

THE COMPOSITION OF CONSUMER ASSET AND DEBT PORTFOLIOS:
A LANCASTERIAN APPROACH

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A Lancasterian approach to explaining the composition of consumer asset and debt portfolios considers the demand for portfolio characteristics that influence investors' utility beyond risk and rate of return. This research provides estimates of the expected return discounts associated with portfolio divisibility, liquidity, predictability, and costliness to examine the effect of household net worth and demographic variables on "expenditures" for portfolio characteristics.

INTRODUCTION

In much research on household portfolio composition, empirical models assume that individuals know that tradeoffs exist between risk and expected rates of return on their portfolios or between the ease and speed with which assets can be traded--liquidity--and portfolio return. Observed portfolios implicitly reflect consumers' willingness to trade expected return for the desirable properties that influence portfolio value. Rarely does our research take explicit account of the rate at which financial markets dictate that these properties are traded.

Toward the goal of offering a new approach to explaining portfolio composition, the research reported in this paper has two objectives. First, a general theoretical framework that combines Lancaster's linear characteristics model of consumer demand with modern portfolio theory is outlined. The consumer's portfolio selection problem is described in terms of the demand for a larger set of properties of financial assets and portfolios that influence their respective values. Second, and more importantly, this structure is the basis for an empirical model that addresses two questions that remain unanswered in the literature on portfolio composition:

What are the respective discounts from expected return for each of an expanded set of portfolio characteristics that include not only risk and liquidity but also divisibility and portfolio costliness?

And, how are investors' demands for portfolio liquidity, divisibility, predictability (of return), and reversibility (the absence of costs) influenced by the size of household net worth and by a set of household attributes that determine preferences?

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THE STANDARD APPROACHES IN THE LITERATURE

A review of the exhausting literature on household saving and investment behavior would uncover two salient approaches to the examination of portfolio composition. One line of research employs statistical models to examine the demand for the components (assets and debts) of household wealth. In the second line of work, where the characteristics of assets and

portfolios play important roles in utility maximization, the behavioral implications of theoretical models describe portfolio selection usually in terms of a single tradeoff between risk and expected return or liquidity and return.

The strictly empirical portfolio composition literature is replete with statistical demand function approaches of the "stock adjustment model" variety. (See Bryant (1986), Motley (1970), Watts and Tobin (1967) and Zick and Gerner (1983)). Each of these makes the implicit assumption that assets and debts are the ultimate objects of utility for the consumer.

The standard, formal theoretical structure for modelling the individual's portfolio selection problem is provided by the "modern portfolio theory" (Tobin 1958, Markowitz 1952). The expected return on the portfolio and the standard deviation of the return distribution--a measure of the risk of the portfolio--are the only properties of assets and portfolios that matter in determining the investor's utility. This "mean-variance" assumption also is the basis for the fundamental risk-return tradeoff that is required to characterize equilibrium in the model. Much empirical work on the demand for risky assets has its theoretical roots in this literature (for instance, Blume and Friend 1975).

One recent study of consumer investment behavior does adopt a multi-attribute approach that focuses on financial characteristics that are commonly addressed in this literature. In work that presents a similar theoretical structure as that adopted in this paper, Simon (1985) examines seven characteristics of Individual Retirement Account investments that are important in determining whether individuals are able to match actual IRAs to their desired IRA accounts. Convenience in purchase, familiarity to match actual IRAs to their desired IRA accounts. Convenience in purchase, familiarity with the depository institution, transaction costs, whether the account is federally insured, the stability or volatility of the interest rate, the flexibility in transferring or liquidating funds, and the required management on the part of the investor are hypothesized as the attributes that give rise to utility.

AN INFORMAL THEORETICAL STRUCTURE

A general theoretical structure casts the portfolio composition problem in terms of Lancaster's linear characteristics theory of consumer demand and modern portfolio theory. This model postulates the existence of a set of five portfolio characteristics that influence investors' utility (along with the level of present consumption) and offers hypotheses concerning the determinants of household preferences for these properties. A set of technical constraints by which individuals produce portfolio properties from a collection of assets (and debts) and the constraints imposed by an implicit market for portfolio characteristics that determine their shadow prices are also present in this structure.

First, assume that the household engages in a two stage utility maximization process. The investor's first decision is represented by a separable utility function which describes its choice for the respective levels of present and future consumption:

$$(1) \quad U = u(v(C_0; HHC_0), v(Q_k; HHC_p)),$$

where the subutility functions $v(C_0; HHC_0)$ and $v(Q_k; HHC_p)$ represent the present consumption and investment decisions respectively. Given the choice of the level of present consumption, C_0 , (determined by a set of investor preferences, HHC_0), the portfolio selection problem in the second stage involves allocating invested wealth, net worth, to a set of assets and debts to maximize a subutility function composed of portfolio characteristics that affect the portfolio's cash flows and future value.

The subutility function, $v(Q_k; HHC_p)$, postulates that the investor derives utility from a set of five characteristics, Q_k , given a set of household preference shifters, HHC_p . I hypothesize the relevance of a set of characteristics that are commonly addressed in the financial literature and that are described by Tobin (1958) as being the properties of assets that determine their value. The expected return on the portfolio, Q_{R*} , is the investor's estimate of the uncertain size of the future value of the portfolio and is composed of both yield--positive and negative cash flows from the assets--and return (appreciation or depreciation in

1. The liquidity of the portfolio, Q_L , is relationship between the length of time required to trade portions of the portfolio and the percentage of full value realized by the trade (sale). Portfolio divisibility, Q_D , is the size of the smallest dollar units in which the assets in the portfolio can be traded. The characteristic that embodies the standard risk element of the investment problem is portfolio predictability of return, Q_P . Finally, the costliness of the portfolio--the presence of transaction costs, taxation of asset returns, and other reductions from expected return--is translated into a utility-generating

characteristic, reversibility, Q_{RV} , which measures the extent to which full value of the portfolio is achieved net of these costs.

Preferences for these portfolio characteristics are hypothesized to be a function of three sets of investor characteristics that typically influence a household's accumulation objectives. First, life cycle variables common to most work on saving and investment behavior are included to capture the effect of the household's expectations of family events and conditions in the future that will lead to different demands for portfolio characteristics influencing future budgets given its present life cycle stage.

Lacking any strong theoretical or empirical support to predict the nature of relative demands over the life cycle, stages of the family life cycle (LCS1 through LCS5) can only be expected to account for significant differences in the relative demand for portfolio divisibility, liquidity, and predictability.

Household composition factors are relevant in light of the attention given to them as factors influencing the management of household budgets. Here, the model is concerned with the effect that household size (HHSIZE), the number of dependents of the investor (NDEPS), and the age structure of children (AGEOLD - age of the oldest child under 18), have on the choice between portfolio return and characteristics that cause diminutions in portfolio return but that provide flexibility in future budgets--liquidity and divisibility. At best, household size is expected to be an important determinant in explaining variations in households' relative demands for portfolio divisibility and liquidity. Also, the number of dependents of the investor will influence the demand of predictability of portfolio return and portfolio reversibility. Alternatively, a priori considerations of the large expenditure scenarios that are associated with older children--e.g., financing college education--would suggest that the demand for portfolio predictability will increase as the age of the oldest child increases.

Finally, a set of human capital characteristics are believed to influence relative demands for portfolio characteristics. Here, the model seeks to capture such effects as the ability of primary wage and salary earners to substitute spouse's employment income for portfolio income in periods of unemployment (UNEMP--both spouses unemployed and TWOWORK--both working) on their demand for liquidity (see Klein 1965 and Mincer 1966). Included in this set are variables that consider the effects of self-employment status (SELFEMP), the probability of unemployment of the household head (UNEMPR) on the demand for predictability of portfolio return, the effect of the level of educational achievement by the investor (HSED) and the retirement status of the household head (RETIRED) on the demand for more costless or reversible portfolios.

Portfolio composition is described in the Lancasterian structure by recognizing that households purchase assets (and debts)--the market goods over which savings are distributed--to form a portfolio--the consumption activity--that generates expected return, divisibility, liquidity, predictability, and reversibility--the objective and intrinsic characteristics that give rise to utility. Households produce portfolio characteristics according to five linear constraints represented by

$$(2) \quad Q_k = \sum_j a_j Q_{kj}, \quad (k=R^*, D, L, P, RV).$$

In this expression, a_j is the proportion of the household's net worth invested in asset j , and Q_{kj} is the relative amount of the k -th portfolio characteristic contained in asset j .

Estimation of the empirical demand relationships relies on the crucial assumption that investors are faced with a set of expected return discounts for utility-conferring portfolio characteristics that represent equilibrium in the implicit market for these attributes (see Rosen 1974). The shadow prices of characteristics, p_k , representing the change in expected return on the portfolio for each "unit" of the characteristic traded are generated by an "hedonic return function" of the form,

$$(3) \quad E(R_p) = r(Q_D, Q_L, Q_P, Q_{RV}).$$

$E(R_p)$ is the expected return on a market portfolio that represents the trading of all assets and debts in the economy and the resulting implicit market for portfolio characteristics. By assumption, atomistic investors observe the opportunity costs of their portfolio tradeoffs as being exogenously determined return adjustments. Associated with this relationship is a general "characteristic-return" hypothesis. As implied above, I expect that portfolio attributes with positive marginal utilities will be associated with discounts from expected portfolio return so that the signs of the partial derivatives of this function will be negative.

With a solution to the consumer's maximization problem, one might derive a set of implicit demand equations for portfolio characteristics. The general form of these relationships is given by

$$(4) \quad Q_k = q_k(p_k, NW; HHC_p),$$

where NW is the investor's net worth--the size of the portfolio, HHC_p is the vector of preference-shifters and all other variables are as defined above.

The Data

The 1983 Survey of Consumer Finances (Avery and Elliehausen 1984) contains information on the current value of assets and debts in the portfolios of 4,103 randomly-sampled U.S. households. I select a subsample of 2,526 husband-wife households to which the estimated demand equations apply. I restrict the model to this subgroup of the population in light of my hypotheses that concern the preferences of "married" households realizing that an individual's marital status, viewed in the long-run, may be determined simultaneously with the composition of his or her non-human wealth.

Twenty-one assets that comprise the examined portfolios of these individuals are listed in Table 1. Debts are included to the extent that they finance the ownership of a particular asset. First and second mortgages on single family homes, reflected in the net equity value of this asset, are the only debt items considered. Some assets and debts included in the 1983 Survey are excluded for theoretical and methodological reasons.

The Lancasterian model requires an objective measurement of the amount of each of the portfolio characteristics contained in each asset. Estimates of the expected return, $E(R)$, and predictability of each of the assets are generated from a time-series of 48 monthly annualized rates of return reported for the period of January 1980 to December 1983. Divisibility measures reflect the smallest dollar units of the asset that can be traded determined by either regulated minimum investment requirements or other institutional limitations. The housing asset carries a divisibility measure of \$1 since the asset is measured as the household's net equity position. Liquidity measures reflect the minimum amount of time the asset must be held in the portfolio or the minimum trading time required to realize full, current value. Finally, the reversibility measures attempt to estimate the percentage loss in full value due to personal taxation and trading costs.

Cardinal values for portfolio characteristics suffer from imprecise measurement. Recognizing their deficiencies requires that they be used only as a basis for generating relative quantities of the characteristics that are assumed to mitigate such errors in measurement. Table 1 contains a set of ordinal rankings of the assets on a five point (four for liquidity) scale. Assets containing relatively higher amounts of divisibility, predictability, and liquidity are assigned higher rank scores, five being the highest. The order is inverted for reversibility; assets are ranked according to their costliness. Five-point scales are used to maintain variation in the characteristics data for statistical efficiency and are assumed to

Table 1-Asset Rankings

	DIVIS.	LIQUID.	PREDICT.	REVERS.
Checking Accts. (regular, Now & money fund	5	4	5	1
MMDAs	5	4	4	5
MMMFs	5	4	2	5
Savings Accts (at all insti- tutions)	5	1	2	5
IRA/Keoghs	5	1	2	5
All Savers Cert.	2	3	4	1
Short term CD	1	3	3	5
Long term CD	4	2	4	5
U.S. Sav. Bonds	5	2	4	4
Treas. Notes	2	2	3	4
Munic. Bonds	2	4	4	2
Corp. Bonds	2	4	4	3
Common Stock	4	4	1	3
Taxable Mut.	3	4	1	3
Non-tax. Mut.	3	4	1	2
Land Contracts	1	2	4	4
Homes	5	3	3	2

reflect meaningful separations among (relative) cardinal measures. This second objective could only be accomplished for liquidity with a four-point scale.

Measures of the quantities (weighted rank scores) of each of the characteristics in each household's portfolio are calculated according to expression 3.

The Estimated Equations

Two adjustments to the general model are required to investigate the consequences of separability. Difficulties in the specification of the demand equations may exist when household characteristics that influence the choice of the relative portions of the consumption and investment value (net equity position) of owned homes are included in a model that assumes separability in this choice. To examine this issue, two sets of equations estimated: one reflects the inclusion of housing net equity in the portfolio, while the "preferred" model refers to a portfolio of purely financial assets.

The second modification recasts the characteristics demand equations into "expenditure" functions. Expenditures are interpreted as total expected return adjustments for the weighted relative quantity (rank score) of the characteristic held in the portfolio. The general expression for the system of equations is given by,

$$5) \quad P_k Q_k = q_k (NW, HHC_p) + e_k.$$

Results

Ordinary least squares estimates of two hedonic return functions appear in Table 2. The parameters of these equations support the characteristic-return hypotheses including the positive coefficient for reversibility which is measured as the relative costliness of the portfolio.

Table 2-Ordinary Least Squares Estimates of the Hedonic Return Function

Model	Housing Included	Housing Excluded
Constant	19.74 (.153)	18.09 (.165)
Divisibility	- .734 (.024)	- .971 (.026)
Liquidity	- 1.142 (.036)	- .915 (.035)
Predictability	- 2.389 (.016)	- 2.069 (.022)
Reversibility	1.095 (.015)	1.218 (.017)
N *	3,789	3,644
F value	13,803.17	9,012.82
Adjusted R ²	.94	.91
Highest Condition No.	30.05	20.35

* - the respective sample sizes reflect the elimination of observations with zero net worth.

Note that when housing equity is included in the portfolio, expected portfolio return discounts increase with relatively greater amounts of liquidity and predictability and decrease for divisibility.

Table 3 contains the ordinary least squares estimates of the four characteristics expenditure functions. The coefficients for each regression are interpreted as the change in the total expenditure on each characteristic with a unit change in the regressor.

The second equation for each characteristic contains the estimates that represent the "preferred" portfolio of financial assets that ex-

Table 3. CHARACTERISTICS EXPENDITURE EQUATIONS*

Model	EXDIV		EXLIQ		EXPRED		EXREV	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Constant	3.297 (.029)	3.932 (.077)	3.541 (.055)	3.308 (.086)	6.335 (.160)	8.018 (.156)	2.758 (.054)	3.667 (.089)
ADJNW	-.0008 (.00006)	-.0008 (.0002)	.0006 (.00007)	.0004 (.0001)	-.0016 (.0004)	-.0039 (.0004)	.0003 (.0001)	-.0004 (.0002)
HHSIZE	.006 (.0088)	-.074 (.023)	-.027 (.011)	-.038 (.017)				
NDEPS					.0003 (.066)	-.155 (.065)	-.053 (.018)	-.065 (.030)
AGEOLD					-.048 (.020)	.011 (.019)		
LCS1	.229 (.033)	.635 (.088)	.429 (.059)	-.023 (.092)	1.776 (.226)	.599 (.221)		
LCS2	.266 (.033)	.909 (.087)	.374 (.058)	.134 (.091)	1.430 (.209)	1.310 (.204)		
LCS3	.241 (.034)	.810 (.097)	.223 (.060)	.044 (.094)	.571 (.311)	.814 (.304)		
LCS4	.213 (.036)	.599 (.097)	.171 (.060)	-.097 (.093)	.122 (.326)	-.162 (.318)		
LCS5	.046 (.027)	.284 (.071)	.149 (.053)	-.216 (.084)	-.346 (.179)	-.693 (.174)		
UNEMP			.101 (.050)	-.316 (.078)			-.060 (.097)	-.047 (.161)
TWOWRK			-.046 (.023)	-.026 (.036)			-.043 (.044)	.183 (.074)
UNEMPR			-.0071 (.0051)	-.0008 (.0080)				
SELFEMP					-.348 (.192)	-.313 (.187)		
HSED							.255 (.048)	.687 (.079)
RETIRED							.185 (.094)	.473 (.157)

* - Equations 2,4,6, and 8 are the "preferred" portfolio models.

(standard errors in parentheses)

N = 2,526								
F value	60.67	28.90	17.37	8.23	30.31	41.82	8.13	19.77
Adjusted R ²	.142	.072	.061	.028	.095	.127	.017	.043

clude the housing asset. Comparison of the statistical significance and magnitudes of the parameters of this equation with those obtained for the portfolio that includes the housing asset reveal the consequences of violating the separability assumption. The model only permits interpretation of insignificant coefficients for the housing-included equations as the result of the dominance of the consumption value of owned homes with respect to the variable in question.

The most appealing results of the estimation concern the relative demand for portfolio characteristics over the family life cycle. Household expenditures on divisibility, on average, reach a relative maximum when they enter the middle stages of the family life cycle. The hypothesis that the stage of family life cycle will be a significant determinant of expenditures on portfolio characteristics is supported throughout the estimated equations with the exception of portfolio liquidity. Comparison of the alternative models suggests that life cycle factors become important determinants of the demand for liquidity when families view their net equity in single families homes as a component of their portfolios.

Expenditures on portfolio divisibility and liquidity decrease while expenditures on the predictability of portfolio return decrease as the number of dependents increases. In other words, additional members to a household dampen investors' demands for characteristics that reduce portfolio return but that are desirable for flexibility in the management of future cash flows. Disturbing results are obtained for some labor force participation variables. The negative coefficient for UNEMP, unemployment of both spouses, indicates that expenditures on (the demand for) liquidity decrease, a counterintuitive result. One explanation is that, depending on the longevity of unemployment, these households may have "sold" their most liquid assets for portfolio income that takes the place of earned income so that their remaining portfolios consist of less liquid assets.

Finally, portfolio divisibility, predictability, and lack of reversibility (costliness) appear to be inferior characteristics with respect to the size of the portfolio; portfolio liquidity, however, appears to be normal. A \$10,000 increase in household net worth (ADJNW) is associated with a decrease in the demand for these characteristics (expenditures) by the coefficients given in equations 2, 6, and 8, respectively.

Conclusion

Answers to the questions outlined at the beginning of this paper appear to be available when a Lancasterian approach is adopted to explain consumer portfolio composition. Highly significant estimates of an "hedonic return function" provide evidence that empirical contributions are available from an approach that

considers a fuller set of tradeoffs between expected portfolio return and the characteristics that influence return beyond the standard risk-return tradeoff.

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THE SUBJECTIVE ASSESSMENT OF FINANCIAL WELL-BEING AMONG FARMERS

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A multistage, interaction analysis of 506 cases gathered in the rural North Central Region during the fall of 1985 indicates that farmers are significantly less satisfied with their economic and financial situations than are nonfarmers. Reported recent change in the economic and financial situation has more effect on satisfaction for farmers than for nonfarmers, while the reported rating of the economic and financial situation has less effect for farmers than for nonfarmers.

The assessment of economic well-being has been the topic of a growing body of literature over the past 40 years. Over and over, researchers have found that subjective assessments of income adequacy and satisfaction are of equal or greater importance than objective assessments of income, wealth and level of living in the prediction of economic well-being and the quality of life.

The purpose of this paper is to explore the impact of being a farmer on satisfaction with one's economic and financial situation. The purpose is accomplished through a multistage analysis of data from rural areas and small towns in six states in the North Central region, one of the areas of the country hardest hit by the farm crisis. The data were gathered during the fall of 1985, a time when the crisis was at its worst.

The general hypothesis tested is that there is interaction between being a farmer and recent change in and rating of the family's current economic and financial condition in their effects on satisfaction with the economic and financial situation of the household. The effect of being a farmer occurs both directly and through differential effects on (1) whether recent changes in economic and financial well-being have occurred

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and (2) the rating of the current economic and financial situation.

Recent change in economic and financial situation is included because satisfaction with a condition is more a response to changes than to absolute levels of the condition. Rating of the current situation is included because reports of satisfaction relate more to the respondent's perception of a situation than to its objective level. The relationship of change and rating to satisfaction are seen as differing between farmers and nonfarmers because the macroeconomic events that reigned at the time of the survey in the North Central Region had greater effects for farmers than for nonfarmers.

THE ASSESSMENT OF ECONOMIC WELL-BEING

A theme running through the social indicators literature is that well-being should be assessed through the use of subjective indicators, such as reported satisfaction, reported rankings and reported comparisons with reference groups. Those assessments should be used in combination with objective indicators, such as wealth and income. Work in the early 1970s by Campbell, Converse and Rodgers (1976) and Andrews and Withey (1976) showed that the assessment of the quality of life requires that the researcher take into account both sets of indicators.

Strumpel (1976) hypothesized that the objective environment (including income, assets, socioeconomic status and employment opportunities), coupled with an individual's goals, aspirations and expectations, determines the individual's level of subjective well-being, which, in turn, is the primary cause of human behavior and societal discontent. Strumpel and his associates (Strumpel, Curtin and Schwartz, 1976; Strumpel, 1976; Katz, 1976) found support for the hypothesis in a series of studies of various populations.

Strumpel and his associates essentially "tested" Davis' (1945) hypothesis that it is the gap between standard and level of living that motivates human behavior. Individuals whose levels of living do not match the standards of living to which they aspire are likely to report dissatisfaction and a propensity to engage in behaviors that would reduce the gap.

The standard of living and the discrepancy between the standard of living and the level of living are culture specific, as noted by Cantril (1965): "The standards and expectations by means of which people judge their own development are relative to their experience" (Cantril, 1965:

311). Using Cantril's data, Easterlin (1973) showed that, both between and within societies, there is little association between the level of income and the level of happiness. Like Duncan (1975), who posed the question, "Does money buy satisfaction?", Easterlin concluded that it is not the level of income or wealth, but rather, how one compares oneself to a point of reference: the life situation of a reference group or the collective standards or norms of a reference group.

Subsequent studies of economic well-being have obtained similar findings. Cramer (1982) found a strong, but not perfect, relationship between economic welfare, a measure incorporating both current income and net worth, and attitudinal measures of income adequacy and satisfaction with income. The absence of a perfect correlation suggests that other factors are important in the prediction of income adequacy and satisfaction with income.

Slusher, Helmick and Metzen (1983) found that value concordance between husband and wife on the rankings of the importance of selected life domains (e.g., family, work, and financial security) is an important factor in the explanation of satisfaction with economic well-being. Their findings indicate that the relationship is stronger for wives than for the husbands in their sample of husband-wife families. Using the same data set, Mammen, Helmick and Metzen (1983) found that reported adequacy of income is a stronger predictor of satisfaction with the quality of life than is income.

Winter, Bivens and Morris (1984) showed the effect of subjective assessments of economic well-being and objective indicators of economic well-being on satisfaction with the household's financial situation. The strongest predictor of satisfaction is the respondent's rating of the household's financial situation; respondents who rate the household's situation as being at or near "the best for your family" also report high levels of satisfaction.

The statistically most significant predictor of the respondent's rating of the household's financial situation is recent change in that situation. Respondents who report recent improvement are more likely to rate their situation as good than those who do not. None of the measures of income and wealth included in that analysis is as important in the prediction of overall satisfaction with economic well-being as the reports of recent change and the rating of the situation.

Evidence from several studies, then, indicates the importance of the inclusion of the subjective attitudes along with objective indicators of wealth and income in the prediction of economic well-being. A recent study (Wilhelm, Iams and Rudd, 1987) provides evidence that it is not particularly important which member of a husband-wife couple provides the report of the attitudes. Their study of the agreement between husbands and wives indicates high levels of agreement between

spouses on subjective indicators of financial well-being.

THE IMPACT OF THE FARM CRISIS ON THE ASSESSMENT OF WELL-BEING

In his analysis of the farm crisis, Weagley (1985) notes that the farm crisis of the 1980s had its roots in the boom in the farm economy in the 1970s. Expanding world markets, coupled with acreage controls in the early 1970s led to huge increases in the prices of farm products. Weagley (1985:275) reports that, "By 1974, agricultural prices had risen 69 percent from their 1971 levels." He continues, "Farm families were elated by the trend in agricultural prices for, just as their baby-boom children were completing school and returning to the farm, the prospects for profitable farm expansion looked feasible." Consequently, many families mortgaged their current land holdings to expand the sizes of their farms in anticipation of family farm operations. Many of these families, particularly in the productive North Central Region, bought land at high prices; \$3000 an acre for prime farmland was not atypical.

The decline in world markets and subsequent decline in the prices of farm products caused land values to decline. Debt-to-value ratios for some farmers increased to more than 70% (Weagley, 1985:277). The North Central region had the highest percentages of farmers in trouble, defined as having a debt-to-value ratio of more than 40%. Even so, more than half (58%) of the farmers in the North Central Region had debt-to-value ratios of less than 40%. Hence, even at the height of the farm crisis, there were many farm families who were not experiencing extreme difficulties.

Still, by 1985, farmers in general felt worse off, even if they were not in danger of losing their land. The profits of the 1970s were a thing of the past (at least temporarily), and many "paper millionaires" whose assets were based on land values found themselves in severe difficulties.

The question addressed in this study is, "what is the effect of being a farmer (compared with nonfarmers) on subjective financial well-being?" The main research question is whether there is a difference between farmers and nonfarmers in (1) satisfaction with the economic and financial situation and (2) the effects of change in economic and financial situation and rating of the situation on satisfaction. The overall hypothesis tested is that, when socioeconomic and demographic variables are controlled, farmer status and the interaction of farmer status with change and rating have significant effects on satisfaction with financial well-being.

THE DATA

The sample consists of 506 households selected through area sampling methods to represent nonmetropolitan communities with populations of less than 20,000 and open-country residents in the six-state area. The data were gathered in the fall of 1985 by trained interviewers administering an interview schedule to the head of the household in male-headed or female-headed households or to either adult in a couple-headed household. The average interview lasted approximately one hour.

THE VARIABLES

Satisfaction

The respondents were asked, "Please tell me how satisfied or dissatisfied you are with your economic and financial situation." The responses ranged from 1, "extremely dissatisfied," to 7 "extremely satisfied." More than one-third (35%) gave responses between 1 and 4; 22% responded "somewhat satisfied" (category 5), 36% responded "satisfied" (category 6), and the remainder (7%) indicated "extremely satisfied." With the mean at 4.79, the median 5.0, and the modal category at 6, it is clear that this distribution is skewed to the right (Table 1).

TABLE 1. Means and standard deviations of all variables used in the analysis

<u>Variable</u>	<u>Mean</u>	<u>Standard deviation</u>
1. Age of the head of the household	50.73	18.83
2. Education of the head of the household	11.90	2.93
3. Household size	2.69	1.41
4. Annual household income, 1984	22242.39	15407.64
5. Couple-headed household (proportion)	.73	--
6. Female-headed household (proportion)	.17	--
7. Farmer (proportion)	.24	--
8. Recent change in economic financial situation	3.23	1.00
9. Rating of economic and financial situation	4.31	1.37
10. Satisfaction with economic and financial situation	4.79	1.56

Rating

A version of Cantril's (1965) self-anchoring scale was used to assess the respondent's rating of the household's economic and financial situation. Each respondent was asked to "Imagine that number 7 is the very best situation you can think of and number one is the very worst situation you can think of. Now, please tell me where each of the following situations for you and your family are on the scale from 1 to 7." Almost one-fourth of the respondents (24%) indicated numbers between 1 and 3; one-third responded with the middle category (response 4), and the remaining 43% indicated responses between 5 and 7. The mean of the variable is 4.3, and the median value is 4 (Table 1).

Change

Change in economic and financial situation, asked the respondent to assess whether the economic and financial situation for the household had "gotten better or gotten worse during the past five years." The potential responses were "gotten much worse" (5%), "gotten worse" (19%), "unchanged" (32%), "gotten better" (36%), and "gotten much better" (8%). The mean is 3.2 and the median is 3.0 (Table 1).

Farmer

The household was classified as being engaged in farming if income was received during 1984 from the rental of farm land, or if income was received from farming, even if the income in 1984 was negative. The variable is a dummy variable, with farmers (24%) coded 1 and all others 0.

The Interaction Variables

To test the hypothesis that being a farmer makes a difference in one's reported attitudes about the household's economic and financial situation, the farmer variable was used. In addition, two interaction variables were created by multiplying the assessment of change and the rating of the economic and financial situation by the dummy variable representing farmers. The purpose of these variables is to test whether their effects on satisfaction differ between farmers and nonfarmers. Nonfarmers receive a 0 on each interaction variable, while farmers receive their rating on each variable.

The Control Variables

Age of the head of the household is the age in years of the household head; in couple-headed households, this variable represents the age of the husband. The mean age is relatively old, at 51 years (Table 1), but not surprising given that the sample represents the rural North Central Region. The education of the head of the household is the number of years of schooling completed, and is slightly less than 12 years (Table 1). The modal category is 12 years of education.

Household size measures the number of persons living in the household at the time of the

interview. The modal category, with 37% of the cases, is two, while one-fifth of the sample lives alone. The remaining 44% live in households with three or more persons. Total household income was assessed by asking whether the respondent's household had received income from a list of specific sources. If income was received from a particular source, then the respondent was asked the amount from that source. The amount from all sources was summed to yield the annual household income. The mean income for the sample, \$22,242, is larger than the median income of \$19,296.

There are three categories of type of household: couple-headed households (the most prevalent type with 73% of the households in this category), female-headed households (households headed by a woman without a male partner), 17%, and male-headed households (households headed by a man without a female partner), 10%. Three dummy variables were created to represent the different household types. The male-headed household is the omitted category in the regression analyses.

THE ANALYSIS

Preliminary correlation and regression analyses indicated potential problems with multicollinearity among the explanatory variables. First, the psychological variables of recent change and rating are highly correlated (Table 2). In addition, the two psychological variables are not independent of the control variables. Had the assumptions of a recursive model been tenable, the latter would not have been such a problem. Because interactions were expected, a recursive model was not deemed appropriate.

TABLE 2. Correlation matrix

	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>
Age	-.37*	-.43*	-.19*	-.15*	.22*	.03	-.24*	.04	.10*
Educatt'n	.19*	.39*	.10*	-.08*	-.01	.18*	.18*	.07*	
H'hold size		.30*	.54*	-.36*	.04	-.04	.18*	-.09*	
Income			.39*	-.31*	.09*	.25*	.38*	.24*	
Couple headed				-.74*	.08*	.01	.08*	.00	
Female headed					-.12*	.03	-.05	-.01	
Farmer						-.13*	-.05	-.00	
Recent change								.54*	.58*
Rating									.68*
Satisfaction									--

*P<.10

To overcome the two problems of multicollinearity, the satisfaction model and the rating model were tested using instrumental forms of the recent change and rating variables. The instrumental variables are the residuals representing the variance not associated with the control variables and the farmer variable, in the case of recent change, or the control variables, the farmer variable and the residual of recent change for the rating variable. The instrumental variables were used in the creation of the interaction variables previously described. This multistage procedure has apparently resolved the main problems with multicollinearity.

First, the farmer variable has very weak zero-order correlations with other variables. Its highest correlation with any of the control variables is -0.12 and it has a correlation of -0.15 with recent change but that is removed in the instrumental variable format.

Second, recent change and rating have a zero-order correlation between them of 0.54 but that is removed in the instrumental variable format. Each of those variables has a correlation with satisfaction that is substantial but those presumably reflect their causal effects.

Third, the correlations among the control variables range from -0.75 to 0.54 but these variables are treated as a block. The individual coefficients are not important to the analysis.

Fourth, the interaction variables have only moderate correlations with the parent variables (recent change and its interaction, 0.54 ; rating and its interaction, 0.49). Farmer continues to have no correlation because of the multistage form of the analysis.

Fifth, the correlations of the control variables with the instrumental variables are, of course, zero in each case. The correlations of the control variables with the interaction variables are very small, ranging from -0.11 to 0.08 .

FINDINGS

Correlation Matrix

The correlation matrix (Table 2) indicates few surprises among the zero-order correlations of all the variables. Recent change, rating, and satisfaction are positively correlated, with coefficients of $.54$, $.58$, and $.68$. Farmers are older than nonfarmers, are more likely to be in couple-headed households and less likely to be female-headed households than are nonfarmers. Farmers are more likely than nonfarmers to report higher levels of income.

That there are two categories of farmers, in the sense that some suffered severe setbacks during the crisis while others who fared quite well, can be seen in the pattern of the zero-order relationships between being a farmer and the three dependent variables, the assessment of recent change, the rating of the economic and financial

situation, and satisfaction with the economic and financial situation. Farmers are more likely than nonfarmers to report that their economic and financial situation has gotten worse, but the correlation coefficients between being a farmer and the rating and satisfaction are not significant, indicating an absence of relationship. One potential interpretation is that, although their situation declined, a portion of the farmers do not rate their situation as bad, nor are they dissatisfied with that situation. Other farmers, of course, rate their situation as not particularly good, and they indicate lower levels of dissatisfaction; hence, the nonsignificant correlation coefficients.

Change in Economic/Financial Situation

Being a farmer is one of the significant predictors of reported change in the financial and economic situation (Table 3). The coefficient is negative, indicating that farmers are more likely to report that their economic and financial situation declined in the past five years than are nonfarmers. Other variables with significant relationships to the assessment of change are age of the household head, household size, and household income. Older people are more likely than younger people to report that the situation has gotten worse, and those who enjoyed higher incomes in 1984 are more likely to report that their economic and financial situation improved in the past five years. Larger families more likely than smaller families to report that their financial situations have gotten worse.

TABLE 3. Regression of the change in economic and financial situation on the control variables

Variable	B	SE B
Age of the household head	-0.012*	0.003
Education of the household head	0.005	0.016
Household size	-0.070*	0.039
Household income (0000s)	0.179*	0.032
Couple-headed household	-0.137	0.162
Female-headed household	0.032	0.170
Farmer	-0.377*	0.098
Constant	3.775	
R ²	0.147	
Adjusted R ²	0.135	
degrees of freedom	7 & 498	
F-ratio	12.276	
Probability	<0.001	

*P < .10

Rating of the Economic/Financial Situation

In Table 4, an instrumental form of the recent change variable is included in the regression, rather than the raw recent change variable. The instrumental variable was created by the regression reported in Table 3, and is the residual, the variance in recent change not explained by the control variables.

TABLE 4. Regression of the rating of the economic and financial situation on recent change and the control variables

Variable	B	SE B
Age of the household head	0.007*	0.003
Education of the household head	0.035*	0.019
Household size	0.114*	0.045
Household income (0000s)	0.372*	0.037
Couple-headed household	0.033	0.186
Female-headed household	0.061	0.196
Farmer	0.269*	0.113
Recent change (residual)	0.696*	0.052
Constant	3.059	
R ²	0.402	
Adjusted R ²	0.392	
degrees of freedom	8 & 497	
F-ratio	41.715	
Probability	<0.001	

*P < .10

The residual of recent change has a positive effect on the rating of the household's economic and financial situation. Respondents who reported an improvement in the household's economic and financial condition in the past five years are likely to rate their current situation toward the high end of the scale. Being a farmer has a significant negative effect on the rating. This effect is separate from the effect of the residual of the recent change variable.

Other significant predictors of the rating are household income, household size, and age and education of the household head. Older people and those with higher incomes and higher levels of education are likely to report high ratings of their economic and financial situation. Respondents from larger households are less likely than those from smaller households to rate their economic and financial situation as good. With an R² of .39, the overall model is quite good for the prediction of the respondent's rating of the household's economic and financial situation.

Satisfaction with Economic/Financial Situation

It is obvious from Tables 3 and 4 that neither recent change in nor rating of the economic and financial situation are independent of the control variables. And they are not independent of each other. Therefore, the analysis of satisfaction includes instrumental variables with the dependence on the control variables, farmer, and on each other removed. The residual of recent change is the product of the regression reported in Table 3; the residual of the rating was produced by the regression reported in Table 4. The interaction variables were constructed by multiplying the farmer variable by each of the instrumental variables.

The prediction of satisfaction with the household's economic and financial situation is quite strong with an R^2 of .55 (Table 5). The significance of the farmer variable indicates that farmers are less satisfied than the nonfarmers when recent change, rating, and the socioeconomic and demographic variables are controlled.

TABLE 5. Regression of satisfaction with the economic and financial situation on recent change, rating, interactions, and the control variables

Variable	B	SE B
Age of the household head	0.009*	0.003
Education of the household head	0.015	0.018
Household size	-0.125*	0.044
Household income (0000s)	0.313*	0.036
Couple-headed household	-0.214	0.181
Female-headed household	-0.165	0.190
Farmer	-0.327*	0.110
Recent change (residual)	0.864*	0.060
Rating (residual)	0.590*	0.050
Farmer x recent change (resid'l)	0.282*	0.112
Farmer x rating (residual)	-0.186*	0.103
Constant	4.024	
R^2	0.563	
Adjusted R^2	0.553	
degrees of freedom	11 & 494	
F-ratio	57.781	
Probability	<0.000	

*P <.10

The interpretation of the relationships between (1) the residual of recent change and satisfaction and (2) the residual of rating and satisfac-

tion is straightforward. Those who report an improvement in their situations and those who rate their situations as relatively good are likely to report high levels of satisfaction.

The significant effects of the interaction variables mean that farmers differ from nonfarmers in the effect of recent change and of rating on satisfaction with the economic and financial situation. For farmers, the effect of recent change on satisfaction is stronger than it is for the nonfarmers. This result indicates that equal differences in recent change for farmers result in greater differences in satisfaction than for nonfarmers. The interpretation of the second interaction term is the opposite because the sign is negative. Equal differences in rating result in smaller differences in satisfaction for farmers than for nonfarmers. In other words, recent change for farmers, either a positive change or a negative change, has more effect on satisfaction than it does for nonfarmers. Similarly, the rating of the household's economic and financial situation has less effect on satisfaction for farmers than it does for nonfarmers.

CONCLUSIONS

The pattern of findings suggests that, because the crisis in the Midwest is seen primarily as a crisis in agriculture, farmers are likely to have stronger subjective and affective reactions to the situation. This pattern can be a result of (1) a heightened sensitivity to change when viewed as crisis related, and (2) the possibility that change had greater consequences for farmers than for nonfarmers under the conditions that existed at the time. As a result, recent changes (either improvement or its opposite) affect satisfaction greatly for farmers. The implications are that fairly deep psychological reactions are occurring among farmers.

The ratings by farmers of their situations are less closely related to their satisfaction than is the case for nonfarmers. That result indicates that a less rational process of reaction to economic and financial conditions is occurring on the part of farmers. The evidence of such a process is especially notable in the light of the fact that farmers may not have been less well off than others. They, on average, experienced more negative change and then reacted emotionally. The reason may be the development of the situation into a socially-defined, media-communicated agricultural crisis.

Our findings suggest that the psychological consequences of the agricultural crisis are as profound as its economic ones. The implications for researchers and practitioners include the need to develop and monitor both economic and psychological indicators to assess the depths of a crisis as well as subsequent recovery from that crisis. The most recent crisis has been the farm crisis; other crises will demand the same sort of assessment.

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EXPANDING INTERNATIONAL CONSUMER RESEARCH: WHY AND HOW

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In attempting to answer at least in a schematic way the grand questions raised by the title, this paper is concerned with what may be called the 4M issues:

Matter -- what to study, and why

Methods -- how to do the research

Management -- who conducts the research, and

Money -- how the research may be financed

The development of these concerns raises at least seven challenges to the consumer research profession and to the panel discussion following this presentation. These challenges are restated in the summary of the paper.

SETTING THE STAGE: DEFINITIONS

What do we mean by International Consumer Research? Here the noun consumer research is taken to mean research on consumer ecology, that is, on the interaction of consumers (and groups of consumers) with the environment, and most notably the market environment, in which they find themselves. The term interaction is sufficiently broad to encompass not only strategic but also plain behavioral as well as attitudinal phenomena. The market environment, in turn, is affected by--and also affecting--the stakeholder groups influencing consumer welfare, notably business, government, media and the educational establishment in addition to consumers themselves. It is also affected by, and affecting, the economic, social, political and technological infrastructure in which it is imbedded.

The adjective international suggests at least four centers of possible relevance:

1) Theory and methods development for international research on consumer ecology. Evidently, to some extent it is accidental in what nation(s) new models and tools for such research are developed. It is equally clear, however, that chances are more than average that they will be developed in nations with more than average global awareness level, such as, say, the Netherlands and Scandinavia, as the record will bear out. Not nearly close to the top ranking in global awareness the U.S. is doing surprisingly well in this area, in large part no doubt due to the continuing influx of scholars from other countries.

2) Country studies. This term refers to studies limited in scope to only one country--such as advertising attitudes in Bangladesh or an analysis of public consumer policy in the Bundesrepublik. Challenging fellow panel members, let me say I believe that most country studies only incidentally

and tangentially are to be viewed as international research (Challenge No. 1).

3) Comparative studies, trans-national or cross-cultural. We will discuss this type of research in some detail in a moment.

4) Global or inter-nation interface studies. Examples might include the effect of EEC consumer policy on consumers in member countries, the infant formula episode, global standardization of consumer goods, the effect of trade restrictions on consumer welfare.

At all levels one may think of both positivist research, i.e., essentially fact-finding studies of consumer behavior and policy, and more normatively oriented studies aimed at consumer rights and responsibilities or generating consumer policy conclusions or implications. By consumer policy we understand organized measures to promote consumer interests. The total range of consumer policy comprises consumer information, education, and protection. Consumer policymakers include consumer organizations, other citizen groups, business, government, educational institutions and the mass media (Thorelli and Thorelli 1977).

MATTER AND METHOD

Why is it essential to expand international consumer research? Perhaps the most pungent reason is that of testing the external validity (in a literal sense!) of single-culture-centered research. We are faced with a situation where the external validity of likely more than fifty percent of the thousands of articles and books in the general consumer behavior and policy area is, at best, questionable. One may venture that this observation probably also holds for the scores of papers presented at this conference. (We may note in passing that not a single presentation seems to be based on international consumer research as defined here.)

There are other reasons. Some things just cannot be studied in the U.S., such as consumer adjustment to hyperinflation (Johnson 1986), or consumer ecology in socialist economies (Thorelli 1982). Such research may also be practically useful due to its private or public policy implications. Technology transfer of public consumer policies may well be hazardous unless environmental differences are taken into account (Thorelli 1981). The U.S. is keenly interested in Third World development, but thus far has failed to see that consumer emancipation is a likely prerequisite to economic development (Thorelli and Sentell 1982). We must blame ourselves for the lack of data and public informedness in this area. International consumer research is also bound to be useful in the building of a general science of consumer ecology.

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In the States we also need to think about our competitiveness. A major reason for our losing out in world markets in this decade of toughening competition has been our lack of understanding of overseas consumers and markets. Our academic leadership in the entire consumer research area is increasingly being challenged by European scholars. In the area of industrial buying the International Marketing and Purchasing Project comprising five European nations is just eons ahead of anything coming out of our own shops. International consumer policy research is largely a European domain, as manifested by the Journal of Consumer Policy, published in Stuttgart.

Among additional reasons one stands out: frequently there is no better way to attain a deeper understanding of one's own culture than to compare it with another one, or preferably several of them!

What methodology should be used in international consumer research? Turning around a tired macho fable we are reminded of the woman who was asked, How is your husband? Her retort was, compared to what? It would be tempting to explore her answer in detail, but it might also lead us astray--as it might indeed the woman herself! Suffice it to say that the anecdote points to the crucial importance of comparison in our search for truth. Long practiced in such disciplines as economics, law and literature and, more recently, business administration, the comparative method has been applied only rarely in consumer research at the international level. As such research develops beyond its present modest stage, we may safely predict that comparative methodology will move to the forefront. This is why we are placing method ahead of matter in this discussion.

As Boddewyn (1969) observes in the excellent introduction to his book on comparative marketing, "Comparison deals with similarities and differences, and the comparative approach consists of their systematic detection, identification, classification, measure, and interpretation." (On the last point many comparative studies are weak.) Comparison is based on the recognition that many phenomena, for instance, grocery shopping, are well-nigh universal, yet take particular forms and patterns in different times and places. In a classic article Reavis Cox (1965) defined three categories of comparative results: "universals," "limited generalizations," and "specific differences." Grocery shopping in urban areas may be universal, but the generalization that most of it takes place in stores is a limited one (indeed, in a majority of countries grocery shopping may still occur in open markets). Specific differences present a special challenge. If their possibility is overlooked in the research design they may well not be uncovered at all, or they may confound the results; in either case their neglected existence will make the overall comparison less meaningful, if not outright misleading.

In extending a study of grocery shopping in Thailand to the People's Republic of China the author was fortunate enough to postulate that the coexistence of state and private food outlets in the PRC might be reflected in some specific differences in the comparison of consumer satisfaction in the two

countries. Thus, while overall satisfaction was somewhat similar in the two environments, an overwhelming majority of PRC customers thought that produce was fresher and service more friendly in private than in state stores (Thorelli and Sentell 1982; Thorelli 1983). Anticipating the possibility of such a result we had added the hypothetical control question, Assuming that there were only one type of store, which type would you prefer? To our surprise, an equally overwhelming majority opted for the state store. A plausible but speculative explanation: state stores had a monopoly on rationed items at the time, such as rice and cooking oil. (This, on the other hand, was a "detail" overlooked in our questionnaire!)

This example was given as it illustrates our Challenge No. 2: More attention should be given to the "specific differences" between cultures, or we run the risk that comparative research loses much of its meaning. In this area qualitative approaches have an indispensable role to fill next to quantitative tools. Our aim must be explanation (or even prediction) rather than merely fact-finding.

What subject matter should be studied? Of course, there is no limit to the number of conceivable topics. The list below is intended to serve illustrative purposes only:

- the extent of consumer choice opportunity, and its determinants;
- the extent of restraints on the freedom to consume, and its determinants;
- consumer strategies;
- time allocation;
- the household as firm;
- consumer expenditures (and savings);
- consumer satisfaction and aspiration levels;
- role of social approval and pressure in buying and consumption (gift giving, fashion, status, etc.).

Even given the subject matter the issue must be faced at what level of aggregation the research should set in: national societies at large or national or international subcultures such as ethnic minorities, senior citizens, Information Seekers.

Clearly, both as individual researchers and as a profession we face Challenge No. 3: What should the priorities be regarding subject matter and level of aggregation in international consumer research?

MANAGEMENT AND MOTIVATION

Other circumstances equal, native researchers have a great differential advantage in conducting research in their own milieu. At the conceptualization stage they can also be counted on to identify key "special differences" in their own cultures which will need to be taken into account. Prevailing on colleagues in other countries to do their parts in comparative research also can be a tremendous saving of both time and travel and living costs. These gains are generally counter-balanced to some extent by communication problems. It must be kept in mind, however, that overseas researchers often have limited access to funds and, of course, will expect due recognition as partners in the

project. Building a project-oriented international network is generally an exciting venture in itself. Yet American researchers still need to be reminded that the community of scholars is boundless: it is truly global. Thus we face Challenge No. 4: Networking to build an international team of researchers to conduct your project.

The relative dearth of international consumer research suggests, however, that a greater problem is that of motivating our researchers to harness their talents in this direction in the first place. The effort to generate requisite motivation must proceed along a broad front. There is a crying need to internationalize our two major consumer research organizations, ACCI and ACR. The ACCI Committee on International Affairs has done yeoman work, but in an inhospitable atmosphere. As Board Member of ACR in the last three years, I volunteered to boost the international contacts of that organization, which regularly issues proclamations about its pending internationalization. There was, however, close to zero backup when it came to going from sounds to deeds. Indeed, I am aware of exciting international program proposals for ACR conventions which have been turned down as not being in the mainstream of programmer personal interests. Not only do we need more international research content in our programs, we must also somehow bring at least some of the more prominent European researchers here for our conventions. This is not just networking--we have a lot to learn!

Next we need to push the snail-like internationalization of U.S. universities. This means internationalization of standard courses not now having international content--especially courses aimed at doctoral students. More faculty and student exchange programs with overseas. Too, it means spiritual and monetary support for international research, and a climate of evaluation of such research which recognizes the special problems of coordination and communication inherent in international work. It means our stimulating interest in and respect for the professional journals specializing in international consumer and marketing research, such as the Journal of Consumer Policy, International Marketing Review and the Journal of Global Marketing, plus several other relevant journals published in Europe. The Journal of Consumer Affairs and the Journal of Consumer Research; and other domestically oriented journals must be reoriented to a broader perspective. Challenge No. 5: Internationalize professional groups, universities, and journals to stimulate interest in international courses.

MONEY

Not all international consumer research needs extra money. For example, a study relating the government surveys of consumer expenditure and savings patterns which have been made in well over 20 nations to degrees of economic development and other presumably relevant environmental explanatory variables--a type of research that may be undertaken in any well-stocked U.S. university library. Nevertheless, it is true that international research tends to require more funds than corresponding do-

mestic studies, if nothing else due to the necessity of replicating the research in at least one other culture. Travel and living, translation and communications costs are typical resource drains. In addition, sometimes it is necessary to provide some kind of subsidy for colleagues abroad (especially in the Third World) engaged as partners in their respective countries, whether this be in the form of salary supplement, employment of assistants, or the payment of survey costs.

How are such funds to be obtained? The Midwest Universities Consortium for International Affairs (MUCIA) has already made at least one sizeable grant in this area, and presumably would be receptive to further applications. Other likely funding agencies include the German Marshall Foundation and the Bank of Sweden American Independence Jubilee Fund. Consumers Union has helped spawn several local testing and consumer groups abroad. In recent years CU has not made any name for itself as a philanthropic group, its now flowering finances notwithstanding. It should be time to approach Mrs. Karpatkin!

Having assisted doctoral students in obtaining funds for international consumer research from U.S. multinationals, I suggest it may be time to approach a select group of them with a view of forming a consortium to support international consumer and marketing research. As always, it is easier to obtain support if the research may have prospective policy implications. My own experience is that academic freedom and integrity will be respected by corporations as much as by interested government agencies.

Finally, let us note that ingenuity helps in minimizing what otherwise might be formidable costs. We were able to extend our Information Seeker project to Norway by the "omnibus" procedure, that is, by attaching half a dozen questions to a large-scale representative survey of consumers undertaken by the Central Statistical Office of the government, and were given access for our own purposes to the data stemming from the 60+ other questions involved in the survey.

Who knows, it may be time again for Reader's Digest to repeat its large-scale comparative survey of consumer attitudes to advertising of some 20 years ago. There is every reason to assume they would be as interested in as objective an approach as might be expected from any academic researchers.

Challenge No. 6: We need more imagination in tapping sources of funding and piggy-backing on governmental and other survey research.

LINKING COTTAGES IN THE GLOBAL VILLAGE

Finally, a word on research at the inter-nation interface. Examples of topic areas were given in the introductory section. There is little research of this nature, although scholarly articles have appeared both on EEC consumer policy and on the multinational infant formula episode.

As being a consumer, and, as such, having certain rights and responsibilities, is common to all living persons we must expect such developments as the

International Consumer Guidelines of the UN as being modest precursors of a latent globalization of consumer affairs. While there was astonishingly little by way of research behind the Guidelines there is a great need to undertake integrative research at the inter-nation interface level to furnish the base for future transnational private and public policy efforts.

The International Organisation of Consumer Unions (IOCU) and the World Health Organization are among the bodies who could--and certainly should--support such research. IOCU has but a modest budget; this might be increased by special research assessments on member organizations. Too, there is no good reason why IOCU could not lobby governments, foundations and other groups for this worthwhile cause. All it needs for the IOCU Secretariat to go to work is a little pressure from Consumers Union.

Challenge No. 7: To stimulate integrative consumer research at the inter-nation interface.

SUMMARY

There can be no doubt that international consumer research needs expanding. Developing this theme, we encountered seven challenges worthy of further exploration:

1. Most country studies are to be viewed as international research only incidentally and tangentially.
2. More attention should be given to the "specific differences" between cultures, or we run the risk that comparative research on consumer ecology loses much of its meaning.
3. What should be the priorities regarding subject matter and level of aggregation in international consumer research?
4. Networking to build an international team of researchers to conduct your project.
5. To stimulate international consumer research we need to internationalize U.S. professional groups, universities, and journals.
6. Need a lot more ingenuity in funding international consumer research.
7. Need to stimulate integrative consumer research at the international interface.

In closing we may pose the challenge of adding additional items to the list--preferably including follow-up suggestions!

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CONSUMER EDUCATION: CLOSING THE CREDIBILITY GAP

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The MICHIGAN AGENDA FOR CONSUMER EDUCATION, a public-private partnership, conducted surveys with Michigan public high school principals, teachers and students to assess the current status and needs in consumer and personal finance education. The data will be used to guide program development and to provide benchmarks to measure program effectiveness.

THE MICHIGAN AGENDA

The MICHIGAN AGENDA FOR CONSUMER EDUCATION is a program designed to strengthen consumer and personal finance education and to promote its importance. The MICHIGAN AGENDA is a public-private partnership with business, education, government, labor and community leaders.

MICHIGAN AGENDA leaders believe that consumer education has yet to take its rightful place in the mainstream of Michigan education. Increased awareness, coordination and focus are needed so that all citizens have opportunities to gain consumer knowledge and skills in elementary, secondary and adult educational experiences.

In order to document the current status of consumer and personal finance education, and to provide benchmark data for MICHIGAN AGENDA program development and evaluation, surveys were conducted with Michigan elementary and secondary teachers, high school principals and students during the 1987-88 school year.

SURVEYS AND OPINION POLLS

High School Student Opinion Poll

Procedure. In November 1987, Project Outreach of the Michigan State Board of Education conducted the "Third Annual Opinion Survey of Michigan High School Students" (N=4,388). This annual collection of opinions of high school students toward their schools is obtained by administering a written questionnaire to a representative sample of tenth and twelfth grade students. Consumer education and personal finance questions were written and submitted to Ned Hubbell, Director of Project Outreach, by Dulmes and Bannister.

Results. Nearly nine out of every ten (87%) of the high school students polled agreed that high school students should have the opportunity to take a personal finance course before they graduate from high school.

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The majority of high school students selected five major topics of interest to them in learning about personal finance. Those five personal finance topics include: budgeting (72%), employment (68%), income (66%), savings (65%), investments (55%).

When given a list of skills and programs offered by schools and asked whether each topic should receive more emphasis, 70 percent of the high school students polled felt schools should give more emphasis to "managing personal finances". This amount is significantly higher than the 48 percent who wanted more emphasis on personal finance in 1985 (MASB JOURNAL, 1986).

Consumer and Personal Finance in Michigan High Schools

The current Michigan public high school policies and course offerings in consumer and personal finance education were obtained through a mail questionnaire sent to each public high school principal in December 1987 (Dulmes, 1988).

Consumer Education Results. Almost one-fourth (23%) of the Michigan public high schools "required" their students to take a consumer education course to meet graduation requirements (N=592). Almost three-fourths of the high schools (74%), "offered" a separate consumer education course in one or more departments. One-third (33%) of the high schools reported that consumer education units were taught within one or more other courses. Consumer education concepts seemed to be integrated in the departments of home economics, business, and social studies, in descending order of occurrence.

Personal Finance Results. Almost one-third (32%) of Michigan public high schools "offered" a personal finance course (N=592). One-fourth (25%) of these schools who offered a personal finance course "required" it for high school graduation. Only 8 percent of the high schools "required" a personal finance course for graduation.

As found with consumer education concepts, personal finance concepts were often taught within other courses. When offered, personal finance courses and concepts were usually taught in home economics and business departments, followed by offerings in social studies and math departments.

Teacher Opinion Polls

Procedure. Teacher opinions about the importance and current status of consumer education in Michigan were obtained through two opinion surveys. In November 1987, a random sample of 200 elementary and 200 secondary teachers were interviewed by telephone by professional interviewers with

Project Outreach of the Michigan State Board of Education (Project Outreach, 1988).

Elementary Teacher Poll

Consumer Education in Elementary Schools.

Consumer education was taught in only about one-fifth (22%) of Michigan's elementary school classrooms, according to the survey of elementary school teachers. Where consumer education was taught, its concepts were woven into the curriculum of most of the elementary grades. Most of the elementary teachers (92%) who offered any instruction in consumer education said it was infused into the curriculum rather than taught as a separate subject. If consumer education topics were taught, it was either during mathematics instruction or as a part of social studies.

Support for Consumer Education. Elementary teachers were overwhelmingly convinced, 88 percent believed students should first be taught about money at the elementary school level, rather than in the secondary schools. However, three-fourths of the teachers (79%) said they spent "less than one hour per week" on consumer education concepts. Only 9 percent of the respondents said their school administrators gave them a "great deal" of support to teach consumer education concepts.

Reasons For Not Teaching Consumer Education. Elementary teachers who did not teach any aspect of consumer education gave two major reasons for this: "not appropriate for my grade level" (31%) or "lack of time to fit that into the curriculum" (27%). Other reasons given by the respondents included "not in my area of expertise" (18%) and "guidelines set--not part of curriculum" (16%).

Concepts Taught. Key aspects of consumer education taught at the elementary level, according to the survey respondents, are: what is money (84%), why people need money and how they get money (81%), how to make choices (77%), how to make change (75%). Slightly over half (53%) of the elementary teachers who taught consumer education concepts, also said they taught students the concepts of saving and setting goals as opposed to immediate spending.

Student Interest. If there is one topic that interests students most about consumer education, according to the elementary teachers polled, it is "how to make choices" (53%). Students are also interested in learning about money--how to manage it (30%), why people need it and how they get it (26%), what it is (16%), and how to do comparison shopping (13%).

Secondary Teacher Poll

Preparedness of Today's Graduates. In the opinion of the 200 secondary teachers polled, today's high school graduates are not very well prepared in the area of personal finance. Only 10 percent of the teachers polled felt today's graduates were well prepared.

The majority of secondary school teachers (60%) agreed with the vast majority of the elementary

teachers (88%) that consumer education and personal finance skills should first be taught at the elementary school level.

What Students Need to Know About Personal Finance.

When read a list of personal finance topics, secondary teachers ranked the topics that every student should know before he or she leaves high school. The following prioritized list of personal finance topics are in descending order of importance:

Savings and interest	93%
How to get/use credit	93
Financial rights, responsibilities of borrowers	92
How taxes affect consumers	92
How to budget	92
Ways to earn money	91
How goals affect financial plans	90
How to obtain banking services	88
How income affects lifestyle	87
How to evaluate types of insurance	82

What is Taught. In an effort to find out what secondary teachers teach in personal finance, an open-ended question was asked. The topic mentioned most frequently was "budgeting," named by 30 percent of the respondents.

Administrative Support. Most of the secondary teachers polled felt there was only "some" administrative support (48%) for teaching personal finance.

SUMMARY

High school students have significant interest in learning about managing personal finances, yet less than one-third of Michigan high schools offer a course in personal finance. Teachers agree that more consumer education should occur at the elementary level, yet most elementary teachers spend less than one hour a week on the topic. This and other data point to significant unmet needs and opportunities for educators and policymakers to work together to promote consumer and personal finance education in Michigan schools.

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MONEY MATTERS AT DIVORCE

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It is currently projected that 40 percent of persons born in the 1970's who marry will experience at least one divorce during their lifetimes. About 60% of divorces involve dependent children.

CONSUMER ISSUES AND CONCERNS IN DIVORCE SETTLEMENT

Divorce is a complex emotional, legal and economic process which requires couples to make many decisions that will not only end the marriage, but will have substantial impact on their futures. Divorcing couples are often unprepared to deal with the financial implications of divorce and may not have collected the personal and financial information necessary to make informed decisions. Experience in Wisconsin indicates divorcing individuals need assistance in the following areas:

- o Tracing the history of complex monetary transactions and identifying assets as marital and nonmarital property.
- o Locating and valuing tangible and intangible assets and proving value including contributions to creation of marital assets.
- o Recognizing and reducing tax consequences of divorce settlement.
- o Maximizing marital resources while minimizing divorce costs.
- o Achieving property division balance between marital partners.
- o Estimating the post-divorce cost of living for two households.
- o Allocating responsibility for marital debts.
- o Organizing financial material so that it is useful in the divorce process.

Money Matters at Divorce: A Guide to Financial Decisions is designed to help people understand the economic decisions that accompany divorce and what information is needed to make those decisions. The Guide focuses on the areas listed above with emphasis on estimating post-divorce cost of living, dividing property and debts, spousal maintenance and child support.

Property Division

In no-fault divorce, it is presumed that most property will be divided equally between spouses. This presumption can be changed after considering factors such as age, health, education of each party and the length of marriage as well as each person's contributions to it. It

is important to locate and value that property which is marital property and subject to division. States differ on what is classified as marital and on the time for valuation. Couples need to consider the marketability of the properties as well as the tax consequences of the division. Clearly estimating which properties will depreciate and which will appreciate can be strategic to the decision making.

Spousal Support and Estimating the Value of Non-Monetary Contributions Maintenance

The question of spousal support or maintenance arises from each spouse's right to continue to enjoy the lifestyle that existed during the marriage, if feasible. It is not viewed as an automatic, permanent annuity, but as a tool designed to achieve equity and is generally based on need. Consideration is given to length of the marriage, custodial responsibilities, each person's contribution to others earning power, and tax consequences. In Wisconsin, public policy recognizes more than monetary contributions by spouses to the accumulation of property during marriage. Home production may enter into these decisions. The Guide includes information on identifying all sources of income, rights to social security and pension benefits; maintaining adequate health care coverage and valuing homemakers contributions.

Child Support

Financial support of children is the major ongoing obligation of the parents following a divorce. The Child Support Enforcement Act of 1985 mandated that states adopt numerical guidelines for courts to use in settling child support amounts by October, 1987, in order to receive federal funds for child support. Wisconsin has established award levels based on the income of both parents and the number of children in the family and dependent children "of other liaisons."

Standardized tables may not accurately estimate the cost of raising any particular child. In addition, there is evidence that tables applied to a sample of divorce cases in Kansas resulted in awards significantly less than the amount that would have been awarded if the court had applied the USDA estimates for families of similar age, composition and geographic location. Because the USDA estimates are considered to be fairly low and because of evidence that the level of living of children drops considerably following divorce of their parents, Money Matters provides extensive assistance in estimating the cost of raising a particular child.

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CHANGE IN ECONOMIC VALUE OF HOUSEHOLD CONTRIBUTIONS
AMONG WORKING MEN AND WOMEN: APPLICATION IN THE COURTROOM

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ABSTRACT

Two ways of calculating economic loss of household services in cases of personal injury, wrongful death, and dissolution of marriage are the opportunity cost method and the replacement cost method. It is possible that increased women's labor force participation and increased use of labor-saving devices has diminished the amount of time spent in household tasks. This would, in turn, reduce the economic value of women's household contribution. Methods of determining loss of household contribution and generalization drawn from courtroom testimony are presented.

The legal system is finally beginning to acknowledge that women should be granted economic equality under the law. In recent years, attorneys have been consulting family economists to determine the market value of their clients' homemaking services in cases of personal injury, wrongful death, and dissolution of marriage.

The opportunity cost method and the replacement cost method are two ways of calculating the household contribution of individuals in these situations. The application of the methods, however, is different in the three cases. In wrongful death and personal injury cases the calculated economic value of the household services is projected through the lifetime of the dependents and then the present value of this future income stream is calculated. In the case of divorce, the past income stream contributed by the spouse is calculated.

OPPORTUNITY COST

The opportunity cost method considers what the person could do if entering the labor force. The question asked is, "What other job could the person have done and what is its market value?" This method assumes that the person is worth the dollar amount that is earned in the labor force. Generally, the more highly educated the person, the greater the opportunity cost. Conversely, the less educated the person, the lower the opportunity cost, and therefore, the lower the replacement cost (Hauserman and Fethke, 1978).

REPLACEMENT COST

In the replacement cost method, the cost of hiring specialized workers (at local wage rates) for the various homemaking tasks is determined. The steps used to calculate replacement costs are: (1) identify the homemaking services performed, (2) determine the amount of time in services performed, (3) find an equivalent market job wage per hour, and (4) compute the equivalent market value. These equivalent market jobs may vary depending on the actual tasks done and the local market condition.

There are a few limitations to the replacement cost method. First, this method considers only one task at a time ignoring concurrently performed tasks. Secondly, the quality of household work performance is not taken into consideration because quality is a subjective concept. Finally replacement costs are calculated only for those tasks that can be measured and are done regularly. These may result in an underestimation of the economic value of the loss.

APPLICATION IN THE COURTROOM

The family economist, as the expert witness, is hired to assess the economic loss of household services to the family. To determine this, the family economist would interview family members and/or others who have observed the household contributions of the individual in question. Based on the interviews, the household tasks performed and the average time spent doing these tasks would be determined. Results of past time studies would be used to verify the figures provided by the family members. Either the opportunity cost method or the replacement cost method would be used depending on the specific case.

Based on our previous experience as expert witnesses we have drawn several generalizations: (1) Regardless of gender, the woman always contributes more to the household. Past time studies have indicated that women did most, if not all, of the household tasks (Walker and Gauger, 1973). More recent studies reveal that household work still remains the domain of the woman (Sanik, 1981; Consumers Union News Digest, 1987). (2) Families of nonworking wives lose more (in terms of household contribution) than those of working wife families. Nonworking wives have more time to spend in household activities. Although working wives also contribute to household activities, they do less than nonworking wives. (3) Younger men contribute more to the household than older men. This is, in part, due to changing attitudes among young men today who

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are more willing to help their spouse at home. Younger men are more likely to make some contribution in the area of food preparation. This may be the result of the presence of a working wife and the presence of labor saving devices such as a microwave oven. (4) Men contribute more to the household work when their wife works outside the home. This trend has been observed in several families. The area in which men are consistently more likely to contribute time is in the area of child care. The second greatest area of contribution is that of house maintenance and repair, followed by yard care. (5) Men with more education contribute more in terms of household services than men with less education. These men tend to view their marriage as being a more equitable partnership and therefore view household work less negatively.

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THE RELATIONSHIP BETWEEN WOMEN'S TIME AND GOODS

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While we know a great deal about how the value of female time affects the work behavior of women and how they allocate their time among household activities, we know a great deal less about how female wage rates affect consumption patterns. Yet, the rising value of female time has been one of the more important recent economic trends. Female wage rates have risen relative to the prices of goods and services for at least the past 30 years. Since 1955 female wage rates have risen at the rate of 6.5 per cent per year while the prices of goods and services (as measured by the implicit price deflator for Personal Consumption Expenditures from the National Income and Product Accounts) have risen at the rate of 4.8 per cent annually. In contrast, the permanent income of households not earned by females has been almost constant for the past 30 years.

A question raised by such trends is whether and to what extent American households have substituted goods and services for female time in household activities as the value of female time has risen relative to the prices of goods and services. Research currently underway by the author and Yan Wang, also of Cornell University, is seeking to answer this question. We have broken quarterly Personal Consumption Expenditures per household from 1955 to 1984 down into Durables, Nondurables and Services and have also broken these three categories down into 13 sub-components. Simple demand functions have been estimated for each of the three aggregate groups and also for each of the 13 sub-groups. The price index for the group or sub-group, the female wage rate, and permanent income per household not earned by females are the arguments of each demand function.

Preliminary estimates indicate that each of the major groups (durables, nondurables and services) are substitutes for female time as measured by the female wage rate elasticities of demand. Holding prices and permanent income not earned by females constant, a 10 per cent increase in female wage rates would induce a 4.0 per cent increase in the demand for durables, a 1.4 per cent increase in the demand for nondurables, and a 2.2 per cent increase in the demand for services. Clearly, durables consumption is most responsive and nondurables consumption is least responsive changes in the value of female time.

These results are almost what one would have expected. It might have been supposed that the demand for services would have been more responsive to changes in female wage rates than durables since durable goods, however "time-

saving," still require someone to operate them. But, these findings seem consistent with the fact that the time the average female spends in household work activities has trended downward quite slowly over time. Had the trend downward in the time spent by females in household work been more rapid, either services consumption would have had to rise more rapidly to replace the lost female time or men would have had to spend much more time in household work. Neither appears to have happened--yet.

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TIME ALLOCATION AND CHANGES OF WORKING WIVES' AND HUSBANDS' HOUSEHOLD PRODUCTION

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This paper is part of the Roundtable Panel, "Change in Economic Value of Household Contribution Among Working Men and Women." A summary of time allocations to household production is presented. Issues on measuring value of time are discussed. Data from S-191 project, Farm Wife's External Employment, Family Economic Productivity and Functioning, illustrate value of homemaker services.

Research on time allocation to household production has reached the point where some broad generalizations can be observed. The most important one is that wives' contribution to housework has always been substantial and has remained so despite external employment. Family size (Walker and Woods, 1976; Nickols and Metzen, 1978; Hafstrom and Schram, 1983) or number of children (Berardo, Shehan, and Leslie, 1987) and employment time (Vanek, 1974; Nickols and Metzen, 1978; Hafstrom and Schram, 1983) are the most important determinants of wives' time in household production. Employed wives allocate about 4.8 hours per day to housework, over one-half that of other wives (Walker and Woods, 1976; Geerken and Gove, 1983). Time allocations of husbands to household work has remained fairly constant over time (Coverman & Sheley, 1986), although Sanik (1987) has noted a slight increase in time for child care.

ISSUES

In order to make progress in measuring the economic value of household activities, three major issues deserve attention of consumer professionals: methodological problems in measurement of time; classification of household production activities; value per se.

Methodological

Data collection by diary or recall each have positive and negative aspects. Asking respondents to report time spent in different activities is usually an estimation of his/her perception of one point in time and has all the inherent problems of recall. Recording time as it is used puts a burden on the respondent, may affect what activities he/she does, and may be biased by the fact that a certain type of person is willing to record data in this way. Also, it is difficult to determine time spent on particular tasks in that participants must record a primary task when they are involved in

more than one activity. Time allocations are reported in hours and minutes; hours per day, week, or year; percent of total time, household time, total work, etc. These differences in units of measure hamper comparisons.

Classification of Household Production

Household activities are measured in different ways. Household production may be defined as things done in and around the house, as housework, or as a list of specific activities, for example. Some estimates include child care and others include yard or garden work. In other research, it is difficult to determine what is actually being measured. To complicate the meaningful comparison of findings, some household activities data are reported as time allocations and others as task allocations.

Value of Contributions

There are three basic ways to estimate the economic value of contributions to household production: opportunity cost method, market cost method, and the replacement cost method. Using the opportunity cost approach, the amount of income the homemaker has sacrificed from her former occupation by choosing to stay at home is calculated. The weakness of the opportunity cost approach is that it places a greater value on the home services of women who had high-paying jobs than on the same services provided by women who gave up lower-paying jobs. This approach is rarely used except in cases where the woman has sacrificed an "extraordinary talent" in art or music.

By using data for occupation of wives living on Illinois farms to calculate opportunity cost of homemaker services, we estimate that this cost would range from \$135 per week for those with lower education (less than high school) to \$750 per week for those with higher education (up to 18 years)--a wide range in value of services.

The market cost approach lists different types of work a homemaker performs and the number of hours per day spent performing each job. Hourly wages for hiring a person to perform each task for the same amount of time is calculated. Job categories included in calculation of the market cost are: dishwasher, cook, seamstress, laundry person, practical nurse, domestic help or janitor, interior decorator, secretary, and bookkeeper. For women living on farms, the cost of a hired hand to feed animals or drive equipment would be included. Our data on how farm families allocate their time also can be used to illustrate calculation of the market cost. Time spent in home-related services varies for husbands and wives (see Table). Task categories are based on those of Walker and Woods (1976).

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TABLE. Average Time Spent in Household Work Categories by Husbands and Wives (S-191 Farm Data, 1985)

Household Work	Average Hours Per Week	
	Husband	Wife
Human Care		
Nursemaid	2.3	4.9
Practical Nurse	1.3	3.5
Meal Preparation		
Cook	1.5	15.1
Server & Dishwasher	1.4	8.6
Clothing Care		
Laundry	1.3	7.4
Seamstress	.9	2.5
House Care		
Housekeeper	1.6	13.4
Marketing & Managing		
Food Buyer	3.0	4.2
Shopper	1.8	2.9
Other		
Gardener	2.6	4.0

By using these data, the current minimum wage of \$3.35 per hour, and the estimated local dollar rate per hour, the "weekly worth" of homemaking services for the wife are calculated to illustrate this approach. The wife's services vary from \$29.55 for Human Care, \$92.99 for Meal Preparation, \$48.30 for Clothing Care, \$44.89 for House Care, and \$28.57 for Marketing and Management to \$13.40 for Other. The total "weekly worth" of homemaker services on the average for farm wives thus comes to \$257.70.

The most common way to estimate the value of homemaker service is the "replacement cost" method, which calculates the cost of hiring one full-time housekeeper to perform the work done by the homemaker. By using the current minimum wage rate and estimating that a full-time housekeeper would work 66.5 hours per week, the "replacement cost" of the homemaker comes to \$222.78 per week.

In calculating the value of household production by each of the three different methods it is evident that there are substantial differences among the total values. The value of household services of farm wives could vary as much as \$600 per week depending upon the method of computation chosen. These differences are a reflection of how society views the worth of household production. This is an issue of national importance, deserving the concern of our best thinking and study. The implications for practitioners in education and in providing expert testimony also merit attention from the research community.

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