotions including magazines, teaching materials, and news programs with advertising;
* product placements in motion pictures; and
* "kid's clubs" that promote memberships, emphasize mail order selling, and create mailing lists for sale to other marketers ("Selling America's Kids 1990).

To counteract these marketplace influences, consumer affairs specialists, educators, and policy makers should consider research activities to determine and promote educational alternatives, health and nutrition, and informed marketplace decision making.

The process encountered when researching young consumers can involve three audiences:

1. the young consumers,
2. parents and legal caretakers, and
3. supervisors of young consumers (teachers, scout leaders, and community workers).

Since all three groups can provide insight into the target audience, this paper will consider each as part of the research environment for young consumers; in addition, this paper has the following purposes:

* to review the procedures and concerns associated with collecting research data from young consumers.
* to provide guidelines for planning research with young consumers.
* to suggest research for assessing and planning marketplace decisions, educational programs, and public policies.

What Do We Want to Know?

Data for researching young consumers generally fall into three categories:

1. Attitudes related to marketplace influences (such as advertising) and product offerings (including product performance).
2. Behaviors concerning buying habits, media usage, and product consumption.
3. Influences on behaviors that come from the young consumer's household, peers, educational/community involvement, and the marketplace.

Types of Data Collection Methods

As with any research study involving consumer attitudes, behaviors, and influences, generally accepted data collection methods would include the following:

1. Observations. Planned watching activities may occur in both a structured manner (including quantitative analysis of behavior frequency) or with an anecdotal format to gain understanding of the decision-making environment of young consumers. Atkin (1978) provided a strong framework for the former of these approaches, while ethnographic research designs can be the basis for the latter (Fine and Sandstrom 1988).

2. Surveys. Questionnaires may be used with varying degrees of success depending on the age, audience, and data needs of the study. Rossiter (1977) validated a scale for use with children when studying attitudes related to commercials.

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3. Individual and Group Depth Interviews. In-depth personal interviews and focus groups have been used with varying levels of success depending mainly on the age of respondents. Harrigan (1991) provides strong evidence for this method indicating that one-on-one interviews were used most frequently by organizations involved in children's research. She further points out that mini-focus groups (with three to seven young consumers) were the next most popular technique. This group size is in contrast to the more commonly used 8-to-12 person focus group for other consumer segments.

4. Projective Techniques. Psychological data-gathering devices such as word association, sentence completion, story creation, and third person techniques can be helpful for gaining insight into attitudes and motivations of young consumers. Haire (1950) suggested that projective research methods are useful for revealing motives that may be incapable for a respondent to verbalize. Among young consumers, these techniques can be used to assess brand awareness, animated character perceptions, and role understanding (Marketing News 1983).

5. Diary/Journal Data Records. While having mixed reviews concerning validity of data, diary studies can be especially helpful when researching parents and youth supervisors (Isler, Popper, and Ward 1987). This technique has also been successful with adolescents.

6. Content Analysis. The monitoring of commercials, promotional messages, and other marketplace influences can provide important background and insight of the buying environment of young consumers (Atkin 1977).

Factors Affecting Data Collection Methods

Selection of a specific data collection method to use when researching young consumers will be influenced by:

1. Research topic, data needs. Exploratory studies are likely to be best served by qualitative methods such as unstructured observations, open-ended interviews, and projective techniques.

2. Age of respondents. As previously mentioned, verbal interactions (necessary in surveys) or writing skills (required in a diary study) may not be possible for children under a certain age.

Data Collection Issues

The unique situations involved with researching young consumers gives rise to several concerns that need reconciliation when planning and implementing a study. These issues include:

1. Cognitive Limitations. As Rust (1991) suggests:

* adults can think about themselves objectively; children can not;

* adults can consider alternatives in parallel; children use "serial processing;"

* adults often plan purchases; children's intentions are likely to dissolve in seconds; and

* adults focus on product attributes; children understand products as entities.

2. The Research Environment. A lab setting can seem very foreign to the participant, resulting in nonvalid responses. In contrast, a natural setting (home, school, youth activity location) that is familiar to the young consumer may reduce one's ability to generalize the findings, but the insights gained can more than justify this action. Also, when children are put in a research setting designed for adults (such as one with furniture for grown-ups) the young consumer is less likely to provide valid data.

3. Interviewer Influence. Young consumers are easily intimidated by an adult; respondents must be made to feel comfortable with the researchers with whom they have contact.

4. Ethical and Legal Concerns. Permission of parents or guardians along with confidentiality of data are two areas that require care in the planning stage of a study.

5. Validation of Data Collection Instruments. Procedures must must be established that certify the desired measurement as well as consistency of a questionnaire or observation form.

6. The Response-Behavior Link. While a problem in most types of respondent-centered research, the gap that exists between survey replies and marketplace behavior must be carefully considered when attempting to generalize results or when designing program to improve decision making among young consumers.

7. Interpretation of Responses. The frame of reference used by researchers to draw conclusions from data must also be tempered in light of the perspective, evolving values and behaviors, and physiological changes occurring in this target audience.

Data Collection Selection Guidelines

In the process of planning an investigation involving young consumers, direction may be taken based on the data that will best serve the goals of a study. For example, several types of data (related to desired informational outcomes) may be offered along with suggested data collection approaches, as follows:

For YOUNG CONSUMERS....

...when marketplace behaviors, product use information is desired, use either structured or unstructured observation.

...when media habits, attitudes, or preferences are measured, use a survey or personal interview.

...when an in-depth discussion of behaviors and attitudes is required, use a focus group.

...when determining the types and frequency of commercials and promotional messages, use content analysis.

For PARENT AND LEGAL CARETAKERS, SUPERVISORS of young consumers (teachers, scout leaders, community workers)....

...for determining parent-child interactions, use observational research.

...for measuring attitudes, behaviors, and knowledge, use survey research.

...for listing shopping patterns or media habits, use a diary.

...for assessing promotional messages aimed at parents and supervisors of young consumers, use content analysis.

Research Applications

In an effort to influence consumer education programs and public policy decisions that can help to balance strong marketplace influences, suggested research involving young consumers can include:

1. Studies to determine messages that will effectively promote nutrition, wise shopping, and other desired consumer behaviors; for these, consider the use of surveys and group interviews.

2. Studies to monitor media and messages that are likely to influence behaviors of young consumers; for these, consider the use of content analysis and media habit surveys.

3. Studies to assess the relative influence of parents and children upon each other in buying decisions; for these, consider in-store observations.

4. Studies to assess the influence of teachers, peers, and community environment on attitudes and behaviors of young consumers; for these, consider surveys and ethnographic observation.

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Money Management Information and Financial Resources of Teenage Consumers in Kansas

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Introduction

While adolescents comprise an increasingly smaller proportion of the national population, their economic behavior still remains of interest. Adolescents yield enormous impact in the economy. They tend to be the major decision makers on an estimated $70-80 billion of annual expenditures. Today's adolescents purchase many of the products intended for their family's consumption. And about $50 billion is available annually to teenagers for their discretionary spending or saving (Hauser, 1986; Walsh, 1985). During their adolescent years individuals acquire much of the financial knowledge and skill to carry them into their adult years. Yet little is known about where and how adolescents acquire their financial background.

Purpose and Method

There were two objectives for this study. The first objective was to determine the magnitude and sources of financial resources available to Kansas teenagers in 1990. The second was to ascertain how adolescents acquire their understandings of money management.

Data for this study were gathered through a written survey distributed to high school seniors enrolled in a government course during Spring,1990. A stratified sample was obtained to represent the five geographical areas of the state, rural and urban communities, as well as small, moderate and large schools.

Results and Implications

A total of 1479 usable responses were obtained from 34 high schools within Kansas. The median amount of weekly spending money available to Kansas teenagers was $60, with males having more ($65) than females ($55). The majority (85.3%) of respondents earned at least a portion of their income, with 58 percent having regular jobs. The average teenager earned 85.7 percent of his available spending money and parents provided 9.8 percent. Half of the respondents indicated their parents provided spending money upon request and 19 percent received a regular allowance. Other sources of income, which accounted for 4.5 percent of total resources, included amounts from other relatives, investment income, or child support. Working teens had significantly more spending money ($70) available than did non-working teens ($15).

The magnitude of resources available to today's youth should be of interest to more than marketers. The vast difference between the discretionary income of working and non-working teens needs more careful scrutiny in future studies.

Over 90 percent of respondents indicated parents/family as a source of their money management knowledge. One-third of the respondents also cited a class at school as a source of financial information with business, economics, and home economics courses most frequently mentioned. While it is not surprising that adolescents learn about managing money from parents and family, the evidence of this informal transmission of knowledge and skill on such a vital topic encourages the development of programs to support parents in their role of financial educator.

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Profiles of Consumers and Those Who Recycle

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Rationale

The research is philosophically encompassed with a view of the consumer as part of an ecosystem. This perspective provides a structure for research activities that explore consumer attitudes, values, and practices that affect global environments and resource conservation, particularly recycling. Recycling helps minimize the economic and environmental consequences of consumer waste and consumption itself. Waste management is considered a concern of the current decade (Mikitka, Zeitler, & Gross, 1984; U.S. Environmental Protection Agency, 1989).

Research Objectives

The objectives of this study were to gauge identification of a widely used recycling symbol and to obtain profiles of household consumers and those who recycle.

Respondents

Respondents were 440 strategically selected supermarket shoppers and recycling center patrons from a major suburban area in the USA. Previous research suggested that class division may influence recycling attitudes and behaviors. Therefore, social class ranks for respondents were determined using the Hollingshead Index of Social Position (Mikitka, 1987).

Findings

Awareness of the recycling symbol increased from one-tenth of the respondents in early surveys to one-third of the respondents in the most recent surveys. There were no significant differences in the rate of recycling (i.e., the percent who recycle) among different social class categories. However, there were some significant differences* in what respondents did with recyclables. Respondents with lower social class ranks were more likely to receive money (64% vs 29%) and upper class respondents were more likely to give them away (39% vs 10%). About one-third of all the respondents who recycle receive money for some of their materials and give away some of their recyclables. The middle social class group was more significantly inclined to recycle for ecological reasons (64% vs 25-53%). Lower class respondents groupings were much more inclined to recycle for money (85%) and the upper classes for charity (30%). When respondents were asked "What is the most important reason for recycling?," 46% identified ecological or environmental reasons, 34% monetary reasons, and 19% charitable reasons. The general differences between social class groupings remained.

*Multivariable Chi square analyses significant at .05 or better.

Implications

A framework for developing environmental concepts may be associated with the Mobius loop recycling symbol that emphasizes total systems. The research lends support for consumer education and environmental programs that aim at creating awareness of the recycling symbol and its significance. Programs should be based on environmental affective objectives as prerequisite to learning environmentally beneficial decision-making practices. Demographic profiles of household consumers may be useful in further expansion and penetration of consumers, retailers, manufacturers and industry markets for recyclables in the 1990s.

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Testing A Computer Program for Life Cycle Savings

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Computers have the potential of helping consumers with complex financial decisions but little testing and evaluation has been conducted with sophisticated software. This poster session will report on a test of software users.

Rationale

To give additional assistance in planning for retirement, a computer program based on the economic theory of life cycle savings was developed. The program was intended for consumers who are at least ten years away from retirement. Many individuals have a tendency to increase their level of savings in the years just prior to retirement when the demands of raising and educating children and purchasing a home have been accomplished. However, the program allows for the especially thrifty consumer who begins saving early to change the values of several variables including the "thriftiness" factor. The full model is described elsewhere (Hanna, 1989).

Potentially confounding factors in implementing the model include: overestimation of future income and pension by young consumers, few households purchase an annuity at retirement, and consumers may have difficulty in thinking about income and consumption in real terms. The program assumes that an annuity will be purchased to fill the gap between optimal consumption, pension, and Social Security benefits. While all dollar amounts (current and future income, personal loans, and net worth additions and withdrawals) are entered in terms of today's dollars, the projected consumption and savings may be observed in both real and nominal dollars.

Students in a Family Resource Management Application class tested the Life Cycle Savings program by writing a case study and focusing on a decision about family formation or consumption and its effects on savings over the life cycle. A pre-test and post-test with fourteen items was administered. Attitudes toward the use of a computer program as a means of generating financial advice as well as specific features of the program such as Constant Dollar Planning and the thriftiness level were analyzed. A significant increase in students' ability to make decisions about how much to save for retirement was noted in the survey results.

Findings

Forty-five students participated in the exercise but only 37 students completed both attitude surveys. The mean age of the students was 22.8 years. The mean hours worked per week by students was 13.3. However, 15 students were not employed and only 2 students worked full-time. Five students were married, 1 was divorced, and 38 were single. Only 2 students were parents. An entry level financial management class had been completed by 75 percent of the students.

Each group of students assumed that both spouses would be employed. The mean take home income with both spouses employed was $41,700. Beginning retirement assets averaged $27,800 while beginning loan balances averaged $20,800. The mean starting age for the savings program was 26 with a mean retirement age of 63. Mean annual growth rate of future income was 2 percent with a range from 1 to 4.25 percent. The mean take home income at retirement was $89,900.

Decision groups consisted mostly of pairs. In addition, a few groups made multiple decisions such as varying the retirement age and deciding whether or not to have children. Retirement age and children (when to have them, child versus no child, and one child versus two) were the decisions receiving the most emphasis.

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Mail-Order Use and Problems: Differences by Age

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Purpose

This study explored the use of information, knowledge of selected consumer rights, and perceptions of fair and legal business practices of a sample of 1,019 persons age 25 years old and older (566 who had made purchases via mail in the last six months and 453 who had not). It also examined the actions taken by 254 persons who indicated that they had a problem with a mail order purchase. Three age categories were used: 25 to 43 years old (babyboomers), 44 to 64 years old (inbetweeners), and 65 years old and older (elderly).

Methodology

The data used in this study were taken from a 1989 telephone survey of consumer behavior conducted by Market Facts for the American Association of Retired Persons (AARP). Responses to questions on use of information from the Better Business Bureau (BBB) or consumer protection agencies, consumer magazines, articles or books about a product or service, past buying experiences, sales person's advice, family or friend's advice, and advertising were analyzed. Also, each group's knowledge of one's right to have several days to cancel a purchase made from a door-to-door sales person, knowledge of one's right to cancel a mail order if not sent within one month of being ordered, and opinion of the fairness and legality of selling a product different from the one pictured in the mail catalog were analyzed.

Among those who indicated that they had a problem with a mail order purchase (product did not look like the catalog picture), the responses to the following complaint procedures were examined: keep the product, return the product and request a refund, write a letter to the company expressing dissatisfaction, and complain to a consumer agency.

The Chi-Square test of independence was used to analyze the data. Gamma was used to indicate the strength of association when Chi-Square was significant.

Results

Among those persons who indicated that they order products or services via mail, there were significant associations between age and all sources of information except sales person's advice and family and friend's advice. The babyboomers were more likely to use these sources of information and the elderly were less likely. These significant associations also held for the group who said they had not made purchases via mail in the last six months. However, family and friend's advice was also significant for this group.

There was a significant association between age and knowledge of one's right to have several days to cancel a purchase made from a door-to-door sales person among those who had made purchases via mail. The babyboomers were more likely to correctly answer that one has several days to cancel a purchase made from a door-to-door sales person and the elderly were less likely. This significant association also held for the group who said they had not made purchases via mail in the last six months. However, the inbetweeners were more likely to answer correctly and the elderly were less likely.

There was also a significant association between age and perception of the legality of selling a product through mail that looks different from the one pictured in the catalog among those who had made purchases via mail. The elderly were more likely to correctly answer that it is illegal to sell a product through mail that looks different from the catalog picture and the inbetweeners were less likely. This significant association also held for the group who said they had not made purchases via mail in the last six months. However, the inbetweeners were more likely to answer correctly and the elderly were less likely.

There was no significant association between age and complaint behavior.

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Consumer Credit : An Exploratory Study of Search Behavior

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This study applies Stigler's economic of information model to the external search for consumer credit and explores factors associated with diverse consumer search behavior. Logistic regression was used in empirical analysis of a sample from the 1983 Survey of Consumer Finance. The variables SIZE OF LOAN, and EDUCATION were positive related to search. INCOME had a curvilinear effect on search.

Information search has been the focus of numerous research studies in the past. However, there have been few studies of the search process for services. The characteristics of consumer services are different from those of tangible goods, as are the contributions of different information sources to the decision process for services. This study applies Stigler's economic model to the external search for a service -- consumer credit -- and seeks to explore factors associated with consumer search behavior.

Model

Stigler's economics of information model implies that a consumer will search for lower prices as long as the marginal costs of additional search are less than the expected marginal benefit from search (1961).

Methodology

Data came from the 1983 Survey of Consumer Finance (the latest survey year available with such information). The sample used consisted of those who purchased over $500 by loan in the previous year, and had not been rejected by credit in past few years resulting in 574 households selected from the original 3,824 respondents. So few consumers had considered search beyond a second lender that the dependent variable used was a dichotomous variable, whether the consumer had considered any search for information about an installment loan. A logit function was specified as follows:

SEARCH = f(SIZE OF LOAN, INCOME, EDUCATION, AGE, PRIOR EXPERIENCE, TIME SCARCITY)

Six independent variables are specified as dummy variables. It is hypothesized that SIZE OF LOAN and EDUCATION have positive effects on search, INCOME, AGE, PRIOR EXPERIENCE, TIME SCARCITY have negative effects on search.

Results, Conclusions, and Implications

The results revealed that consumers still engage in little information search although "more information is better" has been emphasized for over two decades. The SIZE OF LOAN has a significantly positive effect on credit search, indicating the economic model of information is valuable for service information search analysis. The curvilinear income effect, however, suggests that middle-income consumers search more than lower and higher income consumers because they have a higher demand for credit than lower income consumers and a lower search cost (foregone wage rates) than those in higher income level. The strongly positive EDUCATION effect further indicates that for such a complicated commodity as credit, more investment in human capital may increase the efficiency in search, leading the consumer to search more. One implication of these results is that disclosure mandated by "Truth in Lending" may not benefit poorly educated consumers. Greater efforts in consumer education may be needed. Future analyses in service information search studies may also need to extend the model to include other types of services to determine if the results observed in this study are consistent with those for other services.

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Wife's Employment and Service Expenditures

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The working wife has become an integral part of the American economy. In 1987 both husband and wife had earnings in over two-thirds of the 43.5 million married-couple families with at least one spouse employed ("Earnings of Married Couple Families," 1989).

Since time is a fixed resource, dual-earner families have fewer hours for nonmarket activities than comparable one-earner families. For this reason, they may have to purchase time-saving goods and services as substitutes for household production time taken up by market work. The purpose of this research is to examine the relationship between a wife's employment and outlay on services for which demand is expected to be sensitive to the value of time within a household.

Methodology

The interview component of the 1986 Consumer Expenditure Survey (CEX) was the data base for this research. The study sample consisted of married-couple families in which the wife was less than 65 years old and in which neither spouse was retired. Families not reporting information on income and other sociodemographic characteristics of interest were excluded, resulting in a sample of 1,000 families.

Multivariate tobit regression analysis was used to examine the influence of wife's employment and other factors on outlay on selected services. The services examined were 1)food away from home, 2)child care, 3)domestic services, 4)clothing care, 5)personal care, 6) gardening services and 7)total services. Independent variables of interest were 1)family income, 2)wife's employment status, 3)wife's education, 4)wife's age, 5)wife's race, 6)family size, 7)family composition and 8)homeownership status. Region and Metropolitan Statistical Area (MSA) status were also employed as controls.

Results

Family income was positively associated with all dependent variables except child care. Families of wives employed both full- and part-time spent more on child care and total services than families of full-time homemakers. Families of part-time working wives spent more on food away from home compared to families of full-time homemakers, but no difference was found for families of full-time working wives.

Higher levels of education were positively associated with all service expenditures. The impact of the age variable indicated the presence of distinct life-cycle effects.

Families of black wives were found to spend less on food away from home and gardening services, but more on personal care than families of white wives. Families of wives of other races spent less on personal care than families in the reference category.

Neither family size nor family composition proved to be major explanatory variables and were only significant in explaining expenditure on child care. Homeowners spent more on domestic services, but less on clothing care relative to renters; no difference was found for the remaining categories.

Conclusions

Wife's employment was influential in explaining expenditure on food away from home, child care and total services only. Contrary to what might be expected, only families of part-time employed wives spent more on food away from home. Findings indicate that factors not associated with wife's employment were more influential in explaining expenditure. For example, family income had a positive influence on all categories except child care. Education and age were also influential.

It should be noted that the CEX did not provide information on service price and availability, both of which could play a major role in spending, particularly for domestic services. For this reason, future research on service consumption should take these factors into account.

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Organic Produce: Consumer Attitudes and Willingness to Pay

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Today's consumers are more informed about health and nutrition, and are asking more questions and expressing concerns about food quality and product safety. The growing interest in nutrition and food safety has contributed to an outgrowth of the organic produce industry (Franco, 1989). However, sales of organic produce at some retail markets have been minuscule due to inconsistent quality and higher price (LaRue, 1989). The objectives of the study are to assess consumers' food concerns with respect to use of chemicals in fresh produce production, and their motivations, attitudes and willingness to pay for organic produce.

Data and Methods

A self-administered mail survey was conducted in the summer of 1989 among 580 households participated in the Georgia Consumer Panel. The panel constitutes a random sample of Georgia consumers stratified by income classes. The survey resulted in 389 completed questionnaires, a response rate of 67%. The sample tended to be demographically upscale with older, better educated, and higher income households slightly overrepresented. The average household size is about 2.7 persons. Female, city residents, and people of European origin represent 69%, 54% and 77% of the survey respondents, respectively. Cross-tabulations and Chi-square test were used to analyze and determine if differences in responses exist among socioeconomic and demographic subgroups.

Findings

The respondents most frequently chose pesticide use (45%), chemical food additives and preservatives (31%), food poisoning (29%), and high food prices (26%) as one of their top three food concerns. These food concerns were statistically significant between those who indicated a preference for organic produce and those who did not. Sex, age and educational level correlated significantly with these food concerns.

Results suggest that 61% of the respondents would prefer to buy organic produce, if available. However, this preference was invariant of gender, race, age, education or income of the respondents. The most important reason that consumers said motivated them to prefer organic produce to conventionally grown produce was freedom from chemical residues (38%). Other important reasons for choosing organic produce were naturally grown (35%) and tasting better (16%). A majority of respondents (61%) indicated that they would only pay up to 10% higher than what they were paying for conventional produce. While some (15%) would pay a premium greater than that, 24% of them were unwilling to pay any higher price. Furthermore, only 25% of the potential buyers would accept organic produce with low appearance and sensory qualities such as insect damages, blemishes, or soft spots.

Conclusions and Implications

The results did not suggest any direct correlations between socio-demographic variables and the groups of consumers who would and would not buy organic produce. However, sex, age, and levels of education and income were statistically significant determinants that affected consumers' food concerns and fresh produce purchasing decisions. An important factor to the marketing potential of organic produce in Georgia appears to be some certification that these produce are free of chemical residues. Furthermore, organically grown produce should be made available to consumers at a reasonable price that is competitive with those grown by conventional methods, and without apparent defects in its sensory quality.

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Management and Involvement Factors Related to Financial Satisfaction

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The study identified management and involvement factors related to husbands' and wives' financial satisfaction. A random sample of 110 dairy farm couples were interviewed. Multiple regressions, with t-tests, were used. Two risk management and three involvement factors were related to the husbands' or wives' financial satisfaction.

The purpose of this exploratory study was to identify financial management and decision and work involvement factors related to husbands' and wives' financial satisfaction. Such factors are throughputs in the Deacon-Firebaugh management model (1988) and were related to an evaluation of the output from management.

Related Literature

Gap theory explains the concept of satisfaction as the difference between one's desired and actual situation. Financial satisfaction has been measured in various ways; there is no consensus on measurement (Davis, 1986). Previous research has identified a number of financial resource input factors and demographics which are related to financial satisfaction. The few throughput factors identified to date include being a planner and decision-making equality (Heck, 1983).

Methods

The population studied was dairy farm couples in five Utah counties. A stratified random sample was drawn. Two-person interview teams conducted separate simultaneous interviews with husbands and wives in 1986. A sample of 110 cases was analyzed; the response rate was 71%.

Variables. Financial satisfaction was an index of satisfaction with financial security, family income, and level of consumption. Money management and risk management factors were individual questions; decision involvement and farm work involvement factors were indexes.

Analysis. Money management, risk management, decision and farm work involvement factors were entered in separate multiple regressions for husbands and wives. The regressions controlled for all other factors in the equations while testing the hypotheses that each individual factor was related to financial satisfaction. T-tests determined statistical significance. Probabilities of .10 or less were considered significant.

Sample Description. The mean age of husbands was 51.0. The modal category of education was high school graduation for husbands and vocational school or some college for wives. The mean number of children under the age of 19 living at home was 1.65. Over 60% of husbands and wives were not employed off the farm. Net 1985 farm income was low; 26% had a net loss and 36% netted less than $10,000. However, only 20% had net 1985 family incomes of less than $10,000. The mean debt/asset ratio was 33.

Results, Discussion, and Conclusions

In the husbands' equation, two risk management and two involvement factors were statistically significant. Those risk management factors were life insurance on both husband and wife, and health insurance coverage judged "good" in adequacy. Significant farm work involvement factors were runs errands, and, inversely, prepares taxes. Only one factor was related to the wives' financial satisfaction, involvement in day-to-day family spending decisions.

Discussion. As in previous studies, few throughputs related to financial satisfaction were identified. However, 2 risk management factors were related to the financial satisfaction of husbands. Three decision or work involvement factors were related, although one had an inverse relationship. Noninvolvement is contrary to managerial theory; perhaps such theory needs to address unpleasant work.

Conclusions. Basic money management activities were not related to financial satisfaction; perhaps this is why few people prepare budgets, keep spending records, and use these tools to control spending. Insurance purchase may be motivated by its relationship to financial satisfaction. Involvement in decision-making and work, two widely recommended managerial strategies did receive some support in this study.

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Factors Relating to Spousal Financial Arguments of Louisiana Urban Consumers

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This study was conducted to determine frequency of spousal financial arguments as related to use of financial management strategies, perceived financial satisfaction, and selected demographic variables.

Introduction

Financial arguments are likely to cause disruptive and stressful family conditions. The focus was to determine the frequency of spousal financial arguments of urban Louisiana consumers, with emphasis on relationships between frequency of arguments and a) utilization of financial management strategies, b) perceived financial satisfaction, and c) selected demographic variables.

Methodology

Questionnaires were mailed to Louisiana residents--115 from each of 7 cities--randomly selected from a Louisiana Department of Motor Vehicles list. From the sample of 224 consumers (36% of the deliverable questionnaires), 133 (59%) were married. The data were analyzed using factor analysis with varimax rotation, analysis of variance with covariates, and correlations.

Results and Discussion

Fifty-one percent of the married respondents indicated spousal financial arguments. Of these, 5% reported "usually" arguing, 22% reported "sometimes" arguing, while 24% reported "seldom" arguing.

Two strategies, goals/savings and record keeping, were negatively related to arguing, indicating that respondents using these strategies were less likely to argue about finances. Arguing increased with the use of apparel cost cutting, delaying tactics, and do-it-yourself techniques/allowance strategies (see Table 1). Underlying financial difficulties may have prompted the use of delaying tactics.

Table 1
Spearman Correlations Between Frequency of Spousal Financial Arguments and Utilization of Financial Management Strategies

Factor	Arguments rho
Goals and savings	-.281**
Record keeping	-.245*
Delaying tactics	.278**
Apparel cost cutting	.211*
Controlling expenditures	-.159
Financial statements	-.060
Do-it-yourself & allowance	.216*
Cost cutting techniques	.091
Communication regarding budget and goals	-.034

Note. N = 88. A negative estimate indicates a positive relationship since 1 = usually and 4 = never.
* $p < .05$
** $p < .01$

Financial arguing decreased as respondent's age increased (see Table 2). Spouses may have reached financial compromises during their younger years, resulting in less arguing in later life.

Table 2
Analysis of Variance with Covariates for the Relationship between Frequency of Spousal Financial Arguments and Selected Variables

	Frequency of Arguments			
Variable	df	MS	F	Est.
Age	1	8.86	11.42**	0.03
Sex	1	0.46	0.60	
Employment	1	0.32	0.42	
Education	1	0.26	0.33	-0.04
Size of household	1	0.57	0.73	-0.08
Income	1	0.20	0.25	0.02
Perceived income adequacy	1	0.67	0.86	0.12

Note. Error = 72. Estimates available for continuous variables only.
** $p < .01$

Financial satisfaction was related to spousal financial arguments ($rho = .269$, $p < .01$, $N = 120$). Less satisfied respondents had more financial arguments than than those who were more satisfied.

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Money Management Education...It Works

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Nevada Cooperative Extension's development and implementation of the Money Works Program was in response to the economic challenges facing families from changing employment opportunities, eroding purchasing power, income instability and lack of financial management skills.

The program is a series of seven two-hour classes, addressing values, goals and decision making, financial statements, spending plans, credit management, risk management, saving and basic investing, and retirement planning.

The target audience included families and individuals having limited knowledge and experience in managing their finances. Marketing efforts strongly encouraged partners to attend together. The workshops were limited to 20 participants in order to provide interactive instruction.

Program Objectives

Through participation in the Money Works Program, participants were to: strengthen their understanding of how values are related to family financial goals; develop a plan for reaching financial goals; develop and use financial management tools such as spending plans and financial statements; gain control over their financial situation; and develop the ability to analyze their debt situation, improve their management of credit and reduce their debt load.

Accomplishments

Prior to the time of impact evaluation, three classes had been conducted with a total of 44 participants. The six month impact assessment had a 64 percent response rate. The evaluation instrument included 29 questions, 21 of which assessed financial accomplishment which resulted from participation in the program. Don A. Dillman's Total Design Method (TDM) for mail surveys was utilized.

The assessmented indicated: 67 percent had prepared an income and expense statement; 62 percent had completed a net worth statement; 44 percent had developed monthly spending plans; 38 percent had initiated a planning calendar for periodic and seasonal expenses; 56 percent had improved their ability to balance spending with income; 96 percent were more in control of their finances; 52 percent strengthened their understanding of how values are related to family financial goals; 39 percent developed a plan for reaching financial goals; 81 percent analyzed their debt situation, reduced debt load, and increased their ability to manage credit.

Continuing Developments

Since the initial implementation of the Money Works Program, professionals from social service agencies, utility companies, casino human resource departments, and others have been invited to participate. Staff training and on-site employee workshops have also been conducted. This variety of approached has expanded the ability to reach audiences who are not traditionally information seekers and provided a blend of prevention and intervention programming.

Observation and evaluations indicated that offering all topics in the series resulted in participant information overload. The beginning level of skills needed to be learned and applied before participants were ready to move on to the next level.

Consequently, the program has been divided into two components, Money Mechanics and Money Works. Money Mechanics focuses on goals, values, decision making, spending plans, credit management, record keeping, financial statements, and saving. In Money Works, the emphasis is on risk management, investing and retirement planning.

Implications

The decade of the 80's has been described as the decade of rising income inequality. The decline of real wages among young workers is expected to continue. Consequently, programs such as Money Works, which have a proven impact on the financial management skills of program participants, will need greater accessibility.

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Women's Participation in an Employer-Sponsored Pension Fund

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Retirement strategies of women may differ from men's. Women are likely to have lower Social Security benefits due to weak labor force attachment and low wages, and are less likely to participate in an employer-sponsored pension fund (Woods, 1989). Women in professional occupations were more likely to contribute to a pension than women in non-professional occupations. Married women were less likely to contribute to a pension than single women (Price-Bonham & Johnson, 1982). While the purpose of the survey was to explore employees' participation in the university's pension plan, the results presented focus upon the female employee respondents.

A random sample of benefits-eligible faculty, professional/administrative/technical (PAT), and operating staff (OS) at a northeastern university were sent a short questionnaire through campus mail. One hundred forty-two or 46% of the respondents were female. Chi square test of independence and t-tests were used to determine if the participation by women in the pension system differed based on demographic and personal factors.

Thirty percent of the female respondents were faculty, 29% were PAT's and 40% were OS's. The average age was 40.9 years (sd=10.69) and ranged from 21 to 66 years. Median level of family income was $35,000-40,000 per year. The proportion of the total family income earned by the married women ranged from 7% to 100%, with a mean of 47.1% (sd=21.8).

The women differed significantly in their pension participation based on whether they were faculty, PAT, or OS (χ^2=20.703, p=.0004). A significant difference was also found by family income (χ^2=28.209, p=.0133), and by whether they or their spouses had an IRA, 401-k or 403-b plan (χ^2=8.807, p=.0320). No differences were found by marital status.

T-test revealed a significant difference between the ages of the participants and non-participants (t=5.20, p=.000). While there was no difference between the level of satisfaction with their own ability to manage money, there was a difference between the participants' and non-participants' satisfaction with their economic position (t=2.75, p=.007).

Because the literature indicated that married women might take a more lackadaisical attitude toward their own pension rights, several analyses were done using responses from only married respondents. The factors examined were spouse's employment, his pension participation, and the proportion of income earned by the women. There were no statistically significant results.

Confirming the findings of prior studies, three-fourths of the faculty and PAT women were participating compared with 43% of the operating staff women. These findings were similar to those of prior research. Women with higher incomes were more likely to be participating than those with lower incomes. When asked why they were not participating, the most frequent response was "could not afford it" (30%). Those who participate in the pension fund are likely to be more concerned about retirement in general, so it is not surprising that more participants also have an IRA or other pre-tax retirement savings plan than non-participants, confirming Woods' (1989) report. Contrary to the findings of Price-Bonham and Johnson (1982), married women were not less likely to be participating in the pension fund than single women.

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Educating Consumers to Take Control of Life and Death Health Care Decisions

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Preserving one's autonomy regarding health care decision making has become a complex issue facing individuals and society. Few resources exist which address the issue from a consumer decision making and family context perspective. Pilot study results of a newly developed self-study approach to the issue are shared.

Medical science has made major advances in life-sustaining technology, enabling individuals to survive illnesses and injuries that were once fatal. These advances create complex dilemmas and decisions regarding life and death for individuals, their families, health care providers, the courts, and society. What happens if an individual is unable to make or communicate his or her preferences or decisions regarding health or personal care? Who decides? How should such decisions be made and on what basis? The purpose of this poster is to highlight the development and impact of an educational resource designed to address this new and critical consumer and policy issue.

Autonomy, or the right to self-determination, is an ethical principle that is generally supported today as a basic consumer right in the health care system. While many consumers are familiar with the need to plan ahead regarding the use and distribution of their property and assets in case they are unable to do so, planning ahead to preserve one's autonomy regarding personal care is a new concept. The 1990 Cruzan Supreme Court case has raised awareness of the need for individuals of all ages to plan ahead for the possibility of not being able to make or communicate one's own decisions.

Planning ahead for decisions about personal care involves sorting out complex legal, ethical, spiritual, and economic issues. While there have been some consumer education efforts to help individuals understand legal approaches (e.g., living wills), few resources exist which address the issue from a broader decision making and family context approach.

Development of an Educational Resource

A four part family focused self-study series was developed by the Minnesota Extension service to help families: 1) gain an understanding of why health care decision making is an important issue; 2) recognize the advantages and disadvantages of various planning options; 3) identify the myths and facts about formal and informal planning options; 4) develop personal perspectives and opinions on health care decision making; and 5) increase skills in communicating about such a sensitive issue. The units which were mailed weekly contained reading material, definition of terms, discussion questions, and worksheets and activities.

Ninety families in four counties piloted the self-study. Anywhere from 1-5 family members participated, for an average of 1.8 individuals including spouses, children, parents, in-laws and siblings. Participants ranged from teenagers to 93 year olds; were primarily female (85%); and a majority had completed high school or some level of higher education. The evaluation process consisted of pre and post profiles of participants, written evaluations of each lesson, and phone interviews to evaluate content, methods, marketing, and assess planning and behavior changes.

Findings

As a result of participating in the self-study, family members: 1) made a point of discussing the issue with family members (73%); 2) decided to informally share viewpoints and preferences (68%); 3) learned about the viewpoints and preferences of those they are close to (63%); 4) improved skills in bringing up and talking about sensitive issues (59%); 5) decided it is important to make some formal plans (living will or Durable Power of Attorney)(59%); and 6) changed attitudes and opinions about health care decision making (54%).

Overall, ratings of both content and methods were consistently very high. The most valuable components of the self-study when rated on a 4-point scale were worksheets and activities and definition of terms, followed by the reading material and discussion questions. A majority of participants rated higher knowledge and comfort levels with the subject matter after weekly participation. An overwhelming number (95%) would encourage others to enroll in the self-study.

Suggested changes in content included more in depth definitions and discussion of medical terminology and options. More time between lessons was requested to allow time for sharing and working through activities.

Conclusions

While the content and methods of the piloted self-study have been important additions to a new consumer issue, varied educational resources need to be developed. Federal legislation passed in 1990 will require all health care facilities receiving Medicare or Medicaid funds to inform patients of their health care decision making rights. Consumer educators can offer much needed family and decision making approaches to such an interdisciplinary issue.

Effects of Different Income Sources on Food Expenditures

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A Tobit model is used to examine the impacts of income sources on food expenditures using BLS's Consumer Expenditure Diary Survey data in 1986. The empirical results show that four income components have significantly different effects on the expenditures of aggregate food, food at home, and food away from home.

The affordability of food to American households continues to be a public issue. There are concerns about adequate nutrition consumed by households and the coverage and high costs of food distribution and assistance programs (West and Price). Transfer payments and food subsidy programs are two major public assistance vehicles to help low income households improve their level of living especially on food consumption. In order to improve the effectiveness and efficiency of various social programs such as the food stamp program, policy-makers need to understand the effects of transfer payments, food stamp program, and selected household characteristics on food consumption.

A previous study of the impacts of various income sources on food consumption was conducted by Hymans and Shapiro (1976). They used a panel data from a five year period and found that various income sources had distinguished impacts on food consumption for different household groups. The magnitudes of marginal propensity to consume food from the food subsidy and transfer programs are higher than those from wages and other income sources. The evidence clearly implies that various income-supplement programs aimed at raising the level of food consumption for the poor was effective. The Hymans and Shapiro's study examined only total food expenditure. Since the component of food away from home has been increasing rapidly during the 1980's, it is important to investigate and compare the effects of various income sources on food consumption at home vs. away from home.

The main purpose of this study is to utilize the recent consumer expenditure survey data for analyzing the impacts of various income sources on total food expenditure, and on the expenditures for food at home and food away from home. The empirical results will provide valuable information for evaluating the effectiveness of the food subsidy and transfer payments programs. For the remainder of this paper, the theoretical framework will be first discussed. The data sources and statistical model are next described. We will then present the regression results, the estimated marginal propensity to consume, and the expenditure elasticities of various income sources. The paper ends with concluding comments.

Theoretical Framework

A demand function, derived from the maximization of a utility function subject to a budget constraint under neoclassical consumer theory, can be specified as:

$$Q = Q(P, X; \gamma(D)) \qquad (1)$$

where Q is quantity demanded of a commodity; P is a vector of the prices of all goods; X is household income (or total expenditure); and $\gamma(D)$ is a vector of unobserved preference parameters which are non-stochastic functions of a vector of observed household characteristics D. Household income in Eq. (1) is an aggregate amount which combines all income components. Various income components are considered to be homogenous in the neoclassical demand model.

In this study, we assume different sources of income may affect food consumption behavior differently. In order to test this hypothesis, Eq. (1) is modified and expressed as:

$$Q = Q(P, X_1, \ldots X_n; \gamma(D)) \qquad (2)$$

where $\Sigma X_i = X$, and X_i represents i-th income source. It is obvious that Eq. (2) is a more general model than Eq. (1). Equations (1) and (2) would be identical if various income sources have the same impact on consumption.

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For instance, if earned income and food stamp income have identical marginal propensity to consume for food, then these two income components can be, theoretically, combined together as an aggregate income in a demand function. One advantage of Eq. (2) is to permit us to examine whether or not various income sources have any differential effect on consumption.

Further, we assume that Q(.) is a linear function of observed prices (P), income sources (X_i), and demographic variables (D_i). The resulting linear model is expressed as:

$$Q = \alpha + \Sigma\alpha_i P_i + \Sigma\beta_i X_i + \Sigma\gamma_i D_i \qquad (3)$$

where α_i's, β_i's, and γ_i's are parameters to be estimated. Note that Eq. (3) can be considered as a demand function expressed in budget share or expenditure form. Typically, prices are assumed to be the same among households when using the household data in one period. However, in this study, we can relax this assumption because households can be identified on a monthly basis within the survey year of 1986. Therefore, we can account for the effect of price variation using monthly price data. The dependent variable is expressed in terms of expenditures (aggregate food, food at home and food away from home).

Data

The basic data needed for this study including food expenditures, prices and demographic characteristics of households were provided by the Bureau of Labor Statistics (BLS). Specifically, expenditure and demographic data were obtained from the BLS's 1986 Consumer Expenditure Diary Survey while the price data were the consumer price indexes published by the BLS. Note that all data can be identified on a monthly basis. Therefore, the data base is essentially household data spread over a 12-month period.[2]

Data in the diary survey were collected from a national probability sample of households designed to be representative of the national, noninstitutional population. The diary survey was completed by each sample consumer unit for two consecutive one week period. In this study, data on expenditures and income of various sources are all converted to a weekly basis within the month. Expenditure variables include total food expenditure, food at home, and food away from home. Income of a household is divided into four main components: (1) wages and salaries; (2) transfer income including social security benefits and public assistance or welfare; (3) value of food stamps; (4) other income including interests, pensions, dividends, unemployment compensation, etc. In addition, demographic variables such as race, region, family size and family composition are also included as explanatory variables.

Note that food expenditures in the diary survey refer to transaction cost, including excise and sales taxes for goods and services acquired during the survey reference period. The full cost of each purchase is recorded, even though full payment may not have been made at the time of purchase. It is also noted that expenditures incurred by members of the consumer unit while being away from home over night or longer are excluded from the diary survey.

The observations to be analyzed in this study are randomly selected from the public-use tape of the diary survey of consumer expenditure for 1986. Prior to the random sampling, households with negative before tax income were excluded. Table 1 shows a comparison of sample size and sample means between the BLS survey and the random sample selected for the study. The random sample represents the BLS sample very well. The sample size is 2,198 or about 23% of the households in the original survey. The sample mean of total weekly food expenditure is $62.37 per household consisting of $38.57 for food at home and $23.80 for food away from home. The sample mean of total weekly income is $489.42 per household consisting of wages and salaries ($370.64), transfer income ($35.28), food stamp income ($1.69) and other income ($81.81). The transfer income and value of food stamp accounted for only 7.5% of total household income in 1986.

Purchase vs. Consumption

The neoclassical demand model captures the relationship between consumption of a commodity and explanatory variables. Presumably consumption of goods yields utility. A major problem in demand analysis using cross-sectional data is that we only can observe purchases of commodities rather than their actual consumption.

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[2]BLS's consumer expenditure survey data are now available for the entire period of 1980-88. It would be desirable to extend this study to cover this period.

However, the act of purchasing does not itself yield utility. Therefore, for an empirical study, consumption and purchase are usually assumed to be the same. In the case of food, one would expect purchase to approximate real consumption very well because unlike clothing or other durables, food is a relatively perishable good and it is needed on a daily basis. There is a very high frequency of purchases for food. In fact, it is reasonable to assume that for most households, most food items are purchased on a weekly basis.

In the diary survey, expenditures were recorded during a period of one week. If the consumer unit did not purchase any food during that week, there would be no food expenditures. In our randomly selected sample, there are 91 observations, or about 4% of total sample, reported a zero-value for total food expenditure. Furthermore, 9.3% and 22.3% of observations have zero-level expenditure on food at home and food away from home, respectively. While households may spend food expenditures for only at home consumption or away from home consumption, it may be surprising to have zero expenditure for total food consumption. However, in the diary survey, zero food expenditures may occur in several situations. College students may pay their room and board together in the beginning of each semester. Some households may receive meals as a form of pay. Also, some households may just simply did not incur any food expenditures during the survey week. There are still other households who just did not record their food expenditures. Since the households with incomplete record of food expenditures can not be easily identified and deleted, all households with zero food expenditures remain included in the study.

In this study, purchase and consumption are assumed to be identical. A zero-level expenditure is considered as temporary non-consumption during the survey period. Therefore, we have a case of truncated dependent variable to deal with in estimation.

The Tobit Model

The appropriate technique for estimating a structural model with a limited dependent variable (i.e., non-negative constraint) is to use the censored regression model. This model was first introduced by Tobin (1958), and has became widely known as the Tobit model.

As discussed in Amemiya, there are several (five) types of Tobit model. The one used in this study is the standard Tobit model which can be specified as:

$$Z_i = X_i\beta + \mu_i, \quad i = 1,2,\ldots,n$$
$$Y_i = \begin{cases} Z_i, & \text{if } Z_i > 0 \\ 0, & \text{if } Z_i \le 0 \end{cases} \qquad (4)$$

where μ_i is assumed to have independent normal distribution with mean zero and variance σ^2. Z_i represents an index for the right-hand side variables and Z_i maybe positive or negative. In this study, Y_i is food expenditures while X_i is a vector of explanatory variables such as prices, income components and demographic characteristics of a household. The likelihood function of the Tobit model is given by

$$L = \prod_{Y_i=0} \Phi[1-\Phi(X_i\beta/\sigma)] \prod_{Y_i=1} \sigma^{-1}\phi\,[(Y_i - X_i\beta)/\sigma] \qquad (5)$$

where Φ and ϕ are the cumulative distribution and density function, respectively; $Y_i = 0$ denotes zero observations for Y_i and $Y_i = 1$ denotes positive observation for Y_i. There exist several estimation methods for the standard Tobit model (see Amemiya). In this study, we use the Probit Maximum Likelihood Estimator (MLE). Specifically, the Tobit likelihood function (5) can be rewritten as

$$L = \prod_{Y_i=0} [1-\Phi(X_i\beta/\sigma)] \prod_{Y_i=1} \Phi(X_i\beta/\sigma) \prod_{Y_i=1} \Phi(X_i\beta/\sigma)^{-1}\sigma^{-1}\phi[(Y_i-X_i\beta)/\sigma] \qquad (6)$$

Note that the first two products in (6) constitute the likelihood function of a Probit model and the last product is the likelihood function of the truncated Tobit model. The Probit MLE of $\alpha = \beta/\sigma$ is obtained by maximizing the log of the first two products. α is a vector of the normalized regression coefficients. Under this method, only the ratio β/σ is estimated, not β or σ separately. However, the normalized coefficients can be transformed into the regression coefficients (β) by multiplying all normalized coefficients (α) by the calculated standard error of estimated regression (σ).

One may gain further efficiency by using the Heckman's two-step estimator which extends the Probit MLE. However, the improvement of the Heckman's two-step estimator over the Probit MLE is unlikely to be as much as in the more complicated Tobit models with sample selection bias. We further note that the Probit MLE is not consistent under heteroscedasticity or nonnormality of the error term. These problems obviously require further investigation of the estimates presented in this paper.

We recognize that in using Tobit model, we essentially assume that zero expenditure means no consumption. This assumption is plausible for food at home and food away from home, separately. It is not entirely plausible for total food expenditures except in the case households receive meals as a form of pay. When the zero expenditure for total food consumption occurred because of infrequent payment as in the case of college students or simply infrequent purchases for some households, one may use the infrequency of purchase model (IPM) developed by Blundell and Meghir (1987). Instead of equating purchase as consumption as in Tobit model, the IPM works with the expected purchase and assumes expected purchases to be equal to expected consumption. Even though food does not typically fall into this category of infrequently purchased goods, the use of IPM merits further consideration in view of zero observations in the diary survey.

Regression Results

Two versions of Eq. (3) are estimated in this study. The first version (Version I) can be viewed as the Engel function which deals only with the relationship between expenditures and income (sources), holding prices constant and disregarding demographic variables. The second version (Version II) is based on the specification of a demand function expressing food expenditures as a function of food prices, income components and demographic variables. The Tobit models for these two specifications are estimated by the maximum likelihood estimation (MLE) procedure as described earlier. Under the MLE procedure, the normalized coefficients are estimated. For analyzing the quantitative impacts of explanatory variables, the original regression coefficient not the normalized coefficients should be used. However, for hypothesis testing, the normalized coefficients are tested. As can be seen in Eq. (6), the standard error of estimated regression (σ) can be easily used to transform the normalized coefficients to regression coefficients. For measuring the goodness of fit in the Tobit model, we use the usual measure of R^2 computed as the squared correlation coefficient between the actual and predicted values of the dependent variable.

The Tobit regression results for Version I are presented in Table 2. Four income components are found to have significant and different impacts on the expenditures of aggregate food, food at home, and food away from home. The only exceptions include food stamp income in the aggregate food expenditure equation and transfer income in the food away from home equation at the conventional significant level of $\alpha = 5\%$. Note that the food stamp income has a positive impact on food at home, but a negative impact on food away from home. This is consistent with our expectation. As households participate in food stamp program, they would more likely eat at home since they are less affordable to eat out.

The standard error of estimated regression for expenditures on aggregate food, food at home and food away from home are 46.98, 37.93 and 31.62, respectively. These estimated standard errors are used to obtain the regular regression coefficients which can be defined as the marginal propensity to consumer (MPC) on food. The magnitudes of MPC for food stamp income are the highest among four income sources. The MPC of food stamp income on aggregate food is 0.139 while they are 0.230 and -0.198 for food at home and food away from home, respectively. The MPC's of wage income, transfer income and other income are relatively lower than that of the food stamp income (ranging from -0.021 to 0.059). The R^2's for aggregate food and food away from home are both 0.19, but only 0.06 for food at home.

For estimating the food demand functions in Version II, various demographic variables such as family size, age of household head, number of children with age less than 18, number of household members with age greater than 64, race and region were included in many preliminary regression runs. Since many demographic variables did not exhibit much explanatory power, only the family size and race variables are included in the final model. Note that race is a dummy variable having a value of 1.0 when the head of household is black, and 0 otherwise. It is also noted that the prices of other goods and services are excluded in the model. This is because our main objective in this study is to test the hypothesis of homogeneous effects of various income sources on food expenditures rather than the estimation of a complete demand system for food or a system including food. A complete demand system along with other goods and services using the BLS's data was analyzed elsewhere.

Table 3 reports the regression results for Version II. The estimation results show some interesting findings: (1) the family size has strong positive impacts on food expenditures as expected; (2) the race has negative impacts on food expenditure in all three categories, but it is not significant for food at home; (3) price effects are unfortunately, insignificant and have a wrong sign in both the equations of food at thome and food away from home, perhaps as a result of limited price variation in the data; (4) the coefficients of food stamp income have a negative sign in the demand function but they are relatively insignificant for aggregate food and food at home. This reversion of signs after incorporating price and demographic variables may be caused by multicollinearity.

Comparing the results between Versions I and II, we also found that (1) the estimated MPC's of wage income, transfer income and other income on food expenditures are very similar between the two versions; (2) the R^2's improved from Version I to Version II for aggregate food expenditures (from 0.19 to 0.27), and food at home (from 0.07 to 0.20). However, the R^2's for food away from home remain the same between the two versions. These results would suggest that the expenditure of food away from home can be largely explained by income components while the expenditures for aggregate food and food at home are more sensitive to prices and demographic variables.

As discussed in Maddala (p.159), the expected values of dependent variable, E(Y), and the predicted probability of the dependent variable with values greater than a given limited value can be estimated. Using Version I, the expected value of the expenditure for aggregate food is computed to be $63.1 while it is $39.3 for food at home and $24.1 for food away from home. The estimated probabilities of expenditure greater than zero are 0.91 for aggregate food, 0.85 for food at home and 0.72 for food away from home. Similar expected values and probabilities were obtained in Version II.

Finally, the impacts of various income sources on food expenditure are evaluated using the estimated elasticities. Table 4 presents two sets of estimated elasticities for four income components based on the estimated coefficients obtained in Version I. The first set of elasticities is computed for Y or Z in Eq. (4).[3] The second set of elasticities is computed for E(Y).[4] The elasticities for E(Y) are lower because these elasticities take into account the probability of expenditures with a non-zero level. The results show that wage income has the highest and food stamp income has the lowest elasticities of Y and E(Y) among four income components in all categories of aggregate food, food at home, and food away from home.

Table 5 shows the comparison of the estimated MPC for aggregate food expenditure obtained from this study and those from previous studies. The present study yields a lower MPC of food stamp income than found in all previous studies. Our estimated MPC of total household income is within the range of the previous estimates. Since this study uses more recent data than those cited, the result would imply a decline in the MPC for food from food stamp income. This important evidence would reserve further study and verification.

Conclusions

In this study, we used the recent Consumer Expenditure Diary Survey data base to investigate the impacts of various income sources on the expenditures of aggregate food, food at home, and food away from home. A Tobit model was developed for estimating these effects with truncated data due

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[3]Following Maddala,

$$E(Z_i) = X_i\beta \text{ and } \frac{\partial E(Z_i)}{\partial X_{ij}} = \beta_j$$

The elasticity formula for the jth explanatory variable is

$$E = \beta_j \frac{x_{ij}}{x_i\beta}$$

[4]Again, following Maddala,

$$E(Y_i) = \Phi\left(\frac{X_i\beta}{\sigma}\right)X_i\beta + \sigma\phi\left(\frac{X_i\beta}{\sigma}\right)$$

and

$$\frac{\partial E(Y_i)}{\partial X_{ij}} = \Phi\left(\frac{X_i\beta}{\sigma}\right)\beta_j$$

The elasticity formula for the jth explanatory variable is

$$E = \frac{\Phi\left(\frac{X_i\beta}{\sigma}\right)\beta_j X_{ij}}{\left[\Phi\left(\frac{X_i\beta}{\sigma}\right)X_i\beta + \sigma\phi\left(\frac{X_i\beta}{\sigma}\right)\right]}$$

to a zero-value for some observations of the dependent variable in the sample. Two versions of Tobit model, an Engel curve and a demand function, were estimated.

The statistical results, based on Engel relationship, show that four income components have significant varying effects on the expenditures of aggregate food, food at home, and food away from home. Furthermore, the food stamp income is found to have a relatively higher positive MPC on the expenditures of aggregate food and food at home than other income sources. The results also show that the food stamp income has a negative effect on food away from home. In comparison with previous studies, this study, using a more recent data base, obtained a lower MPC of food stamp income. A decline in the MPC of food stamp income would have important policy implication and thus it reserves further study and verification.

These regression results would also suggest that it may not be appropriate to treat various sources of expenditure (income) the same for analyzing budget allocation in a demand model. In order to accurately estimate a single expenditure elasticity in a food demand system, data should be based on households with a similar pattern of income sources.

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Table 1. Comparison of Sample Size and Sample Means, 1986

Items and Variable	BLS Survey	A Random Sample for this Study		
		Total	Food Stamp Program: Parti-cipants	Food Stamp Program: Non-Parti-cipants
Sample size	9.600	2.198	132	2,066
Household size	2.56	2.54	3.14	2.50
Food Expenditure (weekly)	\$63.64	\$62.37	\$43.22	\$63.59
Food at home	39.77	38.57	35.17	38.79
Food away from home	23.87	23.80	8.05	24.80
Total Income (weekly)	493.45	489.42	139.31	511.79
Wage Income[a]	381.00	370.64	39.50	391.79
Transfer Income[b]	34.78	35.28	53.99	34.09
Food Stamp Income	1.72	1.69	28.21	0
Other Income[c]	75.95	81.81	17.61	85.91

[a]Includes wages and salaries.
[b]Includes social security payments and public assistance or welfare.
[c]Includes interest payments, capital gains, pensions, and unemployment compensation, etc.

Table 2. Regression Results of Engel Functions (Version I)

	Normalized Coefficients (10^{-3})			Regression Coefficients		
Explanatory Variables	Y1[a]	Y2[b]	Y3[c]	Y1	Y2	Y3
Constant	745.9 (19.08)[d]	588.8 (15.08)	145.5 (3.72)	35.04	22.334	4.60
Wage Income	1.20 (19.89)	0.72 (12.20)	1.13 (18.50)	0.059	0.070	- 0.021
Transfer Income	1.26 (3.64)	1.84 (5.31)	-0.65 (-1.81)	0.059	0.070	- 0.021
Food Stamp Income	2.95 (8.33)	6.07 (4.42)	-6.27 (-8.31)	0.139	0.230	- 0.198
Other Income	0.80 (8.33)	0.42 (4.42)	0.80 (8.31)	0.037	0.016	0.025
Standard Error of Estimate (σ)	46.98	37.93	31.62			
R^2	0.19	0.07	0.19			

[a]Y1 is total food expenditure.
[b]Y2 is expenditure of food at home.
[c]Y3 is expenditure of food away from home.
[d]Figures in parenthesis are asymptotic t-ratios.

Table 3. Regression Results of Food Demand Functions (Version II)

	Normalized Coefficients (10^{-3})			Regression Coefficients		
Explanatory Variables	Y1[a]	Y2[b]	Y3[c]	Y1	Y2	Y3
Constant	503.8 (0.37)[d]	-212.4 (-0.12)	127.72 (0.08)	22.43	- 7.45	4.02
Wage Income	0.96 (15.31)	0.40 (6.54)	1.06 (16.58)	0.05	0.01	0.03
Transfer Income	1.34 (03.89)	2.02 (5.82)	-0.68 (-1.88)	0.06	0.08	-0.02
Food Stamp Income	-4.96 (-1.77)	-4.21 (-1.49)	-6.28 (-2.07)	-0.22	-0.15	-0.20
Other Income	0.74 (7.75)	0.35 (3.62)	0.77 (7.94)	0.03	0.01	0.02
Price of Food	-0.45 (0.11)			0.02		
Price of Food at Home		8.43 (0.74)	-16.92 (-1.48)		0.30	-0.53
Price of Food Away from Home		-5.31 (-0.53)	14.27 (1.16)		-0.22	0.45
Family Size	23.41 (14.90)	29.07 (18.19)	4.16 (2.65)	10.43	10.19	1.31
Race[e]	-282.99 (-3.90)	-244.26 (-3.35)	-282.07 (-3.63)	-12.60	-8.56	-8.89
Standard Error of Estimate (σ)	44.53	35.05	31.52			
R^2	0.27	0.20	0.19			

[a]Y1 is total food expenditure.
[b]Y2 is expenditure of food at home.
[c]Y3 is expenditure of food away from home.
[d]Figures in parenthesis are asymptotic t-ratios.
[e]Race is a dummy variable, race=1 for black and race=0 for others.

Table 4. Estimated Income Elasticities by Income Sources (Version I)[a]

	Estimated Elasticities of Yi			Estimated Elasticities of E(Yi)		
Income Sources	Y1	Y2	Y3	Y1	Y2	Y3
Wages Income	0.339	0.259	0.561	0.299	0.211	0.396
Transfer Income	0.033	0.064	-0.031	0.030	0.518	-0.022
Food Stamp Income	0.004	0.010	-0.014	0.003	0.008	-0.010
Other Income	0.049	0.034	0.086	0.044	0.027	0.062

[a]All elasticities are computed at sample means.

Table 5. Comparison of Various Estimates of Marginal Propensity to Consume (MPC) for Food

Study	Data Base[a]	First Stage Partici-pation Model if applicable	Esti-mation Method[b]	MPC of Food Stamp Income	MPC of House-hold Income
Present study[c]	1986 CES-Diary (BLS)	Probit	MLE	0.139	0.054[d]
Devaney and Fraker (1989)[e]	1977-78 NFCS-LI (USDA)	Probit	FIML	0.212	0.069
Devaney and Fraker (1986)	1977 Puerto Rico NFCS	Probit	FIML	0.27	0.14
	1984 Puerto Rico HFCS	Probit	FIML	0.21	0.16
Smallwood and Blaylock (1985)	1977-78 NFCS-LI (USDA)	Logit	MLE	0.23	0.099
Chavas and Yeung (1982)	1973-73 CES-Low Income Households in Southern Region	NA[f]	SUR	0.37	0.126
West and Price (1976)	1972-73 Household Survey in Washington State	NA	OLS	0.297	0.05
Benus, et al. (1976)	1968-1972 PSID	NA	GLS	0.86	0.05
Hymans and Shapiro (1970)	1968-1972 PSID	NA	OLS	0.347 (urban) 0.541 (non-urban)	0.143

[a]CES=Consumer Expenditure Survey, NFCS-LZ=Low income supplement to Nationwide Food Consumption Survey, NFCS=Nationwide Food Consumption Survey, PSID=Panel Study of Income Dynamics.
[b]MLE=Maximum Likelihood Estimation, FIML=Full Information Maximum Likelihood, SUR=Seemingly Unrelated Regression, GLS=Generalized Least Squares, OLS=Ordinary Least Squares.
[c]Version I.
[d]The weighted average of the MPC's of the four income sources.
[e]These estimates were obtained from unweighted data.
[f]NA=Not applicable.